



Department
for Environment
Food & Rural Affairs

Consultation on remote electronic monitoring

Proposals for expanding the use of remote electronic monitoring in English waters

Date: 17 July 2023

We are the Department for Environment, Food and Rural Affairs. We're responsible for improving and protecting the environment, growing the green economy, sustaining thriving rural communities and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.



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www.gov.uk/defra

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Overview

Proposals for expanding the use of remote electronic monitoring in English waters

This consultation launches Defra's vision for expanding the use of remote electronic monitoring in English waters. It proposes an approach to the long-term adoption of remote electronic monitoring that moves from pilots to fishery wide implementation alongside policy reforms such as Fisheries Management Plans and a new approach to managing discards. It is part of an ongoing package of engagement that will help us work together to develop how remote electronic monitoring is used in English waters.

Why your views matter

These proposals will affect fishing industry stakeholders with vessels fishing in English waters. There will be more specific impacts for fishers with vessels in the fisheries that are prioritised for remote electronic monitoring. The proposals are also likely to be of interest to retailers and other stakeholders in the seafood supply chain, consumers, NGOs, remote electronic monitoring service providers and other fishing technology companies.

Responses

This is a 12-week consultation running from 17 July to 9 October 2023

You can view the consultation documents on GOV.UK

To submit your consultation response please:

- complete the consultation questionnaire provided through Citizen Space (Citizen Space is an online consultation tool);
- or send additional information or documents to the Defra remote electronic monitoring policy team by email to rem-policy@defra.gov.uk;
- or respond by post using the address below:

Remote electronic monitoring policy team
Marine & Fisheries Directorate
Seacole Building
2 Marsham Street
SW1P 4DF

Introduction

The United Kingdom has some of the best wild seafood resources in the world. Our fish stocks are a public asset which generate food and create jobs in an industry with a strong sense of identity and pride for their communities. These fish stocks also form a vital part of our marine ecosystems.

Many of our fish stocks are under pressure from fishing and climate change. Fishing can also have impacts on our ecosystem, for example, through accidental bycatch or the effect of fishing gears on the seabed. It is therefore important to consider both the positive and negative effects of fishing as part of our management of the marine environment.

The Environmental Improvement Plan 2023 for England lays out how we will improve our environment and sets a plan for a decade of delivery with target-led actions towards leaving our environment in a better state than when we inherited it.

The Joint Fisheries Statement provides more detail about how the UK authorities will deliver on the eight objectives set out in the Fisheries Act 2020. This includes exploring the use of technologies such as remote electronic monitoring for scientific purposes and to aid the sustainable management and control of fisheries. It also commits the fisheries policy authorities to working with the fishing industry and interested organisations to develop and implement effective fisheries management.

In the UK, fisheries monitoring is devolved, and alongside Defra's proposals, Scottish Government are progressing plans to implement remote electronic monitoring in Scottish waters, with an initial focus on the scallop fleet and pelagic vessels. We will continue working with our colleagues around the UK to ensure maximum interoperability.

Technological monitoring solutions for scientific research and fisheries management are also the international direction of travel and are part of a wider trend towards digital transformation. Within Europe, implementation of remote electronic monitoring is being considered by the EU Commission and remote electronic monitoring programmes are being developed by a number of nearby coastal states. We want the UK to be in the vanguard of this work, leading and shaping how remote electronic monitoring is deployed in both our waters and waters with shared stocks.

This consultation launches Defra's vision for expanding the use of remote electronic monitoring in English waters, in order to support data-led fisheries management decisions. The consultation proposes an approach to the long-term adoption of remote electronic monitoring that moves from pilots to fishery wide implementation. It should be read alongside the parallel consultations on discards reform and on the first six draft Fisheries Management Plans.

This consultation will run for 12 weeks from 17 July 2023 to 9 October 2023.

What we are proposing to do

Quick view: What is remote electronic monitoring?

Remote electronic monitoring is a catch all term that refers to integrated on-board systems that may include cameras, gear sensors, video storage, and Global Positioning System (GPS) units. These systems can capture comprehensive videos and are used to monitor fishing activity with associated sensor and positional information.

Remote electronic monitoring is used in many different forms to support better fisheries management around the world, and its use has been trialled in English waters for over a decade (See Annex A for a list of projects). It is clear that the technology works, but its implementation can be complex and challenging. This consultation proposes an approach to the long-term implementation of remote electronic monitoring that moves from pilots to fishery wide implementation.

Our vision for remote electronic monitoring

Our vision is for fully documented fisheries in English waters.

Remote electronic monitoring is a tool to help us achieve this aim but is not a complete solution in itself. It needs to be used in a proportionate way, with clear and achievable data objectives.

Fully documented fisheries don't just use technology to verify what is being caught. They use a range of monitoring approaches, including remote electronic monitoring, to support better data collection on fishing activity, ensuring it is documented, audited and compliant.

There are already many ways that we collect data on fishing activity including logbooks, sales notes, onboard observers, onshore data collection, Automatic Identification Systems (AIS), Vessel Monitoring Systems (VMS) and fisher driven data collection and science partnerships.

Remote electronic monitoring delivers robust information and evidence and is the next step for enhancing data collection. Better data, collected through a fully documented fishery that uses remote electronic monitoring has scientific applications, for example feeding into stock assessments, and can also support reforms to fisheries management. In some cases, the use of remote electronic monitoring may be essential for reforms to be successful. Similarly reforms to fisheries management approaches may also be necessary for the successful implementation of remote electronic monitoring.

In particular, better information and data have a role to play in the development of discard reform measures. In the context of discards, remote electronic monitoring has a role in encouraging compliance with new measures and ensuring everyone is playing by the same rules. It needs to be used in a proportionate way however and introduced alongside

reforms to the underlying regulatory framework. There is also potential for vessels using remote electronic monitoring to fully document fishing activity to have additional discard management options open to them such as a different approach to accounting for catches or access to quota flexibilities. See Consultation on Discards Reform for more information.

As part of our commitment to delivering world class fisheries management, we want to work together with our fishing industry and other stakeholders to expand the use of remote electronic monitoring.

Q1. What do you think about our vision for remote electronic monitoring?

What remote electronic monitoring can achieve

Fully documented fisheries achieved with remote electronic monitoring presents a wide range of opportunities and can deliver multiple benefits across fisheries and the marine environment. The use of information and data provided by remote electronic monitoring can support:

- **Improved fisheries management:** Remote electronic monitoring can provide greater confidence in catch and effort data and support better decision making in fisheries management.
- **More responsive management:** near real-time monitoring that tells us what is being caught at sea can support more responsive management.
- **Reduced regulatory burdens:** where fishing activity is fully documented there may be less requirement for complex technical regulation.
- **Compliance by design:** Remote electronic monitoring can inform better management and regulatory decisions. Well-designed regulation should result in high levels of compliance.
- **A level playing field:** requiring monitoring across all vessels engaged in fishing activity within our waters will ensure fair application of the rules.
- **Transparent monitoring of designated protected areas and better information about interactions with seabed habitats:** Remote electronic monitoring can enhance how we monitor and manage fishing activity in protected areas and could fill gaps in knowledge about wider interactions with seabed habitats.
- **Better information on stocks:** Remote electronic monitoring can fill gaps in science which, among many benefits for the marine scientific community, can lead to better informed Total Allowable Catch (TAC) setting and over time, improve the evidence base for our Fisheries Management Plans.
- **Improved sensitive species bycatch monitoring:** Remote electronic monitoring can tell us more about interactions between fishing activity and sensitive species.

With this information we can develop better methods for bycatch mitigation, for example to support the bycatch mitigation initiative¹.

- **Increased resilience:** Remote electronic monitoring can evidence where fishing activity takes place and the importance of particular grounds which may help inform spatial squeeze discussions and help to assess the impacts of future changes.
- **Enhanced traceability:** Remote electronic monitoring can provide information about where fish are caught to assist with marketing catch in an increasingly data-driven supply chain.

Our proposed approach

Achieving fully documented fisheries across all fishing activity in English waters is going to take time. Fishing activity is diverse, and each fishery or vessel may have different monitoring needs. Some fisheries may not require remote electronic monitoring technology to achieve fully documented outcomes. We also need to build our capacity to analyse and use the level of data that remote electronic monitoring can collect and ensure that it can work within the regulatory framework. It is important that the expansion of remote electronic monitoring in English waters is proportionate, achievable and pragmatic.

We propose taking a targeted approach to implementing remote electronic monitoring, avoiding a one-size-fits-all approach, and beginning with specific priority fisheries that will come online in stages over the next five years. Proposed priority fisheries are listed below in [Table 2](#). Subsequent fisheries for remote electronic monitoring will be determined later so that we can evaluate the initial phases of implementation and respond to changing contexts and new developments in technology.

We propose beginning implementation with vessels that sign up to be early adopters within the priority fisheries. The voluntary phase would remain in place until implementation issues have been appropriately addressed. Following that, we would move to a mandatory phase. There would then be a minimum 24 months lead in time before mandatory requirements were introduced. This is to ensure industry has time to adapt to the change. It will create a rolling programme where remote electronic monitoring is phased in across different fisheries in stages.

We want to work together with the fishing industry and other stakeholders to design how remote electronic monitoring is applied within the priority fisheries. Engagement has been essential in the development of these proposals so far. We propose continuing this approach by setting up steering groups with early adopters, attended by a range of stakeholders including fishers, scientists, fisheries managers, and technology experts who together can create remote electronic monitoring programmes that address the needs of

¹ [Marine wildlife bycatch mitigation initiative - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

industry, and that will deliver on objectives for data and work towards [our vision for remote electronic monitoring](#). The steering groups will design and agree the specific monitoring and scientific objectives, operating protocols, a proportionate approach to enforcement, privacy concerns, data and technological requirements.

We would like progress over five years to look like:

Table 1: Roadmap 2023–2028

2023	2023 – 2028	2028
<p>Evidence review undertaken to identify priority fisheries.</p> <p>Current monitoring approach: Data collected using logbooks, catch app, observers, AIS, VMS and I-VMS, fisher-led data collection and partnerships with scientists.</p>	<p>Steering groups guide the implementation of remote electronic monitoring in five priority fisheries.</p> <p>Voluntary remote electronic monitoring projects with early adopter vessels begin in stages, leading to the rolling introduction of mandatory requirements.</p>	<p>Remote electronic monitoring is likely mandatory in at least two of the priority fisheries and progress towards fully implementing remote electronic monitoring across further fisheries is underway.</p>

Priority Fisheries

The fisheries that we propose for the initial stages of implementation of remote electronic monitoring within English waters are set out in [Table 2](#).

How have the priority fisheries been identified?

Defra conducted a desk-based evidence review to identify priority fisheries. This involved input from fishing industry representatives and environmental non-governmental organisations (NGOs) as well as Cefas, the Marine Management Organisation (MMO) and Natural England. Each fishery was grouped by vessel size, gear type, species caught and location.

The review assessed fisheries across English waters on their data needs, the suitability of remote electronic monitoring as a tool to meet these needs, and how achievable setting up remote electronic monitoring in the fishery is likely to be. You can find out more information about the evidence review in Annex B. As a result of the review we identified five initial priority fisheries, which are set out in [Table 2](#).

A key output from the review was the exclusion of vessels under 10-metres in length from these proposals. Under 10-metre vessels make up a significant proportion of the English fleet but, within the priority fisheries proposed, are responsible for a small proportion of

landings, and are often targeting different species to over 10-metre vessels. The decision to focus on vessels over 10-metres in length at this stage reflects the need for the expansion of remote electronic monitoring in English waters to be risk-based, proportionate and pragmatic.

The order in which the fisheries are presented is the proposed sequence for implementation, to be undertaken in stages over the next five years and into the future. The order reflects our understanding of the relative achievability of setting up remote electronic monitoring in the first few years.

The table also lists likely data objectives for each fishery. Setting objectives for remote electronic monitoring data collection will be an important function of the proposed [steering groups for each fishery](#).

Table 2: Proposed priority fisheries

Priority Fishery	Vessel size (metres)	Gear type	Fishing location (See Annex C for charts)	Likely data objectives	Potential timeline
Fishery A	Over 24m	Pelagic trawls	All English waters	Catch composition information and verification, improved data on interactions with sensitive species	Early adopter phase begins 2024
Fishery B	Over 10m	Demersal seines (flyseines)	English waters of the Southern North Sea and English Channel (ICES areas 4c, 7d and 7e)	Catch composition information and verification, improved data on non-quota species	Early adopter phase begins 2025

Fishery C	Over 10m	Demersal trawls using mesh sizes up to 120mm	English waters of the North Sea (ICES area 4b)	Monitoring discarded fish	Early adopter phase begins 2026
Fishery D	Over 10m	Fixed and drift nets (gill and trammel)	English waters of the Celtic Sea and English Channel (ICES areas 7e-j)	Interactions with sensitive species, improved catch and discards information	Early adopter phase begins 2027
Fishery E	Over 10m	Demersal trawls including beam trawls	English waters of the Celtic Sea and English Channel (ICES areas 7e-j)	Monitoring discarded fish, improved data on non-quota species	Early adopter phase begins 2028

Q2. Do you agree with:

- A. Taking a targeted approach beginning with specific priority fisheries**
- B. Not including vessels under-10m at this stage**
- C. Working together with the fishing industry, and setting up steering groups to design remote electronic monitoring programmes**
- D. Beginning with voluntary early adopters within priority fisheries moving to mandatory requirements in time**

Q3. For each priority fishery, do you agree with the definition? If not, what would you change (gear type/location/vessel size)?

Q4. Do you think any other fishery should be prioritised?

Q5. What are your views on the proposed timeline and order of implementation?

Q6. Do you have any additional views on the proposed priority fisheries?

Q7. What are your views on the likely data objectives in [Table 2](#) in each priority fishery?

Q8. Are there additional data objectives you think could be useful for each priority fishery?

Other opportunities for remote electronic monitoring

There are many fisheries where remote electronic monitoring can provide useful data to support management that are not included in the list of proposed priority fisheries, but that could be considered for future remote electronic monitoring opportunities. This will be kept under review.

Implementation considerations

In this section we discuss some key questions about how remote electronic monitoring should be implemented. Designing the approach to implementation will be a key function of the proposed [steering groups for each fishery](#).

Data management

Remote electronic monitoring programmes must be designed to protect private and commercially sensitive information. Onboard cameras only monitor areas of a vessel associated with fishing-related activities. Vessel owners and skippers will be involved in the installation of remote electronic monitoring systems from the beginning, to ensure the process is transparent. Remote electronic monitoring data will be encrypted and securely stored. Data generated by remote electronic monitoring systems will be managed in line with data protection rules and retention policies².

Data analysis

Remote electronic monitoring data will be reviewed by designated analysts. The analysts will look at GPS and gear sensor information from the vessel and determine where fishing activities are taking place and consider what parts of the video footage to analyse.

Analysis will only be completed on a sample of the fishing activity data to generate the data set out in the objectives for the fishery. These objectives, and the size of the sample monitored, will be transparent, designed, and clearly documented with input from the fishers involved. This data will then be applied to meet the agreed objectives for the fishery, for example to verify the logbook reporting to provide assurance on catches.

² [Data protection: The Data Protection Act - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

Requirements for vessels not registered in England

When mandatory within selected priority fisheries (subject to this consultation), remote electronic monitoring will be required on all vessels active within the fishery, in line with how the fisheries are defined in Table 2. This will include vessels from the Devolved Administrations, Crown Dependencies, European Union, Norway and other coastal states.

Remote electronic monitoring programmes should have the potential to be interoperable with monitoring systems from other fishing authorities to avoid adverse impacts on fishing activity.

Technology procurement and delivery

There are several options for the procurement of remote electronic monitoring systems. These include a single operator model, which would mean that all English vessels fishing within priority fisheries operate the same remote electronic monitoring equipment; multiple approved operators where the vessel owner can select from a range of equipment providers; or a model where specification is provided for the equipment to meet. Defra are assessing which option for procurement will best deliver as required, interoperability and value for money will key factors in the decision.

Costs and funding

There are broadly three types of costs to remote electronic monitoring:

- Hardware and installation
- Maintenance
- Data costs including transfer, analysis and storage

We acknowledge that the costs of remote electronic monitoring and potential funding options are of concern for some fishers whose vessels will be affected as well as for the organisations collecting, storing and using the data. We are committed to being transparent around the known cost implications of remote electronic monitoring for businesses and would like your feedback on costs and who should pay.

The most recent published figures on costs are published in a technical guidelines report from 2019³ which estimate the cost of hardware and installation for each vessel as

³ [Technical guidelines and specifications for the implementation of Remote Electronic Monitoring \(Remote Electronic Monitoring\) in EU fisheries | EFCA \(europa.eu\)](#)

between £6,138-£10,521⁴. More recent and exact costs are difficult to provide because they will differ between fisheries depending on their different system requirements.

Annual maintenance is estimated in the same report to cost between £438-£2,192⁵, but this again will vary depending on the maintenance required. Vessel owners and skippers will be required to maintain their equipment to achieve stipulated data integrity levels in terms of volume and quality.

Depending on the data objectives, there may also be additional costs if changes to fishing practices and management are required.

Q9. Do you have any views around how different aspects of remote electronic monitoring should be funded?

Q10. Is there anything else you would like to comment on regarding implementation or generally on our plans to expand the use of remote electronic monitoring in English waters, as set out in this consultation?

⁴ Figures as converted from 7,000-12,000EUR as estimated in the 2019 EU technical guidelines report on 'estimated system costs' and 'estimated installation costs', into GBP using the 2019 exchange rate:
<https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/timeseries/thap/mret>

⁵ Rounded figures as converted from 500-2500EUR as estimated in the 2019 EU technical guidelines report on 'annual running cost', into GBP using the 2019 exchange rate:
<https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/timeseries/thap/mret>

Summary of consultation questions

Q1. What do you think about our vision for remote electronic monitoring?

Q2. Do you agree with:

- a) Taking a targeted approach beginning with specific priority fisheries;
- b) [Not including vessels under-10m](#) at this stage;
- c) Working together with the fishing industry, and setting up steering groups to design remote electronic monitoring programmes;
- d) Beginning with voluntary early adopters within priority fisheries moving to mandatory requirements in time?

Q3. For each priority fishery, do you agree with the definition? If not, what would you change (gear type/location/vessel size)?

Q4. Do you think any other fishery should be prioritised?

Q5. What are your views on the proposed timeline and order of implementation?

Q6. Do you have any additional views on the proposed priority fisheries?

Q7. What are your views on the important data objectives in [Table 2](#) in each priority fishery?

Q8. What additional data objectives you think could be useful for each priority fishery?

Q9. Do you have any views around how different aspects of remote electronic monitoring should be funded?

- a) Hardware and installation
- b) Maintenance costs
- c) Data costs including transfer, analysis and storage

Q10. Is there anything else you would like to comment on regarding implementation or generally on our plans to expand the use of remote electronic monitoring in English waters, as set out in this consultation?

Confidentiality and data protection

This consultation is being conducted in line with the Cabinet Office consultation principles and be found at: <https://www.gov.uk/government/publications/consultationprinciples-guidance>.

Representative groups are asked to give a summary of the people and organisations they represent and where relevant who else they have consulted in reaching their conclusions when they respond.

Information provided in response to this consultation, including personal data, may be published or disclosed in accordance with the access to information regimes these are primarily the Environmental Information Regulations 2004 (EIRs), the Freedom of Information Act 2000 (FOIA) and the Data Protection Act 2018 (DPA). We have obligations, mainly under the EIRs, FOIA and DPA, to disclose information to particular recipients or to the public in certain circumstances.

If you want the information that you provide to be treated as confidential, please be aware that, as a public authority, the Department is bound by the Freedom of Information Act and may therefore be obliged to disclose all or some of the information you provide. In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

Defra will process your personal data in accordance with the law and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties. A full privacy notice is included the parts above.

Defra may publish the content of your response to this consultation to make it available to the public without your personal name and private contact details (e.g. home address, email address, etc).

If you have any comments or complaints about the consultation process, please address them to:

Remote electronic monitoring policy team
Marine & Fisheries Directorate
Seacole Building
2 Marsham Street
SW1P 4DF

Or email: consultation.coordinator@defra.gov.uk

Next steps

A summary of responses to this consultation will be published on the Government website at: www.gov.uk/defra.

An annex to the consultation summary will list all organisations that responded but will not include personal names, addresses or other contact details. The response to the consultation is expected to be published by the end of the year.