



University of  
St Andrews

### **Project title** SIFIDS Early Adopters Trial

The project aims to improve methods of data collection within commercial inshore, small-scale fisheries.

### **Researcher name(s)**

*Dr Mark James*

*Dr Tania Mendo*

*Dr Rene Swift*

*Miss Hannah Ladd-Jones*

*Mr Patrick McCann*

*Mr Swithun Crowe*

## Participant Information

### **What is the study about?**

The Scottish Inshore Fisheries Integrated Data System (SIFIDS) Project developed a range of prototypic systems and processes aimed at improving the sustainability within commercial inshore fisheries (i.e. vessels of 12m or less fishing out to the 12nm limit). In collaboration with Marine Scotland, we are now deploying some of the SIFIDS processes and systems to demonstrate how they can work in a fully operational context.

Marine Scotland is committed to tracking all commercial fishing vessels and this trial forms part of this process. The trial will allow fishers and Marine Scotland staff to gain a better understanding of how they can use vessel track data.

The Early Adopters Trial will involve fitting a tracking device to your vessel which will transmit the location of the vessel via the mobile telephone network to a secure computer server. The data that the tracking device transmits will include for example the vessel position, speed and heading. The device will also transmit information about its own status such as battery condition, power supply, the number of satellites used to define the position of the vessel and accelerometer data that measures how the vessel is moving. The device also has Bluetooth capability which allows it to communicate with other Bluetooth enabled devices. Where the mobile telephone signal is poor, the tracking device can still collect vessel track data which it stores and then sends once the mobile signal improves.

In addition, you will be asked to download an App to your mobile telephone that will allow you to enter details of your vessel, date, gear type and amount used and what you catch and discard. When you submit the data from your phone it will also be sent to the same secure server as the track data.

By combining your vessel track and catch data, we will be able to build up an accurate picture of where and when fishing is taking place and how often and calculate measures of catch per unit effort. This information is very important as part of managing the fishery.

### **Why have I been invited to take part?**

You have been identified to take part in this project as the owner/skipper of a fishing vessel.

### **Do I have to take part?**

This information sheet has been written to help you decide if you would like to take part. It is up to you and you alone whether you wish to take part. If you do decide to take part you will be free to withdraw at any time without providing a reason, and with no negative consequences.

### **What would I be required to do?**

If you agree to participate in the trial, you will be contacted by a local marine engineer who will arrange a convenient date and time with you to board your vessel and fit the tracker. For powered vessels, the tracker will need to be connected to the vessel's electrical power supply. It will operate on 6 to 30 volt supplies. We recommend that the connection is made in such a way that the tracker draws power only when the vessel's main switches are on. The tracker will be set to go into a sleep mode when the vessel is inactive and switches on automatically when it detects that the vessel is moving. Once fitted you will not have to interact with the device other than check the green "tracking" light is on when you have started your engine. Although the tracker is IP67 rated, it should preferably be mounted in the wheel house in a position that will allow it to "see the sky" if possible. It is approximately 7x6x3 cm in size and should not be mounted under bulkheads or heavy metal structures, but as the tracker was designed for road transport use it is robust and capable of being mounted discretely under a dashboard or under the bonnet of a car for example. Fitting should take about an hour.

Before the engineer fits the tracker he will ask you to sign a consent form which confirms that you are happy to have the tracker fitted. Once the tracker is fitted, the engineer will confirm that it is working correctly. Shortly after that we will contact you by email to provide your unique login details which will allow you to see, via the internet, the track data being collected from your vessel.

In addition, our intention is to provide you with access to a mobile telephone App that will allow you to record details of your catch on a daily basis.

### **Are there any risks associated with taking part?**

We do not anticipate there being any personal, emotional or financial risks to taking part in these studies. Very limited personal information will be recorded (name and contact details) to be used by the project team for identification purposes. Your vessel track and catch data will be treated as confidential and will not be shared publicly in an identifiable form.

### **Informed consent**

It is important that you are able to give your informed consent before taking part in this study and you will have the opportunity to ask any questions in relation to the research before you provide your consent.

### **Who is funding the research?**

This research is being funded by Marine Scotland.

### **What information about me or recordings of me ('my data') will you be collecting?**

We will retain a record of your name and contact details. This information will only be used for the purposes of contacting you on matters related to the project. The tracking device will record the position, direction of travel and speed of your vessel. It may also, in combination with a Bluetooth "coin" record when and where creels are deployed and recovered. The tracking device also records information on, for example, the number of satellites it is using to provide a position fix, accelerometer data that can be used to show when a vessel is moving. Information on the status of the internal battery within the tracker and external power supply are also recorded.

The App will allow you to record details of your vessel, date, gear type and amount such as creel string number, creel numbers and details of the target species you catch and retain or discard.

### **How will my data be securely stored, who will have access to it?**

Your data will be stored in a FULLY IDENTIFIABLE form, which means that your data will be identifiable as yours. Your data will be stored on a secure server administered by the University of St Andrews until such time as Marine Scotland takes ownership of the database in which the data is held on the server. At this point, Marine Scotland will be responsible for all aspects of data security.

### **Who will be able to see the data?**

The data will be stored on the computer server in a secure database. During the course of the trial, the server will be administered by University of St Andrews. Once the trial is complete, the server and the data collected will be transferred to Marine Scotland administrators. During the trial, data from your vessel will only be visible to named administrators of the database and named researchers involved in this project at St Andrews. Marine Scotland compliance staff will also be able to see your vessel track data and catch data. You will be the only other person able to see your vessel track and catch data. Any data that is to be used for presentational purposes or shared for research or training purposes will be anonymised or aggregated to prevent it being identifiable as any given vessel.

### **How will my data be used, and in what form will it be shared further?**

The data is used to generate vessel tracks and used in combination with catch data. This information can then be used to predict where and when fishing is taking place, and to estimate the number of creels being used. We can calculate a number of metrics for individual vessels or groups of vessels to provide measures of fishing effort. The area fished and the intensity of fishing activity can also be estimated. As part of the trial, daily catch data may also be collected via an App which will allow the calculation of catch per unit fishing effort. You will be able to see these data outputs for your vessel.

Please be assured that all the information and data that we collect in this project will be treated as strictly confidential. The results will be analysed and presented in such a way that no personal details or information which might compromise your fishing activities will be made public. The data will not be shared beyond the named researchers at the University of St Andrews and Marine Scotland staff as may be required as part of the project.

This study is being conducted as part of a Marine Scotland funded project, led by Dr Mark James who works in the Coastal Resources Management Group based the University of St Andrews, Scotland.

### **Who owns the tracker, what happens if it goes wrong or I want it removed?**

The tracker will effectively be the property of the project for the duration of the project. At the end of the project, the intention is that you should be able to keep the tracker and that it will then become your property. If the tracker fails and is under guarantee, we will arrange for the unit to be replaced. If the unit is out of guarantee, replacement during the course of the project will be subject to Marine Scotland funding the cost of replacement. If you want the tracker removed from your vessel please make your requirement known by emailing [crmg@st-andrews.ac.uk](mailto:crmg@st-andrews.ac.uk) and use the word EAT in the subject line. You should also inform your local Fishery Officer. The removal of the device will then be arranged.

### **What would I be required to do?**

You will need to allow the engineer undertaking the fitting of the tracking device to access your vessel and to fit the device as outlined above. The device works automatically and should not require any further intervention. If the device breaks down or is damaged, you may need to allow the engineer access to replace the device. Once you have login details to see your track data you may do so whenever you like, but there is no requirement for you to do this.

You will also need to use the mobile phone App to record information on the gear and how much you are using together with target species catch retained and discarded. It is important that we have a daily catch record so that we can link this information to the fishing you have undertaken that day.

The data you send from your phone will be the equivalent of sending a short text message and this happened automatically when you decided to submit the data.

It is expected that the project to which this research relates will be finalised by December 2022.

### **When will my data be destroyed?**

Data will be retained indefinitely for the purposes of research and training but will only be used in this context in an anonymised form. The data transferred to Marine Scotland will be retained by them in accordance with their data

retention and destruction policies and practice. The point at which data are formally transferred to Marine Scotland, it will become their responsibility to manage.

The data collected will be only be accessed in its raw form by the researchers involved in this study and Marine Scotland staff, unless explicit consent for wider access is given by means of the consent form. If you decide to withdraw from the project your data will be destroyed\*, i.e. in (1) coded format on the University computer system (2) in the case of hardcopy in a locked storage cupboard.

\*Unless secondary data permission has been indicated on the consent form. In the case of electronic data destruction will involve the permanent deletion (overwriting) of files using Eraser<sup>®</sup> software, while any hard copy records will be cross-cut shredded.

### **Will my participation be confidential?**

Only project researchers and Marine Scotland staff will have access to the raw data which will be kept confidential. The data collected will only be made available in reports or publications or for training purposes in aggregated or anonymised form. Your permission will be sought in the Participant Consent form for the data you provide, which will be coded\*, to be used for future research purposes.

\*‘Coded Data’ refers to when data collected by the researcher is identifiable as belonging to a particular participant but is kept with personal identifiers removed.

Your participation will only be known to the research team at the University of St Andrews and Marine Scotland staff who have access to the identifiable data and/or consent forms.

### **Use of your personal data and data protection rights**

The University of St Andrews (the ‘Data Controller’) is bound by the UK 2018 Data Protection Act and the General Data Protection Regulation (GDPR), which require a lawful basis for all processing of personal data (in this case it is the ‘performance of a task carried out in the public interest’ – namely, for research purposes) and an additional lawful basis for processing personal data containing special characteristics (in this case it is ‘public interest research’). You have a range of rights under data protection legislation. For more information on data protection legislation and your rights visit <https://www.st-andrews.ac.uk/terms/data-protection/rights/>. For any queries, email [dataprot@st-andrews.ac.uk](mailto:dataprot@st-andrews.ac.uk).

### **Ethical Approvals**

This research proposal has been scrutinised and subsequently granted ethical approval by the University of St Andrews Teaching and Research Ethics Committee.

### **What should I do if I have concerns about this study?**

In the first instance, you are encouraged to raise your concerns with the researcher. However, if you do not feel comfortable doing so, then you should contact the Ethics Contact (contact details below). A full outline of the procedures governed by the University Teaching and Research Ethics Committee is available at <https://www.st-andrews.ac.uk/research/integrity-ethics/humans/ethical-guidance/complaints/>.

### **Contact details**

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