News story: English fishing vessels sought for trials which may help to reduce discards

The Marine Management Organisation (MMO) is looking for English fishing vessels working in the North Sea to take part in three trial schemes which may help to reduce discards and encourage more selective fishing behaviour.

Vessels taking part in the trials may be fitted with remote electronic monitoring (REM) equipment or be involved in trying out new gears and may be awarded additional quota in return.

The MMO has run fully documented fisheries (FDF) schemes, sometimes referred to as catch quota trials, since 2011. As part of these schemes remote electronic monitoring (REM) equipment is fitted to vessels to encourage a reduction in discards. In addition, REM has proven to be a useful tool for gathering scientific data. The MMO has collaborated with the Centre for the Environment, Fisheries and Aquaculture Sciences (Cefas) on exploring this use.

The MMO is looking for English fishing vessels to apply for two fully documented fisheries schemes in 2018:

1. North Sea Fully Documented Fisheries
2. North-East Nephrops Fully Documented Fisheries

The MMO is also looking for English vessels to take part in the North East Nephrops Net Selectivity trials which is looking to trial new gears which have the potential to be more selective.

North Sea Fully Documented Fisheries

To take part the vessel must be English-registered and a member of a Producer Organisation. In return for taking part in this scheme, vessels will be able to access additional quota for North Sea cod and saithe. In addition scientific quota may be available.

Vessels should apply to take part by 18 April 2018, but if unable to do so by the deadline should contact the MMO as soon as possible to express an interest.

The aims of the scheme in 2018 are to:

- Test the use of REM as a control and enforcement tool
- To monitor compliance with fisheries legislation
- Test new developments in REM technologies
- Trial the use of inter-species flexibility (ISF)

North-East Nephrops

This is a new scheme for 2018. To take part vessels must be English-registered and work within the North East nephrops fishery. In return for participation in this scheme, vessels will be able to access additional quota for North Sea haddock and whiting. In addition, scientific quota for nephrops may be available.

Vessels must apply to take part by 30 April 2018.

The aims of this scheme are to:

- Test the use of REM as a control and enforcement tool within the nephrops fishery
- To monitor compliance with fisheries legislation
- Test new developments in REM technologies

North-East Nephrops Net Selectivity trials

This is a new scheme for 2018. To take part vessels must be English-registered and work within the North East nephrops fishery. When applying for this scheme vessels are asked to propose how they might improve their gear selectivity and the methods they will use to do this. In return for participation in this scheme, vessels will be able to access additional quota for North Sea haddock and whiting.

Vessels must apply to take part by 30 April 2018.

The aims of this scheme are to:

- Trial the use of highly selective gear to reduce discards and catches of below Minimum Conservation Reference Size (MCRS) fish
- To document the effects of using highly selective gear in this fishery

For more information on the scheme email ukcatchquota@defra.gov.uk or call 0300 123 1032. If you would like to take part but have issues meeting the stated deadlines please contact the MMO as soon as possible to express your interest.

This blog post explains more about how fully documented fisheries work in practice.

News story: UK Space Agency invites teams to submit more details on ISS

experiments

The UK Space Agency plans to select a number of these to fund for flight to the ISS.

Following a call for ideas that was published in December 2107, 25 ideas were received. These were reviewed by the UK Space Agency and European Space Agency for feasibility, scientific merit, fit to UK priorities and outreach opportunities. From the 25 submitted 14 have been invited to submit full details of their proposed experiments. These will be fully reviewed before selection.

Libby Jackson, Human Spaceflight and Microgravity Programme Manager, said:

> The large number and high quality of ideas received in this initial round is a testament to the strength of the microgravity community here in the UK. I am very excited to see the full proposals and give the scientific and academic communities this opportunity to get their experiments to the International Space Station.

Earlier this week, on Monday, 2 April, the SpaceX Dragon spacecraft launched on a Falcon 9 rocket carrying cargo to the ISS that showcases the ingenuity of the UK space sector. The cargo included a UK-built satellite, RemoveDEBRIS, that will test different approaches to removing space junk from the Earth's orbit, and ASIM, an international science package to study powerful lightning from space.

The projects selected for full proposals span a broad range of scientific disciplines, including human life science, biology, physical sciences and Earth observation.

The 14 teams selected are:

University of Birmingham, Professor Kai Bongs and Dr Yeshpal Singh, Optical Flywheel on the International Space Station

This project seeks to demonstrate the concept of an optical flywheel in space. Such technology would enable a wide range of key future commercial applications using optical links. A number of fundamental science research areas, such as the fields of relativistic geodesy, detection of gravitational waves, and cold atom-based interferometry would benefit from the ability to use such technology.

University of Brighton, Professor Marco Marengo, Waste Heat Recovery through Magnetic Pulsating Heat Pipe

The proposed project aims to investigate the electrical power generation and thermal performances of a novel pulsating heat pipe system with one or more

solenoids and a magnetic fluid as working fluid. Confirming the feasibility of this technology would allow it to be applied to a wide range of applications, both on ground and the space environment.

University of Bristol, Professor Kate Robson-Brown, Changes to the spine in microgravity: a zebrafish model

This experiment proposes to employ the unique environment of microgravity on the ISS to study the response of the zebrafish spine to microgravity, to improve understanding of how the spine degenerates in humans.

University of Edinburgh, Professor Charles Cockell, Motile microbes in space (MOTILE)

This experiment seeks to understand how microgravity affects microbes that can swim (motile bacteria) compared to those that cannot. The answer to this question may provide an explanation for a lot of data concerning the behaviour of microbes in space and the answer would give us new insights into how life adapts to space.

University of Edinburgh, Professor Grunde Jomaas, Fire Risk Management for Spacecraft through Fundamental Flammability Studies

This project aims to study, understand and improve the fundamental scientific knowledge of fire behaviour in microgravity for the purpose of delivering a well quantified fire safety strategy and the bespoke technologies necessary to implement it in future exploration missions.

University of Exeter, Dr Tim Etheridge, Exploring novel therapeutics to health decline in space

A high-throughput, automated in vivo approach: This experiment aims to study whether a panel of novel pharmacological compounds has the potential to prevent spaceflight-induced health decline in vivo, and do so using a new automated, high-throughput culturing device. This work would demonstrate the efficacy of existing drugs on preventing/attenuating key indices of health decline during spaceflight and validate the technology of the culturing device.

Glasgow Caledonia University, Dr Suzanne Hagan, Investigation of Tear Fluid Biomarkers as an Indicator of Human Health

This proposal seeks to find out if there are measurable changes to tear fluid inflammatory proteins in astronauts exhibiting Spaceflight Associated Neuro-ocular Syndrome (SANS) which may serve as potential biomarkers to aid in earth based diagnostics of conditions affecting the central nervous system.

University of Kent, Dr. Penelope Wozniakiewicz, Dust

Characterisation with the International Space Station

This project proposes the installation of a passive collector experiment on-board the International Space Station to investigate particle populations in low Earth orbit. Monitoring particle populations is vital to understanding the hazards they pose to spacecraft of all kinds in orbit and therefore how to mitigate against them, and also aids understanding of the inventory, formation and evolution of Solar System bodies from which the natural dust population originates.

University of Liverpool, Professor Malcolm Jackson, Microgravity as a model for accelerated skeletal muscle ageing

Previous work by this group has shown that age-related deficits in muscle are linked with an inability of muscle from older people and animals to respond appropriately to exercise. They wish to investigate if a similar failure occurs in muscle exposed to microgravity, to aid understanding of the underlying mechanisms that affect muscle in the ageing population.

University of Nottingham, Professor Nathaniel Szewczyk, C. elegans Exeperiment-2 (ICE-2)

This experiment proposes to build on previous experiments to investigate what molecules control the biological response to spaceflight by studying the response of the worm C. elegans to microgravity. The team anticipate that identifying a molecular mechanism by which spaceflight alters biology further work could be undertaken how this impacts astronaut health, means to counter it and relevance to Earth biology.

University of Oxford and Kings College London, Professor Peter Robbins and Dr Thomas Smith, Study of Advanced Gravitational Physiology of the Lung

This project seeks to understand the factors that cause the baseline variation in inflation in the lungs that is normally present in healthy people by applying the technique of in-airway molecular flow sensing. This information will help develop innovative means of detecting lung disease on Earth.

RAL Space Daniel Gerber, TARDiS

THz Atmospheric/Astrophysics Radiation Detection in Space: This project proposes a remote sensing payload for the ISS which would detect Terahertz signals from space and the Earth’s atmosphere. Monitoring the abundance of atomic oxygen in the upper atmosphere would improve understanding of upper atmospheric cooling, which is believed to be directly related to climate change. Looking into space would pinpoint the location of newly born `warm’ stars which would improve understanding of the physical processes in star formation.

University of Strathclyde, Dr Marcello Lappa, Thermovibrationally-driven Particle self-Assembly and ordering mechanisms in low gravity (PAMELA)

This experiment would seek to explore a new control method of complex fluids based on the application of “vibrations”. Once this technique has been validated through experiments, it could be could be applied to allow the production of “new” inorganic or organic materials in space with properties that cannot be obtained on the Earth.

University of Surrey, Professor Simon Archer, Implementation on the ISS of blood transcriptome-based biomarkers

The physical effects of disruption to sleep patterns are understood but the underlying molecular mechanisms are less understood. This experiment would seek to detect disruption to the temporal organisation of the human blood transcriptome in crew in space, to seek to provide a model for ageing on Earth and further validate the team’s sleep restriction and simulated microgravity bed rest findings.

Press release: New industry representative appointments to Seafish board

Two new industry representative members have been appointed to the board of the Sea Fish Industry Authority (Seafish).

Michael Mitchell will represent the processing sector and brings with him extensive experience of the seafood sector following 30 years in the industry.

Nathan de Rozarieux will represent the small scale fishing sector and will contribute the knowledge he has gained as both a practitioner and consultant.

Seafish is an industry-levy funded body which carries out a wide range of activities that advocate and support all sections of the fishing industry, from fishermen and processors through to importers, retailers and food service providers.

These are Ministerial appointments supported by the four fisheries administrations, who jointly sponsor Seafish.

The recruitment was carried out in accordance with the Ministerial Code of Practice for Appointments to Public Bodies. All appointments are made on

merit and political activity plays no part in the selection process. However, there is a requirement for the political activities of appointees to be made public. Neither Michael Mitchell nor Nathan de Rozarieux have declared any significant activity.

In addition to the two new members, existing members Alison Austin OBE and Jonathan Shepherd have been re-appointed for a further term of three years.

Biographical details:

Michael Mitchell is currently Managing Director of Fair Seas Limited, a consultancy firm supporting the seafood industry with clients including major value added processors, national and international retailers, food service providers, sustainability standards owners and certification assessment bodies. Previous to this, he spent more than 30 years working in the seafood processing industry, progressing his way from the factory floor to Technical & CSR Director at Young's Seafood Ltd.

Nathan de Rozarieux is currently Managing Director of Tegen Mor Fisheries Consultants Ltd a firm offering a range of industry services. He is the owner-skipper of an inshore vessel operating in Cornwall, a position he has frequently returned to alongside roles at Seafish and WWF-UK. For the past 16 years Nathan has sat as a director of the Duchy Fish Quota Company, a not-for-profit seeking to support the Cornwall inshore fishing industry and is a former committee member of the Cornwall Inshore Fisheries and Conservation Authority.

Guidance: North Sea Fully Documented Fishery (FDF) and North Sea Nephrops schemes

The Fully Documented Fishery (FDF) schemes aim to reduce fish discards and encourage fishermen to fish more selectively. Vessels participating in either scheme are required to comply with the Landing Obligation and all fisheries regulations.

North Sea FDF scheme

To apply for the North Sea FDF scheme you should refer to documents 1a) and 1b). You need to apply to take part by 18 April 2018.

North East Nephrops FDF scheme

To apply for the North East Nephrops FDF scheme you should refer to documents

2a) and 2b). You need to apply to take part by 30 April 2018.

The documents give more information on the specific conditions of each scheme including:

- eligibility
- additional quota given to those boats taking part in the scheme
- rules on discards and undersize fish
- operation of the remote electronic monitoring (REM) system
- control and enforcement
- conditions placed on the vessel and people taking part
- data control and handling
- penalties
- other general conditions

North East Nephrops net selectivity trial

Document 3 provides more information about the North East Nephrops net selectivity trials. To express an interest in taking part in this scheme please contact the MMO by email: ukcatchquota@defra.gov.uk or call 0300 123 1032. Vessels must apply to take part by 30 April 2018.

If you would like to take part in the schemes but are unable to apply by the deadline please contact the MMO as soon as possible to express an interest.

Further information and reports on the results of the scheme are available in the document collection.

News story: Trust Your Vet on antibiotic treatment

A campaign urging pet owners to trust their vets on the use of antibiotics has today been launched by the government.

It follows a new survey by the British Veterinary Association (BVA) that found almost 90% of vets said clients came to appointments with an expectation they will provide antibiotics for their pets.

Nearly 70% of vets also said they feel their clients are not aware of the gravity of the issue of antimicrobial resistance.

Antibiotic resistance is one of the biggest global threats with estimates suggesting it could be responsible for 10 million deaths per year by 2050 – and cost the global economy $100 trillion.

Following a government strategy to tackle AMR launched in 2013, antibiotic

use in livestock has fallen to an all-time low, but attention must now address antibiotic use in companion animals, specifically client expectation and understanding.

Christine Middlemiss, Chief Veterinary Officer said:

> We are a nation of animal lovers, and are committed to having some of the highest animal welfare standards in the world.
>
> We all want to take care of our pets which is why it's important to remember that antibiotics are not always the best treatment.
>
> If that's what your vet says – trust your vet.
>
> We all have a part to play in tackling the threat that is antibiotic resistance and reduce it wherever possible.

John Fishwick, BVA President said:

> Vets are working hard to reduce the threat of antibiotic resistance to ensure these vital medicines can be used in the future. It is incredibly important that pet owners follow veterinary advice and trust their vet's clinical judgement.

John Chitty, the British Small Animal Veterinary Association (BSAVA) President said:

> Antimicrobial resistance is a major problem in all species, so trust your vet to give professional and impartial advice on the correct use of antibiotics to help not only your pet, but the whole pet population.

To help raise awareness of the campaign we're encouraging vets to put up our poster in their practices. The poster is available in Vet Record (6 April) and also downloadable at www.bva.co.uk/trustyourvet where you can also find other resources.

Further information:

- *According to BVA's Voice of the Veterinary Profession survey, conducted in February 2018.
- In 2017 it was estimated that the total number of pets in the UK is 21 million, with 8.5 million dogs, 8 million cats and 900,000 rabbits being among the most popular.