Request for proposals:

**Understanding the risks of irrigation expansion for key freshwater dependent habitats**

# Introduction

Within the context of our [partnership with Coca-Cola](https://www.wwf.org.uk/who-we-are/who-we-work-with/coca-cola), and our wider interest in ensuring sustainable food production, WW-UK is seeking to commission a project to enable us to understand where water withdrawal for irrigation is posing a potential risk to freshwater biodiversity, and how may this change in the future.

For the purposes of this study we would like to focus on freshwater dependent sites that have high biodiversity importance. We recognise that, in many instances, the main water abstraction threats to these sites are not derived from agriculture. However, in the context of our strategic focus on global food production as a driver of biodiversity loss, WWF-UK is interested in understanding the additional potential risk from changes to the volume and location of irrigation for food production. In particular, this piece of work will contribute to our understanding of how future irrigation hotspot locations will be able to address the ‘triple-challenge’ of simultaneously adapting to and mitigating climate change, protection and enhancement of biodiversity, and producing food.

# Approach

The main objective of this project is to identify the key freshwater dependent habitats that will be most at risk from future expansion of irrigation in specific nations of the UK (see below). We are open to proposals for different approaches to best address the fundamental question, and would welcome discussions on alternative proposals prior to submissions, but have outlined below our preferred method. The proposed method outlined below is intended to illustrate the nature of the outputs WWF-UK expects from this project.

## Outline proposed method

1. Collate spatial data on freshwater-dependent protected or designated areas. Proposals should include consideration of (giving rationale for inclusion/exclusion) but not necessarily be limited to Priority River Habitats, SPAs, SACs, Ramsar, SSSIs, NNRs, Groundwater Dependent Terrestrial Ecosystems (GWDTE), and principal salmon rivers. Proposals should outline criteria for identifying freshwater dependent sites from broader (i.e. not just freshwater) spatial biodiversity datasets (e.g. by filtering for sites with threats related to abstraction, or specific habitat classifications).
2. For identified surface water dependent sites, delineate upstream catchment areas. For groundwater dependent sites, delineate a likely zone of influence from groundwater abstractions, based on a fixed buffer zone, aquifer extent, or other approach if considered more appropriate. Proposals should consider how to incorporate the effect of groundwater abstractions on downstream flows in high baseflow catchments, such as chalk streams.
3. Develop a site level irrigation risk indicator. For example, by comparison of catchment size with total upstream abstractions, total irrigation abstractions within a buffer zone etc. The risk indicator should account for the size and relative biodiversity importance of sites (e.g. highest level of designation, species rarity). Consideration should also be given to how to account for the seasonality of abstractions (winter vs. summer, and winter storage).
4. Using available spatial data on irrigation abstractions, map the irrigation risk index for each identified freshwater dependent site, considering scenarios of historical actual withdrawals, maximum (dry year withdrawals) and total licenced volumes.
5. Develop spatially explicit scenarios of potential future irrigation extent and abstraction volume. These should account for climate change effects, increased domestic production of fruit and vegetables, water availability and soil type. Identify changes in the site level irrigation risk index under these scenarios for important freshwater dependent sites.

## Scope

* Habitats in scope: rivers and streams, lakes, ponds, ditches, wet grassland, marshes, bogs, fens, wet woodland, reedbeds.
* Spatial scope: It is anticipated that within the budget specified below the analysis can be carried out for both England and Scotland. If this is not thought to be achievable, we request a costed proposal to cover England, and an optional additional cost to include Scotland within the scope.

# Proposal Submission

## Skill Set required for consultant

* Knowledge of key datasets
* Track record of work on this topic
* Spatial data analysis

## Deliverables

* The consultant should organise conference calls with the relevant WWF staff at inception, to ensure alignment of objectives, and also at regular intervals throughout the process.
* Report including two-page Executive Summary, describing method in sufficient detail to make it replicable.
* All output spatial data in agreed GIS compatible format.

## Timeline

* Selection of chosen consultant: by 10th March 2021
* Video call kick-off meeting with WWF: w/c 15th March 2020
* Submission of draft report: by 14th May 2021
* Agreement of final report and conclusion of consultancy: by 4th June 2021

## Budget

The budget is up to £25k including VAT, for all fees and other associated costs

## Submission of Proposals

Please submit your proposal by 5th March 2021 to the WWF-UK contact named below.  Your proposal must contain:

* Your approach and proposed methodology to address the fundamental questions raised and suggested approaches
* An analysis of how you fulfil the required skill set
* Names and CVs of all staff who will work on the consultancy, and proposed roles
* A fee proposal including:
  + Total days and day rates for each member of staff who will work on the consultancy
  + Any ancillary costs (no travel is anticipated)
  + Your VAT status with VAT, if applicable, clearly identified

## Assessment of Proposals

WWF will consider proposals and appoint the successful consultant through a mix of qualitative and quantitative assessment, to include:

* Quality of the submission
* Expertise and skills of staff
* Cost and overall resource inputs
* Quality and effectiveness of the proposed methodology and ability to deliver the brief

# Contact for queries and submissions

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