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Tender

## **Advancing the metabarcoding assay validation framework**

Natural England

UK4: Tender notice - Procurement Act 2023 - [view information about notice types](#)

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### **Scope**

### **Reference**

NE230525AMAVF

### **Description**

DNA-based methods have the potential to significantly change how we monitor and assess ecosystems. Natural England has been exploring the use of these methods for environmental monitoring for several years, delivering a series of reports which focus on the development of DNA-based methods with potential in a particular area. These methods are now being used more widely within Natural England, particularly the detection of ecological communities using environmental DNA (eDNA). This is often conducted by employing metabarcoding assays which target specific species assemblages (e.g. fish, mammals) or broader taxonomic groups (e.g. vertebrates, invertebrates, bacteria).

The DNA Team aims to operationalise DNA-based methods and produces guidance for

using them in monitoring projects. In order to provide sound recommendations, it is important that we understand the limitations of, and uncertainties with, DNA-based methods. Natural England staff need to be able to understand how DNA-derived data can be used, and the confidence they can have in data derived using different DNA-based methods which have been validated to different stages.

Natural England previously commissioned the development of a framework to enable end users to assess confidence in metabarcoding assays and results (Pagaling and others, under review; a copy of the framework can be provided by Natural England upon request by emailing [monitoring.innovation@naturalengland.org.uk](mailto:monitoring.innovation@naturalengland.org.uk)). By using the checklist and levelled scale, end users can appropriately interpret results. It also provides validation and reporting standards for the development of new metabarcoding assays. The framework will enable end-users to determine the recommended scenarios for application of a given assay and improve assay performance with further validation.

As part of development, the framework was trialled against five commonly used assays in the eDNA literature, with specific climate and habitat combinations to account for inherent differences in biodiversity between climates and different workflows used across habitats. Due to time and resource, only temperate climates and one or two habitats for each assay were considered, and the number of metabarcoding studies evaluated to assign a level for each assay varied.

This project will advance the metabarcoding assay validation framework by expanding upon this trial to conduct a comprehensive literature review and meta-analysis, covering more assays being used for different purposes and in different contexts. Feedback on the framework will be sought from the wider eDNA community and a user guide created for applying the framework.

### **Total value (estimated)**

- £50,000 excluding VAT
- £60,000 including VAT

Below the relevant threshold

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

- 7 July 2025 to 27 February 2026

- 7 months, 21 days

## **Main procurement category**

Services

## **CPV classifications**

- 73000000 - Research and development services and related consultancy services

## **Contract locations**

- UKC - North East (England)
- UKD - North West (England)
- UKE - Yorkshire and the Humber
- UKF - East Midlands (England)
- UKG - West Midlands (England)
- UKH - East of England
- UKI - London
- UKJ - South East (England)
- UKK - South West (England)

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## **Participation**

## **Particular suitability**

Small and medium-sized enterprises (SME)

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## **Submission**

### **Tender submission deadline**

20 June 2025, 12:00pm

### **Submission address and any special instructions**

To apply for this opportunity, you must submit your quotation meeting the requirements detailed in the Request for Quotation (RFQ) attached. Your response must be sent to [monitoring.innovation@naturalengland.org.uk](mailto:monitoring.innovation@naturalengland.org.uk) by 12pm BST on 20th June 2025.

If you have any clarification questions linked to this opportunity or the procurement process, please submit these via email to [monitoring.innovation@naturalengland.org.uk](mailto:monitoring.innovation@naturalengland.org.uk). Please note that, unless commercially sensitive, both the question and the response will be circulated to all tenderers.

### **Tenders may be submitted electronically**

No

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## **Award criteria**

see RfQ

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## Procedure

### Procedure type

Below threshold - open competition

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## Documents

### Associated tender documents

[2025-05-28\\_RFQ\\_advancing\\_metabarcoding\\_assay\\_validation\\_framework.docx](#)

RfQ

[LIT63284\\_Commercial\\_Response\\_Basic.docx](#)

Commercial Response Template

[Order\\_Form\\_NE\\_Standard\\_Goods\\_Services\\_Terms\\_Conditions.docx](#)

Contract Draft

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## Contracting authority

## **Natural England**

- Public Procurement Organisation Number: PJDG-6588-XDMM

Seacole Building, 2 Marsham Street

London

SW1P 4DF

United Kingdom

Email: [monitoring.innovation@naturalengland.org.uk](mailto:monitoring.innovation@naturalengland.org.uk)

Region: UKI32 - Westminster

Organisation type: Public authority - central government