



Department
for Environment
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Sir Robert Goodwill
Chair
Environment, Food and Rural
Affairs Committee
House of Commons
London
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15 November 2022

Dear Sir Robert,

Response to EFRA consideration of Sealife Mortality off the North East Coast

Thank you for the interim conclusions from the Environment, Food and Rural Affairs Committee's hearing on October 25th, and for your letter to the Secretary of State. I am responding on her behalf to the points raised in your letter and to indicate the actions that Defra will be taking in response.

As you know, there was a multi-Defra agency response to the incident that started in October 2021 and concluded in February 2022. The associated report of the investigation was then published [Joint agency investigation into Teesside and Yorkshire Coast Crab and Lobster mortalities - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

In your letter, you requested that the Government Chief Scientific Adviser should appoint an expert independent scientific panel ("the expert panel") to review the evidence for the two theories put forward as a cause of this mass-mortality.

The Secretary of State has asked Defra's Chief Scientific Adviser, who has not previously been involved in consideration of this issue, to liaise with the Government Chief Scientific Adviser to establish an independent group of external experts to assess the evidence and consider all explanations for sealife mortality, including the possible role of pyridine. She has asked that this work is completed in a timely fashion, and the findings of the panel will be published.

Your letter raised a number of other points to which I'd like to respond now to aid the committee's understanding and ahead of the expert panel's findings including:

- i. The need for more research on pyridine levels in the Tees Estuary;
- ii. That research and data should be open;
- iii. That MMO should review dredging practises in the area; and
- iv. That the Government should consider compensation to local communities.

i. Further research into Pyridine levels:

You recommend further data and research on the causes of the mass die-off including urgent investigation of the potential sources of pyridine that Dr Gary Caldwell of Newcastle

University identified in his oral evidence. You say this should include more extensive sampling of the sediments in the bed of the Tees Estuary to create a map of potential sources of pyridine in proximity to maintenance dredging and the wider area.

Defra group organisations have been actively undertaking research since the incident and the investigation. Investment has been made to develop a programme of research to consider how to measure the amount of pyridine in tissue, the effects of algal blooms, and test laboratory findings in field conditions. As part of the Defra group investigation, the EA had carried out a review of the possible sources of pyridine Dr Caldwell identified in his evidence to the Committee. They concluded that they were not credible sources directly causing the impacts being seen.

Your proposal to map sources of pyridine would provide more granular information about the spatial extent of potential pyridine within Tees estuary sediments. There is a body of scientific literature that details known contaminants of concern such as polychlorinated biphenyls and polybrominated diphenyl ethers, in sediments, water and biota in and around the Tees. Comparatively, pyridine is not a known contaminant of concern for sediments and biota due to its known chemical and ecotoxicological properties. As such, the evidence base for sediments is weaker than for other contaminants. Pyridine is, however, a known contaminant of concern for water, due to its known chemical properties and is monitored accordingly. EA detected no evidence of pyridine from water samples during the monitoring following the incident (October to December 2021). Pyridine is rarely detected in water including in the Tees and before that, the highest level of pyridine detected over the past decade was 2.4 µg/l (surface sample collected at Redcar Jetty) in October 2012.

We will seek advice from the external expert panel to assess whether additional measurements of pyridine in the sediments and waters of the Tees region would be beneficial, recognizing that a comprehensive survey across the full region would involve significant costs which would require adequate justification and clarity about the usefulness of resulting data.

It should be noted that during panel 1 of your evidence hearing, one of the committee members questioned the representative from PD Ports as to the impact of dredging to “14.6 m” when pyridine was found by NEFC Group researchers in the top 0.2 m of sediment. There may be a misunderstanding about this detail. Reference to dredging to “14.6m” referred to the water depth and not the sediment depth. Maintenance dredging seeks to maintain a safely navigable water depth through the removal of accreted sediments up to the Chart Datum depth of 15.4m.

ii. All research and data should be open

Defra research and data is routinely published. All data relating to processing applications for disposal and/or dredging licences are published on the MMO Public Register and can be specifically identified for an expert panel. Defra group are currently working to publish all raw data and ancillary reports onto government websites. This takes time to ensure the government information and accessibility is legally compliant, however it should be available online in the next few weeks. We expect that all parties involved in this issue will also ensure results and data are made available for peer-review and publication.

iii. Review of dredging practices

On the basis of previous evidence, we have not previously concluded that more evidence is needed. The views of the Expert Panel will steer consideration of further action.

Capital and maintenance dredging are common activities around the coast of England and have taken place on the Tees for many decades. The decisions on dredging methodologies and disposal of dredge material are fundamental to the continued operation of ports and associated industries. Requirements of dredging techniques may be entirely dependent on

local conditions, and an assessment is made pre-determination as a part of the licensing process as to the type of dredging allowed to take place and any mitigation required is included as licence conditions.

The MMO have conducted marine licence inspections on the dredging works in question and following this they remain satisfied that the works are being conducted in line with the relevant marine licence(s). Inspections on the licenced activities will continue on a periodic basis throughout the length of the licence.

iv. Compensation to local communities

Last, you suggest that the Government should reconsider its position on providing financial support to affected communities with a dedicated, fund to support affected fishers and pot- ters and the regeneration of crab and lobster stocks. Defra analysts are continuing to as- sess the economic impacts of this incident including a comparison with landing data from previous years and with other parts of the country for the affected species.

The Secretary of State and I will be happy to speak with the Committee to discuss this matter further.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'M Spencer'.

The Rt. Hon. Mark Spencer MP