

Sustainable Water Network (SWAN)

Agriculture in Ireland & implications for meeting
Water Framework Directive and Nitrates Directive
objectives



- Tender Invitation Document | Research Brief -

November 2024

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1. INTRODUCTION / SUMMARY

The Sustainable Water Network (SWAN) seeks a researcher to conduct a desk-based research project on agriculture as a significant water management issue in Ireland, entitled ***'Impacts of agriculture on Ireland's water resources & implications for meeting Water Framework Directive and Nitrates Directive objectives.'*** This will look at agriculture's impacts on freshwater, transitional and coastal waters, and groundwater and groundwater dependent terrestrial ecosystems (GWDTes) and the implications for Water Framework Directive (WFD) and Nitrates Directive (ND) implementation, the status of Ireland's waters and the meeting of WFD and ND targets. The research must be based on a wide range of primary and secondary literature, including national and international peer-reviewed publications.

The final report should provide an evidence-based analysis of the impacts of the full range of agriculture practices on Ireland's waters, including cumulative impacts and the implications for Water Framework Directive (WFD) implementation and the meeting of WFD and ND targets. It will also provide a comprehensive review of relevant EU and Irish policy, legislation and guidance, including a critical analysis of the efficacy of the above to control agricultural impacts in order to meet WFD and ND objectives in Ireland. It will also include a comparative study of management / regulatory regimes in other jurisdictions, and best practice applicable to Ireland. The research will be based on a wide range of national and international primary (peer-reviewed) and secondary literature, in addition to international case studies and best practice.

Based on the above research and literature review, **the key output from the research will be a set of evidence-based recommendations** setting out proposed actions to regulate / manage agricultural impacts in Ireland (including restoration) in order to meet WFD and ND objectives.

2. Purpose of this research

The purpose of this desk-based research project is two-fold: 1) to provide a literature review on the pressures and impacts of agriculture on the water environment, in the context of the achievement of WFD and ND targets in Ireland and 2) based on this and also on case studies and best practice, to present robust, evidence-based recommendations regarding how best to address and manage agricultural impacts in order to meet WFD and ND objectives and achieve sustainable water management in Ireland. The end-use of this research will be to:

- provide the evidence-base to inform SWAN submissions and communications during formal and informal consultations on relevant policy development and implementation, with national Government agencies and Departments, EU institutions and other stakeholders and
- support the relevant policy and advocacy work of SWAN member organisations on this issue in order to inform and contribute to a national debate on agriculture, specifically in relation to its impact on the aquatic environment and WFD implementation.

3. SCOPE OF WORK

In order to achieve the above purpose, the report should encompass the following scope, and satisfy the following project objectives, requirements and deliverables:

3.1 Specific project objectives

1. A comprehensive literature review including primary (peer-reviewed), secondary and tertiary literature to provide a full overview of the pressures and impacts on surface water, groundwater and GWDEs posed by agriculture to inland, coastal and ground waterbodies. This will include:
 - Impacts of the main agriculture types in Ireland including dairy; beef (intensive, feedlot and extensive); sheep; pigs; poultry; tillage, horticulture, and anaerobic digestion, including via nutrient, sediment, pesticides and physical alterations to waterbodies
 - cumulative impacts, in particular on WFD status;
 - Beneficial effects, if any, of organic farming practises on water quality/status
2. A brief description and analysis of the relevant provisions in the WFD and ND;
3. An overview of current relevant EU and Irish policy, legislation and guidance governing agriculture, pertinent to water, including the inter-relationships between these, with a particular focus on how: 1) the water-related aspects of CAP and b) the nitrates derogation interact with the WFD;
4. A critical analysis of the above policy and legislative provisions governing agriculture, in the context of the meeting of WFD and ND requirements. This should include:
 - Identification of the relevant competent authorities, agencies and responsible government departments and the overlaps and gaps between their responsibilities;
 - An assessment of the effectiveness of the current legislative, policy and planning regime for controlling the impacts of agriculture on water and on meeting WFD & ND targets, including strengths & weaknesses, and an assessment of its implementation and enforcement;
5. To identify and draw on case studies of different management regimes, focusing on other EU Member States, but examining other jurisdictions where relevant, with a focus also on both lessons learned and best practice applicable in Ireland;
6. Based on 1- 5 above, to present a discussion of findings leading to a set of recommendations on how best to address the impacts of agriculture on Ireland's surface water, groundwater and GWDEs, in order to achieve sustainable water management and to meet WFD and ND targets, with particular focus on cumulative impacts and EU and international experience and including:
 - Recommendations for control of nitrates
 - Recommendations for control of phosphates and sediment

- Recommendations for control of pesticides
- Recommendations on the control of physical alterations to waterbodies (including drainage)
- Recommendations in relation to regulatory and voluntary measures, including within CAP
- Recommendations on restoration;
- Catchment-specific recommendations, where identified;

3.2 Additional requirements and services

- To attend an online project initiation meeting, and an interim meeting if deemed necessary, with the SWAN Project Steering Group;
- This report will be widely promoted by SWAN as a high-profile publication of strategic importance, which will play a significant role in informing potentially contentious future public debates on agriculture. To this end, SWAN expects it to be underpinned by a strong review of literature and to be written to a high publication standard with a high level of interpretation and insight and clear, evidence-based recommendations.

3.3 Deliverables

- Monthly email updates to the SWAN Project Manager;
- Full technical report (including an Executive Summary), suitable for publication and meeting all project objectives and requirements set out in 3.1 and 3.2 above;
- Draft literature review and draft report to be presented to the SWAN Steering Group for review at phased dates to be agreed in consultation with the Project Manager;
- Two rounds of consultation with the Steering Group, this to be facilitated through the Project Manager

4. INFORMATION REQUIRED FROM RESEARCHER

- 4.1. A description of the **methodology, approach and content** proposed to deliver the scope of work set out in Section 3, including an outline plan with timescales and the identification of the distinct elements or tasks;
- 4.2. A **breakdown of costs (inclusive of VAT)**, to include the distinct elements of the work (and where anticipated, expenses), clearly stating whether the costs are calculated on a lump sum or time charge basis
- 4.3. Confirmation of access to the necessary range of international and national **academic peer-reviewed journals**;
- 4.4. Links to written outputs from two relevant **previous projects**;
- 4.5. Identification of any **conflicts of interest**.

5. EVALUATION CRITERIA

SWAN must be satisfied that each potential contractor has the necessary capabilities and resources available to deliver the work to SWAN's requirements and applicants will be assessed in accordance with the following criteria:

- A. The applicant's understanding of the requirements of the project demonstrated in the quality of the proposal and proposed methodology: 35%
- B. The relevant skills, experience, qualifications and expertise of the applicant/project team: 35%
- C. Proposed cost and value for money, taking into account the apportionment of time (and rates for this) between the principal investigator/project leader and other researchers, if relevant: 30%

The assessment will be based on written submissions in the first instance, but interviews may also be held, either in person or online.

6. TENDER APPLICATION PROCEDURE, TIMELINE, BUDGET, PROJECT MANAGEMENT

6.1 Project Management

The researcher will work closely with and maintain regular communications with the SWAN Project Manager, SWAN CEO. A Project Steering Group drawn from SWAN members will be established to guide this research and contribute expertise as appropriate. Communication with the Project Steering Group will take place primarily through the Project Manager but will also include a project initiation meeting and possible interim meetings, if deemed necessary. Regular monthly progress reports will also be submitted to the SWAN Project Manager.

6.2 Tender Application Procedure and Timeline

- 6.2.1 Tender submissions should be limited to a maximum of 8 sides A4 at 10pt font, excl. appendices, title page, table of contents, etc.;
- 6.2.2 Tender submissions should be sent by email to Sinead O'Brien at sobrien@swanireland.ie cc'ing info@swanireland.ie by 1.00 p.m., Tuesday, November 12th;
- 6.2.3 See timeline overleaf.

SWAN's target timetable is as follows:

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|---------------------------------|----------------------------------|
| 1. Initiation meeting | 2. w/c November 11 th |
| 3. Commencement of work | 4. w/c November 11 th |
| 5. Draft literature review | 6. December 2 nd |
| 7. Full draft report for review | 8. December 9 th |
| 9. Delivery of final report | 10. End 2024 |

6.3 Budget:

The project budget will be in the region of €15,000 (including VAT)