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Planning

## **Advanced technologies for autonomous health and welfare monitoring in aquaculture**

DEPARTMENT OF ENVIRONMENT, FOOD AND RURAL AFFAIRS

UK2: Preliminary market engagement notice - Procurement Act 2023 - [view information about notice types](#)

Notice identifier: 2025/S 000-046846

Procurement identifier (OCID): ocds-h6vhtk-05833b

Published 7 August 2025, 11:52am

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### **Scope**

### **Description**

Scope - The Government supports the production of healthy, high-welfare animals as part of the UK's food system. We are aware that there is significantly less known about what drives the behaviour of individual fish compared to terrestrial animals. Technical advances in monitoring individuals in group settings combined with artificial intelligence have the potential to play an increasingly important role in animal welfare assessment, and the full potential of these approaches remains to be realised. One anticipated application of the proposed operational product is to improve the monitoring of the health and welfare of Atlantic Salmon and Rainbow Trout, including during breeding. For instance, this could enable us to better understand the welfare impact of different breeding goals and practices. Key objectives of the potential requirement are to: (a) identify key species-specific health, and especially, welfare indicators that could be assessed using new techniques for autonomous fish monitoring, focusing on Atlantic Salmon and Rainbow Trout; (b) develop new software that allows for improved autonomous monitoring of these indicators for large numbers of fish in commercial conditions; and (c) validate these novel techniques for assessing health and welfare through pilot tests, including assessing the

feasibility of implementation. Skills and Experience - • Demonstrable understanding of fish welfare science and current approaches to health and welfare assessments. • Demonstrable experience and understanding of recent developments in relevant advanced technologies (e.g. artificial intelligence tools, such as “machine vision”) and an ability to build on these approaches. • Demonstrable knowledge and understanding of commercial aquaculture breeding and production, particularly Atlantic Salmon and Rainbow Trout. • Access to relevant industry stakeholders to allow for feedback on the practicality of proposals, and opportunities for pilot testing. • Clear verbal and written communication for discussions with key project staff and stakeholders. • Project management skills to oversee the development and delivery of the project to time, cost, and quality criteria. We anticipate an Invitation to Tender around October 2025. Defra is seeking value for money in this potential procurement, within the range of £250,000-£450,000. Consortium applications, and collaborations with industry and/or commercial partners, are welcomed.

### **Contract dates (estimated)**

- 19 January 2026 to 31 March 2028
- Possible extension to 31 March 2029
- 3 years, 2 months, 13 days

### **Main procurement category**

Services

### **CPV classifications**

- 73200000 - Research and development consultancy services
- 73300000 - Design and execution of research and development

### **Contract locations**

- UK - United Kingdom

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## Engagement

### Engagement deadline

21 August 2025

### Engagement process description

Defra is seeking to gather expressions of interest from interested suppliers that may be able to deliver a potential proof-of-concept research requirement. The project would aim to deliver a proof-of-concept output, aligned with recent advances in emerging technologies such as, but not limited to, artificial intelligence, to progress key stages in the development of an operational tool for autonomous monitoring of health and welfare within aquaculture, focusing on Atlantic Salmon and Rainbow Trout. Interested suppliers are asked to register their interest by completing the following form:

<https://forms.cloud.microsoft/e/w3ZCJhUSa2> This should be completed and submitted no later than 17:00 on 21/08/2025. If you have any questions, please email [emily.hayes@defra.gov.uk](mailto:emily.hayes@defra.gov.uk).

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## Submission

### Publication date of tender notice (estimated)

13 October 2025

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## Contracting authority

### DEPARTMENT OF ENVIRONMENT, FOOD AND RURAL AFFAIRS

- Public Procurement Organisation Number: PNBD-3289-CDGX

Seacole Building, 2 Marsham Street

London

SW1P 4DF

United Kingdom

Contact name: Defra group Commercial

Email: [emily.hayes@defra.gov.uk](mailto:emily.hayes@defra.gov.uk)

Website: <https://defra-family.force.com/s/Welcome>

Region: UKI32 - Westminster

Organisation type: Public authority - central government