

Government Chief Scientific Adviser's visits to Cefas and Fera

Public Sector Research Establishments (PSREs) play an important role in the UK's science, research, development and innovation landscape. Principally, they support government by providing science advice to policymakers, by acting as a strategic capability in policy delivery and by delivering critical science services for government business and society. The [Science Capability Review 2019](#) recognised that PSREs represent a significant public asset that is currently under-utilised and not well understood across government.

The Government Chief Scientific Adviser (GCSA) Sir Patrick Vallance visited 2 key PSREs in July – Fera Science (Fera) and the Centre of Environment, Fisheries and Aquaculture Science (Cefas).

Centre of Environment, Fisheries and Aquaculture Science

The GCSA recently visited Cefas in Weymouth, along with the Chief Scientific Adviser at the Food Standards Agency, Robin May. Cefas provides world-class science for the marine and freshwater environment. During their visit, the GCSA and CSA gave a talk, and engaged in a Q&A with Cefas scientists on the importance of PSREs, science capability in government, and ensuring policy is evidenced by science.

The visit was predominantly focused on the work of the Animal and Human Health Science Theme at Cefas, and how Cefas is aligning its deep specialisms in hazard identification and control around a broader concept of One Health Surveillance. For example, Cefas is taking the lead on a new Defra international programme aimed at bringing together methods for assessing specific risks throughout the aquatic food supply chain and targeting controls at points within that chain where they can have most impact. This approach enhances both safe and sustainable food supply, and can also positively impact biodiversity and climate-efficiency of whole food systems.

During the laboratory tour the GCSA and CSA heard about Cefas' national and international programme work, spanning aquatic animal pathology, accredited diagnostics, all gene profiling, bioinformatics, natural biotoxins, chemicals, food-borne pathogens, and antimicrobial resistance (AMR). Cefas' work at its laboratory in Weymouth includes looking at the risks of AMR and assessing the potential impacts of chemicals in the aquatic environment, responsibility for delivering the official controls that help ensure that shellfish across the UK is safe to eat for consumers and control of outbreaks of fish and shellfish diseases in England and Wales. This helps to maintain high standards of biosecurity and animal welfare. All these capabilities help to inform policy and the operational responses both nationally and internationally.

Recent internal investments in cutting edge-technologies for chemical, microbial, and genomic profiling were also discussed during the visit, in relation to emerging opportunities for their application – including in the development of wastewater-based surveillance. This surveillance allowed the Defra group to help support the government's COVID-19 response by testing wastewater samples. This supported effective decision making for NHS Test and Trace to identify how the virus was moving across communities, including new and emerging variants, before being picked up in clinical test data.

The GCSA and CSA also had a series of talks with bacteriologists, toxicologists, shellfish-hygiene experts amongst others to understand how pathogens and toxins are identified and reduce risk for humans, shellfish and molluscs. They were also told about the work of Cefas in other countries to support capacity to identify bacteria and do toxicology on shellfish and molluscs. These activities help support a more sustainable and reliable food source and Ghana and Bangladesh are just 2 of the countries where this work is taking place.

The GCSA said:

It was really great to discuss the importance of science capability in government, and ensure policy is evidenced by science, with the students and early career scientists I met at Cefas.

Fera Science

Fera are experts in safety, biosecurity and sustainability across the agri-food-environment chain. The GCSA visited the York site recently and was informed about Fera's ongoing R&D activities in support of its [Science Strategy](#) and its future growth plans.

Fera is a unique member of the UK PSRE network, in that it operates as a public-private sector partnership under a joint venture business model established by Defra in 2015. This hybrid status has enabled Fera to continue to serve public-sector needs at a much lower cost by being more freely able (and incentivised) to deliver expert scientific services to industry customers and partners on a fully commercial basis. This has enabled Fera to fully finance several of the new infrastructure assets and expert services expansion which were presented on the GCSA's tour of the Fera site.

Just one such example is Fera's work on land use and natural capital assessments which the GCSA was introduced to on the tour. Fera's work in this area supports new environmental land management schemes which aim to deliver national net zero carbon goals, and improve biodiversity and its measurement.

The Fera team also gave a presentation on Fera's work to assess, improve and certify the proficiency of government and commercial-sector labs internationally. This work, for example, enables the UK to have confidence that the data produced by trading partner countries in support of their food and commodity exports are to a UK-equivalent standard.

This was followed by a brief talk on Fera's food safety work at the main Thomson Laboratory location on site which houses over £30m of leading-edge analytical instrumentation which operates 24/7 to provide the analytical results supporting a wide range of Fera's work; examples include statutory testing of maximum pesticide-residue levels in foods, assessing the safety for food contact of packaging materials, through to determining the origin and authenticity of food products which are at high risk of fraud and substitution.

The GCSA also saw the research and testing being conducted for public-sector bodies and commercial agro-chemical and veterinary-medicine companies to evaluate the safety of such chemicals in the natural environment, and their environmental fate. This featured a tour of Fera's new state-of-the-art aquatic toxicology laboratories and the unique [e-Flows Mesocosm](#) which was built with the support of the Crop Health and Protection (CHAP) agri-tech centre and Innovate UK. This is a 'world first' large-scale outdoor field-test laboratory with 66 precisely metricated flowing-water channels which can accurately simulate the impact of chemical and biological interventions in the environment (such as pesticide application) upon the health of aquatic and invertebrate species.

Other experts in the Fera team moved on to talk the GCSA through their work on R&D for assays, molecular detection and genomic sequencing to assess whether plants have been genetically altered, and the measurement and regulatory challenges ahead in detecting the quality and safety of gene-editing processes.

In another example of some of Fera's 'breakthrough' or pioneering work, the GCSA viewed its insect research facilities. Fera's insect research has recently been expanded under a £1m investment made by Fera for a new pilot-scale production facility to support research programmes to evaluate and optimise the application of insect bioconversion at scale. Insect bioconversion is the process of feeding insects organic biomass waste to create additional materials, such as protein (for livestock feed) or bio-fertiliser. The technology can reduce waste, provide alternative (sustainable) sources of protein for animal feed and reduces the environmental impact of sourcing protein from already depleted areas (such as fishmeal and soy).

Reflecting on the visit, the GCSA said:

PSREs such as Fera are really important to help the UK increase its science and technology capability. It was fantastic to visit Fera and learn more about their leading work in agri-food-environmental science.

Monkeypox vaccines to be piloted in smaller but equally effective doses

Three NHS sites are set to begin a pilot offering eligible patients smaller but equally effective doses of the vaccine used for the UK's monkeypox outbreak, stretching existing supplies to protect more people.

The safe and clinically-approved approach, known as 'fractional dosing', has been commonly used in other worldwide outbreaks when vaccine supplies are constrained. It will be introduced in one sexual health clinic in Manchester from today (Monday), and a further 2 in London shortly.

Fractional dosing could maximise the number of doses that can be administered without compromising protection, with [clinical study results](#) showing it provides a near-identical immune response in patients.

Under the approach, eligible people aged 18 and over will be offered a 0.1ml dose of the smallpox Jynneos vaccine, instead of the 0.5ml dose that is typically administered. This will potentially enable up to a 5-fold increase in the number of people that can be offered vaccination.

Fractional dosing has recently been authorised in the US by the Federal Drug Administration for its own monkeypox response. The European Medicines Agency Emergency Task Force has [also approved the approach](#).

The UK Health Security Agency (UKHSA) has reviewed the evidence in detail alongside the Joint Committee on Vaccination and Immunisation (JCVI) and is now working with NHS England to test the feasibility of the approach at pilot clinics in Chelsea and Westminster NHS Foundation Trust, Central and North West London NHS Foundation Trust, and Locala Health and Wellbeing in Greater Manchester.

In a [letter to Directors of Public Health](#), UKHSA chief executive Professor Dame Jenny Harries has confirmed the details of the pilot, with data gathered by the clinics used to inform planning for possible wider use when more doses of the vaccine arrive in the UK.

Dr Mary Ramsay, Head of Immunisation at UKHSA, said:

Global supplies of the smallpox vaccine used to combat monkeypox are limited but we acted early to ensure the UK obtained the maximum number of doses available.

Adopting this tried and tested technique will help to maximise the reach of our remaining stock, including the 100,000 doses due to arrive in the country next month, potentially enabling us to offer protection for many more thousands of people.

We will continue to remain agile in our response to the monkeypox

outbreak and will adapt our approach as new science and advice becomes available.

Professor Sir Andrew Pollard, Chair of the JCVI, said:

The use of fractional dosing will allow more people to be vaccinated sooner by optimising use of the constrained vaccine supply, and this approach is expected to reduce the spread of monkeypox.

Dosing in this way has been successfully used in outbreaks of other viral diseases around the world and existing data we have reviewed indicates this should not compromise protection.

Dr Claire Dewsnap, President of the British Association for Sexual Health and HIV (BASHH), said:

BASHH absolutely supports the UKHSA led fractional dosing pilots, assessing feasibility in UK sexual health clinics. If acceptable, this would offer us the opportunity to roll out vaccine to those eligible much faster and would address the issues of short supply of vaccine across the world.

Dr Will Nutland, Honorary Assistant Professor at the London School of Hygiene and Tropical Medicine and a co-founder of PrEPster, said:

Fractional dosing provides the potential for many more people to receive vaccination to protect against monkeypox. Given the current global shortage of vaccine supply, this decision is pragmatic and welcome.

Communities we are engaging with are keen to receive vaccination as soon as possible, and the pilots provide the opportunity to understand the acceptability and feasibility of providing vaccination this way.

Evidence shows that fractional dosing, when correctly administered, is as effective as the vaccination method currently in use. We must now collectively move to ensure that those who are given the opportunity to receive vaccination are fully informed and are confident to come forward when invited.

In addition to piloting the fractional dosing approach, UKHSA has determined that, due to the limited vaccine supply at this time, the post-exposure offer of vaccination should be reserved for those close contacts who are at highest risk of severe illness. The JCVI supports this approach.

This change does not affect the eligibility for the wider vaccination programme (pre-exposure offer) but means that post-exposure vaccines will be prioritised for people with immunosuppression, children under the age of 5 years and pregnant women.

These individuals will continue to be offered a 0.5ml dose of the vaccine as we await further clinical data on fractional dosing for these groups.

UKHSA published its [latest technical briefing](#) on the outbreak on Friday.

Update: NWS' marine geophysical survey successfully completed

News story

Investigations off the coast of Copeland to provide data about the potential of deep geology to host a Geological Disposal Facility (GDF).



NWS' first marine geophysical survey off the coast of Copeland, Cumbria, was successfully completed on 18 August. This non-intrusive survey has gathered data to provide a better understanding of the deep geology and supports the search to find a suitable site for a Geological Disposal Facility (GDF).

The survey was undertaken by specialists Shearwater GeoServices, took place over a period of around three weeks utilising the SW Bly, a 92-metre vessel carrying specialist acoustic equipment operating 5km-20km from the coastline.

Nuclear Waste Services is the developer of a GDF and is committed to environmental protection at all times. For the survey, this included securing all the necessary permissions. As best practice and also to comply with the permissions, a team of specialist observers were onboard the SW Bly and kept 24/7 observations from the bridge of the vessel for any mammals and birds. Throughout the survey, there were no safety or environmental incidents, and all mammal sightings were reported back to the Marine Management

Organisation.

Detailed analysis of the data collected from the surveys will be undertaken over the next 18 months and the conclusions will be shared with communities to support discussions about the potential of an area to host a GDF.

For more information, see our [story announcing the start of the survey](#).

The search for a suitable site for a GDF is based on consent from a willing community. [Learn more about geological disposal](#).

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Exciting opportunity to manage inshore fisheries and conservation at Southern IFCA

Applicants should have a willingness to positively engage with both IFCA members and officers and to support and champion Southern IFCA's role in the development of sustainable inshore fisheries and provision of marine environmental protection within the district.

During this recruitment campaign, the MMO will be seeking to appoint to fill current vacancies as well as creating a reserve list for any upcoming opportunities.

The role of an IFCA General Member

The members of the IFCA contribute their knowledge and experience to provide sustainable management of the inshore marine area of their IFCA district. Appointees to IFCA's are legally required to consider all the local fishing and marine conservation interests in the waters of the IFCA district in a balanced way, taking full account of the needs of the IFCA district. Appointees should recognise that they are part of a committee and should not regard themselves as representing solely one area of particular interest within the IFCA district.

These voluntary roles require candidates who can take a balanced approach to caring for our seas, assessing the priority and importance of all users and stakeholders. It is essential that candidates have a good local knowledge of the IFCA area for which they are applying. The members of the IFCA contribute their knowledge and experience to provide sustainable management of their IFCA District. As an IFCA General Member, you will have the opportunity to contribute your knowledge and experience to committee meetings helping to

shape and direct the work of the IFCA.

This membership puts local people in the driving seat of fisheries management and is an exciting opportunity to shape the development of inshore fisheries in your region.

As a member of an IFCA committee you will work in a team with others, helping to ensure that:

- the use of sea fisheries resources is carried out in a sustainable way and is balanced with the need to protect the marine environment or promote its recovery from, the effects of exploitation
- the different needs of those engaged in the exploitation of sea fisheries and marine resources are balanced
- the conservation objectives of marine conservation zones are achieved

Although these appointments are unpaid, Southern IFCA will reimburse any reasonable expenses.

IFCA's seek to achieve a balanced membership across various interest groups, including but not limited to those with commercial, recreational, and environmental interests.

How to Apply

We welcome applications from the recreational angling sector who have a good knowledge of the Southern IFCA District.

To apply please complete and submit an application form no later than 7 October 2022. Applications forms should be emailed to ifcarecruitment@marinemanagement.org.uk or posted to IFCA Recruitment, Marine Management Organisation, Lancaster House, Newcastle upon Tyne, NE4 7YH.

Should you have any questions about the recruitment process please contact the Marine Management Organisation on 0300 123 1032.

Should you wish to find out more about the role of an IFCA General Member or require assistance with completion of your application form please contact your local IFCA Office by telephone (01202 721 373) or via email at enquiries@southern-ifca.gov.uk

PM call with the leaders of the United States, France and Germany: 21 August 2022

Press release

Prime Minister Boris Johnson spoke to US President Joe Biden, French President Emmanuel Macron and German Chancellor Olaf Sholz.



The Prime Minister spoke to the leaders of the United States, France and Germany this afternoon to discuss cooperation on matters of international security and diplomacy.

On a joint call, the Prime Minister, President Biden, President Macron and Chancellor Scholz underlined their steadfast commitment to supporting Ukraine in the face of Russia's invasion.

They stressed the importance of ensuring the safety and security of nuclear installations and welcomed recent discussions on enabling an IAEA mission to the Zaporizhzhia facility.

They also discussed other shared priorities, including Iran and joint efforts to prevent nuclear proliferation and deter Iran's destabilizing regional activities.

The Prime Minister welcomed the opportunity to speak, and the leaders agreed their teams would continue working closely together in the coming weeks.

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