

Sustainable Water Network (SWAN)

Abstraction of groundwater and surface water in Ireland
& implications for meeting Water Framework Directive
objectives

SW-AB-06



- Tender Invitation Document -

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1. INTRODUCTION / SUMMARY

SWAN seeks a team of researchers to conduct a desk-based research project on water abstraction as a significant water management issue in Ireland: '**Abstraction of groundwater and surface water in Ireland & implications for meeting Water Framework Directive objectives.**'

SWAN selects its contractors through a competitive process and this Tender Invitation Document sets out the purpose & scope of work that the Sustainable Water Network (SWAN) wishes to commission; sets out the work timetable & deliverables and describes how tenderers can tender for the work.

The final report should provide an evidence-based analysis of the impacts of abstractions on Ireland's surface water, groundwater and groundwater dependent terrestrial ecosystems (GWDTEs), including cumulative impacts and the implications for Water Framework Directive (WFD) implementation and the meeting of WFD targets. It will also provide a comprehensive review of EU and Irish policy, legislation and guidance relevant to water abstraction, including a critical analysis of the efficacy of the current legislative and regulatory system to control abstractions in order to meet WFD objectives in Ireland. It will also include a comparative study of abstraction control regimes in other jurisdictions, with a focus on EU Member States and best practise applicable in 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 control water abstractions in Ireland in order to meet WFD objectives. This should include proposals for both 'basic' and 'supplementary' measures under the WFD.

2. BACKGROUND, CONTEXT & PURPOSE

2.1 Background information on SWAN & our work

SWAN is a network of 26 of Ireland's leading environmental NGOs¹, working to protect Ireland's aquatic resources through active engagement in the implementation of the Water Framework Directive, the Marine Strategy Framework Directive, the Floods Directive and other water-related policy. One of SWAN's key objectives is to participate and inform national debate, at all levels, on the sustainable management of Ireland's aquatic resources, with the support of evidence-based information, analysis, recommendations and international best practice examples.

In 2010, SWAN made a detailed submission on the draft 2009-20015 River Basin Management Plans (RBMPs), including on abstraction, which was identified as a significant water management issue in all eight RBMPs.

¹ See Appendix I for list of SWAN members and Directors

SWAN has commissioned research in the past on the Common Agricultural Policy & the WFD; the Marine Strategy Framework Directive and on Integrated Coastal Zone Management & the WFD. These are available on the SWAN website.²

2.2 Legislative & policy context

Water abstraction represents a significant pressure on some of Ireland's inland surface waters, groundwaters and GWDTs. As explained in the South Eastern River Basin Management Plan (2009-2015), '*too much abstraction reduces flow in springs and rivers and lowers water levels in lakes, wetlands and wells. That can make water supplies unsustainable and adversely affect aquatic plants and animals and wetland areas. In extreme cases river beds may dry up, lake shores can become exposed and, in coastal areas, salt water may seep into groundwater.*'

The 2009 'PoMs report' (Programme of Measures) carried out by the Eastern RBD, '[National POM/Standards Study Revised Risk Assessment Methodology for Surface Water Abstractions from Lakes'](#) identified 79 lakes nationally at high risk from abstraction pressures and stated that '*basic measures will not be sufficient to address abstraction pressures in some lakes and site-specific (supplementary) measures will be needed.*' The accompanying 2008 report '[Revised River Risk Assessment for Abstraction Pressures](#)' found 237 river water bodies to be 'at risk' or 'probably at risk' from abstraction (ref. table 3.1).

The Water Framework Directive identifies abstraction as a '*significant anthropogenic pressure*' and requires *inter alia*:

- '*Estimation and identification of significant water abstraction for urban, industrial, agricultural and other uses, including seasonal variations and total annual demand.....';*
- The identification of all waterbodies abstracted for human consumption³ (Art 7)
- The establishment of '*controls over the abstraction of fresh surface water and groundwater, and impoundment of fresh surface water, including a register or registers of water abstractions and a requirement of prior authorisation for abstraction...*' (Art 11.3(e))⁴

The SE RBD SWMI report, '[Water Matters - Have Your Say](#)' stated that '*Abstraction legislation is dated and needs to be updated and extended to protect waters adequately, with a modernised system of registration and prior authorisation for significant abstractions.*' Similarly, the 2008 PoMs report '[Revised River Risk Assessment for Abstraction Pressures](#)' states that '*Ireland's current institutional arrangements to support the evaluation of the effects of surface water abstractions need to be modernised. The primary governing legislation for water supplies (Water Supplies Act, 1942) does not consider environmental issues.*'

² Please note that the budget for these projects were all significantly less (< 50%) than for the current project.

³ providing more than 10 m³/day as an average or serving more than 50 people, and those bodies of water intended for such use

⁴ Member States can exempt from these controls, abstractions and impoundments which have no significant impact on water status."

The South Eastern River Basin Management Plan (2009-2015) states that, '*The legislative framework will be further enhanced to protect and improve water quality through the introduction of strengthened controls on abstractions of water ...*', although this has not yet happened.

2.3 Purpose of this research in the context of SWAN's organisational aims & objectives

The purpose of this desk-based research project is two-fold: 1) to provide a definitive literature review on the pressures & impacts of surface and groundwater abstractions on the water environment, in the context of the achievement of WFD targets in Ireland and 2) based on the above and also on case studies and best practise, to present robust, evidence-based recommendations regarding how best to address and manage abstractions in order to meet WFD objectives and achieve sustainable water management in Ireland.

In terms of end-use, this research will:

- 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 abstractions 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 & impacts on surface water, groundwater and GWDEs posed by water abstractions. This will include cumulative impacts and information on impacts on WFD status;
2. A detailed description & analysis of the provisions in the WFD directly and indirectly related to abstraction, including classification, exemptions and required measures;
3. A comprehensive overview of current relevant EU and Irish policy, legislation and guidance governing water abstraction;
4. A critical analysis of the above policy and legislative provisions governing water abstraction, in the context of the meeting of WFD requirements. This should include:
 - Identification of the relevant legislative & policy instruments and the respective competent authorities & responsible government departments;

- Identification of the overlaps, interactions and gaps between these⁵;
 - An assessment of the effectiveness of the current legislative & policy regime for controlling water abstraction and meeting WFD targets, including strengths & weaknesses, and an assessment of its implementation & enforcement;
5. To identify and draw extensively on case studies and conduct a comparative analysis of abstraction control regimes, focusing on other EU Member States, but examining other jurisdictions where relevant, with a focus also on both lessons learned and best practise applicable in Ireland;
6. Consultation with a focused number of key decision-makers and stakeholders with relevant state agencies and stakeholder/industry groups, decided in consultation with the Project Steering Group, in order to establish a wide range of views on, and practical experience of, abstraction management;
7. Based on 1- 6 above, to present a discussion of findings leading to a set of recommendations on how best to address the impacts of water abstraction on Ireland's surface water groundwater and GWDTEs in order to achieve sustainable water management and to meet WFD targets, with particular focus on cumulative impacts and EU and international experience and including:
- recommendations for basic measures and supplementary measures under the WFD;
 - recommendations regarding effective regulatory provisions and administrative arrangements, if deemed necessary;
 - region/RBD/catchment-specific recommendations where identified;
 - recommendations regarding any cross-border issues in relation to shared water resources between Northern Ireland and the Republic of Ireland.

3.2 Additional requirements & services

- To attend a face-to-face project initiation meeting in Dublin, and possibly interim meetings if deemed necessary, with the SWAN Project Steering Group;
- To conduct a qualitative survey of key decision-makers and relevant stakeholders with relevant state agencies and stakeholder/industry groups. These will be decided in consultation with the Project Steering Group;
- To present research findings at a workshop for SWAN members in Dublin at a mutually agreed date in Q3-Q4 2015;
- This report will be widely promoted by SWAN as a high-profile publication of strategic importance which will play a significant role in informing the upcoming potentially contentious public debate on abstraction. To this end, SWAN will expect it to be underpinned by a comprehensive and systematic review of academic 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

- Fortnightly email updates to the SWAN Project Manager;

⁵ Both legislative overlaps & gaps and overlaps & gaps in Departmental & agency responsibilities should be addressed here.

- Full technical report (including an Executive Summary); written to an exceptionally high standard, suitable for publication and meeting the requirements of the SWAN Project Manager & Steering Group and also all project objectives and requirements set out in 3.1 & 3.2 above;
- A summary report for policy/decision-makers including recommendations from the above report;
- A report of the qualitative survey presented as an Appendix to the report (in addition to being incorporated into the discussion and recommendations of the report);
- 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;
- Presentation to SWAN member workshop, date and location to be agreed.

4. THE TENDER SUBMISSION – INFORMATION REQUIRED

SWAN invites proposals from suitably qualified professionals for the undertaking of the above work. Tenderers should supply the following information, presented in the order below:

4.1. An executive summary of no more than one side of A4 in length, outlining the proposed work and including the total cost of the proposed work, inclusive of VAT;

4.2. Company/organisation details

- 4.2.1. The name of the contractor;
- 4.2.2. The nominated contact person within the tenderer's organisation (including name, address, telephone number and email address);
- 4.2.3. The registered name, address (if different to the above) and company or charity registration number;

SWAN accepts tenders both from individual companies & institutions and from consortiums. If you are tendering as part of a consortium you will need to identify one member of the consortium (the "Lead Contractor") to act as the contracting party. All other consortium members will be sub-contractors to the Lead Contractor.

4.3. A description of the methodology, approach & 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;

4.4. A list of individuals who will manage and deliver the work, an indication of their assigned tasks, their respective roles within the organisation and, for the purposes of this work their relevant skills and experience including any relevant professional qualifications;

4.5. A breakdown of costs (inclusive of VAT), to include the distinct elements of the work (and where these are anticipated, expenses), clearly stating whether the costs are calculated on a lump sum or time charge basis inclusive of any applicable VAT and expenses⁶;

4.6. Confirmation of access to the necessary range of international and national academic peer-reviewed journals;

⁶ Please note that should a contract be awarded for the work then invoices will need to be supported by valid receipts and relevant documentation.

- 4.7. Links to written outputs from two relevant previous projects** or, where reports are not in the public domain, names & contact details of two referees;
- 4.8. Identification of any conflicts of interest** which might arise if the tenderer were selected to undertake the work and if such a conflict were to arise, an indication of how this conflict would be addressed;
- 4.9. A consideration of the risks and challenges** of this project and how you would address them.

In order to demonstrate an understanding of the remit, potential contractors are also invited to submit a preliminary list of reading and sources of relevant information, although this is not essential.

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. Hence, 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 & value for money, taking into account the apportionment of time (and rates for this) between the principle investigator/project leader and other researchers 30%

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

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

6.1 Project Management

The research team will work closely with and maintain regular communications with the SWAN Project Manager. 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 fortnightly progress reports will also be submitted to the SWAN Project Manager.

6.2 Tender Application Procedure & timeline

- 6.2.1 Tender submissions should be limited to a maximum of 10 sides A4 at 10pt font, excluding 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, quoting SW-AB-06 by 12 noon on March 6th 2015;

6.2.3 SWAN's target timetable is as follows:

Deadline for receipt of tender submissions	March 6 th 2015
Selection of tenderer	March 13 th
Commencement of work	w/c March 16 th
Draft literature review	tbc
Full draft report for review	tbc
Completion of work ⁷	July 30 th

- 6.2.4 SWAN reserves the right not to follow up this tender invitation document in any way;
- 6.2.5 SWAN will not be responsible for any costs incurred in the preparation of any tender;
- 6.2.6 All tender submissions must remain valid for a minimum period of 90 days following the deadline for receipt of tender submissions;
- 6.2.7 Tenderers taking part in this process acknowledge and accept that SWAN may publish details about the winning bid (such as the contract value and the name of the winning bidder) on SWAN's website.

6.3 Budget:

The project budget will be in the region of €20,000 - €22,000 (including VAT)

⁷ Earlier delivery will be viewed favourably

Appendix I:

SWAN Member Organisations

SWAN National Groups		SWAN Regional & Local Groups
1.	An Taisce	16. Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland	17. Cavan Leitrim Environmental Awareness Network
3.	Birdwatch Ireland	
4.	Coastwatch Europe Network	
5.	Coomhola Salmon Trust Ltd.	18. Celebrate Water
6.	Eco-UNESCO	19. Cork Environmental Forum
7.	Friends of the Earth	20. Longford Environmental Alliance
8.	Friends of the Irish Environment	
9.	Irish Doctor's Environmental Association	21. Macroom District Environmental Group
10.	Irish Peatland Conservation Council	22. Save Our Lough Derg
11.	Irish Seal Sanctuary	23. Save Our Lough Ree
12.	Irish Water and Fish Preservation Society	24. Save The Swilly
13.	Irish Whale and Dolphin Group	
14.	Irish Wildlife Trust	25. Shannon Whale & Dolphin Foundation
15.	Voice Of Irish Concern for the Environment(VOICE)	26. Slaney River Trust

SWAN Board of Directors

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Mark Boyden, Chair	Coomhola Salmon Trust
Mindy O'Brien, Company Secretary	Voice of Irish Concern for the Environment (VOICE)
Geoff Cooper, Director	Irish Water and Fish Preservation Society
Karin Dubsky, Director	Coastwatch Europe
David Healy, Director	Friends of the Irish Environment
David Lee, Director	Cork Environmental Forum
Elaine Nevin, Director	ecoUNESCO
Joachim Schaefer, Director	Cavan Leitrim Environmental Awareness Network