Sea Fish Industry Authority

Invitation to Tender

(Open Procedure)

Microplastics and nanoplastics in the marine environment: implications for seafood and food safety

Issued on: 23rd July 2018

Seafish Reference No: TD2018-004
Table of Contents

1. About Seafish ......................................................................................................................................3
2. About the project ..............................................................................................................................4
   2.1 Project aims ..................................................................................................................................4
   2.3 Scope ..........................................................................................................................................5
   2.4 Outputs .......................................................................................................................................6
   2.5 Outcomes ....................................................................................................................................6
   2.6 Expected approach .......................................................................................................................6
3. The tender and contract ....................................................................................................................7
   3.1 Timetable for delivery ..................................................................................................................7
   3.2 Costs ..........................................................................................................................................7
   3.3 Responsibilities of the contractor .................................................................................................7
   3.5 Timeline of tender process ...........................................................................................................7
   3.6 Awarding criteria .........................................................................................................................8
   3.8 Contact information at Seafish .....................................................................................................8

Appendix 1: Details to be included in the submitted tenders ............................................................9
Appendix II: Awarding criteria ............................................................................................................9
1. About Seafish

Seafish sits at the heart of the seafood industry, bringing all its sectors together in support of a shared agenda. We offer a central pool of products, services and expertise that can support our stakeholders, raise standards, drive improvement and improve efficiencies across all areas of the industry.

Seafish is a Non-Departmental Public Body (NDPB), set up by the Fisheries Act 1981. The organisation is led by industry and governed by an independent Board. We are accountable to the four Fisheries Administrations who, in turn, must answer to their respective parliament or assembly for the overall performance of Seafish.

We are funded through a statutory levy made on the first sale of sea fish, shellfish, sea fish products.

Our focus, which in turn shapes our work programme, is to enable transformative industry-wide change by working to overcome the five key challenges that are acting as barriers to a thriving seafood sector. Going forward, all our products, services and insights will be aligned to at least one of these challenges:

**Challenge 1:** Changing political, economic and regulatory landscape as the UK exits the EU.

**Challenge 2:** Stagnant consumer demand and strong competition from other protein and non-protein foods.

**Challenge 3:** Competing with other food production sectors for access to a suitably skilled workforce, while addressing complex challenges around workplace safety.

**Challenge 4:** Sourcing sustainable seafood in an increasingly competitive global market, alongside continued public concern over practices that compromise human welfare and the environment.

**Challenge 5:** Successfully accessing the data, information and knowledge that will ensure the sector is equipped to understand and respond innovatively to a changing environment.

Our work is diverse and spans the seafood supply chain covering everything from fishing to eating seafood. Our 80-plus professional staff works alongside their industry colleagues in pursuit of a range of objectives.

For more information on our current strategy you can visit [our website](#) and current Corporate Plan (2018-2021).
2. About the project

Marine litter and plastics in the marine environment have been and continue to be researched in the context of environmental impacts and effects on marine life. Although the issue is defined as marine, the sources of plastics in the marine environment originate from both sea and land based activities. Recent research studies suggest there is a potential food safety issue associated with marine microplastics and nanoplastics entering the food chain.

A statement from EFSA (2016)\(^1\) and a report by the FAO (2017)\(^2\), indicate that further research is required before any formal assessment can be made on whether any food safety risk exists. Both publications refer to a variety of data and knowledge gaps.

Seafish completes periodic horizon scanning exercises to identify potential risks that could impact on the seafood industry. The most recent scan, completed in 2017, identified microplastics in the marine environment as a priority risk.\(^3\) In response, Seafish has established a ‘marine plastics’ reference group, in collaboration with industry colleagues, focused on improving knowledge and understanding of this important issue.

To understand the current landscape on the implications of plastics on the marine environment, Seafish produced two briefing papers:

- **Sources, fate, effects and consequences for the seafood industry of microplastics in the marine environment** (2016).
- **Update on the sources, fate, effects and consequences for the seafood industry on the marine environment** (2018).

There is growing consumer interest in this issue and recent media articles have flagged potential food safety concerns from marine plastics entering the food chain (see here). Enabling the seafood industry to (1) engage in this debate in an informed and meaningful way, and (2) manage any risks that may exist, is a key driver for this research project.

The reference group is responsible for overseeing the delivery of this project. The reference group acknowledges that the potential food safety risk from plastic waste is not limited to seafood. As such we are also interested in hearing from research providers with general expertise in plastics, toxicology and food safety risks.

2.1 Project aims

The aim of this project is to help Seafish and the seafood industry to answer the following questions.

1. How do micro/nano plastics in the marine environment enter the seafood chain?

2. What are the potential risks for seafood products from micro/nano plastics?

---

\(^1\) EFSA Panel on Contaminants in the Food Chain (CONTAM), Presence of microplastics and nanoplastics in food, with particular focus on seafood, 2016

\(^2\) Food and Agriculture Organisation, Microplastics in fisheries and aquaculture: Status of knowledge on their occurrence and implications for aquatic organisms and food safety, 2017

\(^3\) More information on Seafish Horizon Scanning can be found at [http://www.seafish.org/industry-support/seafood-horizons](http://www.seafish.org/industry-support/seafood-horizons)
3. What are the food safety implications for consumers and how might this impact on the seafood industry?

2.2 Project phases

The project will consist of two phases with an option for a third phase depending on Phase 1 and Phase 2 findings. The three phases are:

**Phase 1:** An assessment of the current knowledge base relating to the impact of marine plastics on the seafood chain which will include a summary of the key knowledge gaps limiting our understanding of the issue. This assessment should include:

- An overview of current research findings, and details of any new research underway in UK Universities/research institutes and relevant overseas research bodies.
- Details of any action taken by the plastics manufacturing industry to better understand and respond to this specific issue.
- Consideration of how other food industries are responding to this issue.
- Consideration of how regulatory agencies in the UK and in key UK seafood markets are responding to this issue.

**Phase 2:** Establish a framework to enable regular risk assessments to be completed on this issue, as the information base improves. These risk assessments should focus on the actual risk to health and the risk to business as a result of consumers avoiding seafood because of any perceived risk. Seafish has a framework for industry risk assessment, involving periodic horizon scanning exercises to identify potential risks that could impact on the seafood industry. Our preference is that Phase 2 is aligned with the existing Seafish framework.

**Phase 3:** Depending on the findings from Phase 1, undertake a preliminary assessment of the risks to consumers from marine microplastics micro and nanoplastics in the seafood chain.

2.3 Scope

The scope of the project includes:

- Food safety risks associated with the direct and indirect effects of micro and nanoplastic particles in the marine environment. Note that:
  - Direct effects relates to plastics ingested during seafood consumption
  - Indirect effects refer to risks from contaminants and additives carried on micro- and nanoplastics and the synergistic effects between nanoparticles and sorbed contaminants.
- Potential food safety risks in the context of the human exposure to micro (and nano) plastics through all routes, including ingesting other foods and breathing in particles.
- Perceived risks and their current and potential effects on the seafood market and seafood consumption.
- All main seafood types (fish, shellfish (crustacea, bivalves)). Note that the UK seafood industry utilises a wide range of species (whitefish, pelagic, shellfish, salmonids) derived from wild capture and aquaculture, sourced from UK waters and internationally.
- Plastics in the marine environment including microplastics, nanoplastics.
- Research findings and information from the UK, EU and globally.
- Existing research findings and details of new research projects that are underway but have not yet concluded.
The scope of the project **excludes**:
- Detailed analysis of plastics and their impact on the marine environment.
- Mitigation and management measures for plastics in the marine environment.
- Source and pathways of plastics ending up in the marine environment.
- Any food safety issues associated with the use of plastic in food manufacturing and distribution.

### 2.4 Outputs
The required deliverables of the project are:
- A comprehensive, fully referenced and independently peer reviewed report on the findings from Phases 1 and 2. Peer reviewers will be agreed with Seafish.
- A factsheet summarising the main findings.
- Presentation of the findings to the reference group.

If the project progresses to Phase 3 a separate risk assessment report should be produced. This will be scoped and costed separately once Phase 2 concludes.

### 2.5 Outcomes
The expected outcomes arising from the project are detailed below noting that these are not necessarily the sole responsibility of the contractor.
- The seafood industry, government and the wider research community have a shared understanding of the current landscape surrounding this issue and are better able to determine where future research should be directed.
- The seafood industry is better informed and positioned to respond to any food safety concerns (perceived or actual) that might arise.
- Understanding the risks (real, perceived or non-existent) will help the seafood industry to manage consumer concerns at a sector wider and individual company level.
- Findings that can be used to inform future policy considerations.
- Establishes a network of expertise on this issue.

### 2.6 Expected approach
Seafish is appointing an independent contractor to undertake this work. The research approach is expected to include:
- Desk based research including detailed review of scientific papers, published reports, other literature and websites, policy briefings etc.
- Discussions with representative seafood businesses in the UK supply chain, seafood industry groups and representatives. Seafish will assist in facilitating industry meetings primarily through the reference group.
- Direct engagement with other stakeholders that work in this area, in the UK, EU and globally. This would not be limited to seafood.
- Direct engagement with experts, research organisations, policy makers in the UK, EU and globally.

The work must not duplicate reports that have been or are being carried out by others, however these can be referenced.
3. The tender and contract

3.1 Timetable for delivery
The start date for the project is October 2018 and the target delivery date of Phase 1 and Phase 2 and outputs is six months after the contract start date (expected by end April 2019). The peer review process may extend beyond the six months.

Responses to this tender should include an explanation if this timeline is challenging.

3.2 Costs
Seafish will not provide an indicative budget for this work, in advance of the tender submission date.

Tenders should be submitted covering all costs associated with the project. Each Phase of the work should be costed separately. Costs should be stated exclusive and inclusive of VAT, if applicable.

An applicant is not entitled to claim from Seafish any costs or expenses incurred in preparing the tender document whether or not it is successful.

3.3 Responsibilities of the contractor
The contractor will be responsible for completing the project and producing Phase 1 and 2 outputs within the agreed deadline.

The contractor is responsible for fulfilling all responsibilities within the quoted costs.

3.4 Responses to this tender
Contractors are requested to submit a response to this tender, providing detail of the approach to be taken, expertise, and a detailed plan specifying timescales for the project, by main tasks. See Appendix I for further information.

3.5 Timeline of tender process
The deadline for submitting tenders by e-mail is 4pm on Friday 7th September, 2018. Submissions received after this time will not be accepted.

The tender process timetable is as follows:

<table>
<thead>
<tr>
<th>Actions</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of application to tender document</td>
<td>Monday 23rd July 2018</td>
</tr>
<tr>
<td>Last date for receipt of tender document submission</td>
<td>4pm on Friday 7th September 2018</td>
</tr>
<tr>
<td>Assessment of tenders received and follow up as required</td>
<td>10th to 24th September 2018</td>
</tr>
<tr>
<td>Follow up discussions with tenderers (TBC)</td>
<td>w/c 24th September 2018</td>
</tr>
<tr>
<td>Notification to successful applicant of intent to award contract</td>
<td>w/c 24th September 2018</td>
</tr>
<tr>
<td>Notification to unsuccessful applicants</td>
<td>w/c 24th September 2018</td>
</tr>
<tr>
<td>Contract commencement date</td>
<td>October 2018</td>
</tr>
</tbody>
</table>
3.6 **Awarding criteria**

All submissions will be assessed for their value-for-money and quality. The detailed criteria for assessing submitted tenders are included in Appendix II.

Following the evaluation of tenders it is feasible that one provider is unable to fulfil all the requirements. In this case we may ask two separate contractors to consider partnering on this work.

3.7 **Contract and project management**

The contract and project will be managed by Seafish who will be responsible for ensuring the project is delivered. The project will be managed within Seafish’s standard project management process. The contractor is required to submit regular (monthly if appropriate) updates on progress.

Upon appointment, the successful contractor will be required to sign a contract including a confidentiality agreement.

3.8 **Contact information at Seafish**

For further information on this tender and to submit completed tenders by e-mail by the deadline (4pm on Friday 7th September, 2018), please contact the following;

Up to and including 31st August;

- Michaela Archer (michaela.archer@seafish.co.uk); or
- Aoife Martin (aoife.martin@seafish.co.uk)

After 31st August;

- Ivan Bartolo (ivan.bartolo@seafish.co.uk)
Appendix 1: Details to be included in the submitted tenders

Contractors are requested to submit a response to this proposal, providing details of the approach to be taken, expertise, timeline and costs.

As a minimum, tenderers are required to submit the following:

- Name of the tenderer(s), status in the company / organisation.
- The proposed main point of contact.
- Evidence of capabilities and track records in this area, including
  - Examples of relevant projects successfully completed.
  - Overview of the team who will undertake the work, including credentials.
- Explanation of how the work will be undertaken, including;
  - Approach to be taken.
  - Timeline for undertaking the work, including completion date and milestones.
- Detailed costs under the following subheadings:
  - Fees – by activity/staff time
  - Reporting and management fees
  - Any other costs
  - VAT where applicable
  - Total
- Explanation of any projects previously undertaken for Seafish, including point of contact at Seafish.

Appendix II: Awarding criteria

All submissions will be assessed for their value-for-money and quality. In the interest of ascertaining the highest level of transparency, fairness and competition, the following evaluation matrix will be used to score each response:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value for money</td>
<td>30</td>
</tr>
<tr>
<td>Quality</td>
<td></td>
</tr>
<tr>
<td>Understanding of the requirements</td>
<td>15</td>
</tr>
<tr>
<td>Approach to undertaking the project</td>
<td>15</td>
</tr>
<tr>
<td>Relevant experience and expertise in this field</td>
<td>40</td>
</tr>
</tbody>
</table>