INVITATION FOR PROPOSALS

THE FUTURE OF UK VEGETABLE PRODUCTION IN A TRIPLE CHALLENGE CONTEXT

INTRODUCTION

Humankind faces a triple challenge over the next 30 years: meeting the dietary and other needs of a growing population, while staying on track to limit global warming to below 1.5°C and halting and reversing biodiversity loss. Failing to address climate change and restore nature will threaten our food security and our livelihoods. Yet the food system itself is one of the major drivers of climate change and biodiversity loss, while a large proportion of our population – globally and in the UK – remain malnourished. An integrated approach is required to address these challenges, that acknowledges the synergies and trade-offs associated with different pathways to meeting these goals and supports those communities most affected by transition.

Vegetable production in the UK presents a triple challenge on a smaller, but no less significant, scale. The ecosystems that are most important to protect to restore nature and store carbon – lowland peatlands – are also our most productive soils for growing food. At the same time, diet change towards more plant-based production is anticipated to play a significant role in reducing the UK's emissions from agriculture and land-use.

The WWF Basket Blueprint for Action sets out an ambition to restore and sustainably manage 70% of the UK's two million hectares of peatlands and tasks retailers with mapping out and reducing product sourcing from lowland peat. This project aims to help retailers understand the context behind these objectives and provide a foundational resource to encourage action.

We are seeking an experienced consultant to explore how we meet the triple challenge of vegetable production, examining what we are growing on our peat soils, how we can manage them more sustainably and the opportunities for new production methods and decentralising vegetable production. This will help inform our engagement with actors across the food sector as part of the aspiration of the WWF and Tesco partnership to halve the environmental impact of Britain's shopping basket by 2030.

BACKGROUND

Restoring and sustainably managing peatlands is critical to achieving the UK government's natural capital objectives, including locking up carbon, restoring biodiversity, and improving water quality. The UK's peatlands are its largest terrestrial carbon store and are home to a range of rare and threatened plants and wildlife, yet only 20% of peatlands remain in a near natural state. Recognising this, the CCCs' land use report states that to reach net zero, action must be taken to restore at least 50% of upland peat and 25% of lowland peat by 2050. The ELM scheme will reward farmers undertaking peat restoration on their land, and the Nature for Climate Fund aims to provide funding for the restoration of 35,000ha of peatland by 2024, but where should this restoration occur and what are the trade-offs?

Most of the focus in the UK has been on restoring upland peat, yet the majority of GHG emissions from England's peatlands come from lowland peat.[1] However, the restoration of lowland peat is poses challenges due to the impact on food production, associated displacement of emissions and environmental impact, the cost of taking this land out of production, and the vulnerability of this land to climate change risk.

A shift towards plant-based diets is key to improving both environmental and health outcomes in the UK. 77% of adults are eating less than the quantity of vegetables recommended in the Eatwell Guide[2], while almost a third of kids aged 5-10 eat less than a portion of vegetables per day. From a climate perspective, plant-based foods can have a significantly lower carbon footprint than most animal-based foods. However, we need to ensure that as diets change and lead to the consumption of less, but 'better' meat and dairy, our farmers are supported through the transition – towards regenerative agriculture and greater vegetable production – and that vegetable production and associated impacts are not offshored to areas where they may have a greater environmental impact. Currently almost half of our vegetable consumption is produced offshore[3], including in the water-stressed areas like the South of Spain. Within the UK, 38% of our vegetable production is concentrated in the East Anglian Fens,[1] an area also highly susceptible to rising sea levels.

Shifts in production methods will be vital to reducing agricultural emissions and sustainable management of lowland peat. These include regenerative agriculture practices like no / low tillage methods, use of cover crops, integrated farming systems and tree planting to reduce erosion. In addition, 'wet farming' and paludiculture are being explored to examine the feasibility of crop production at higher water levels that could balance the need for commercially viable food production and peatland restoration.[4] Urban vertical farming could also provide a solution for our growing need for vegetables on less land.

In summary, restoring and sustainably managing our lowland peatlands is a win for the climate and nature, but will have impacts on the quantity of food, including vegetables, produced there. We need to explore the evidence on innovative methods, and new landscapes, to produce vegetables, to accommodate less peat-based production and any increased demand for vegetables, without offshoring our impact.

MAIN PURPOSE AND SCOPE

We require a highly experienced consultant or consortium to provide an analysis of the available evidence on the following questions:

1. What do we grow on lowland peat soils, and are we using this valuable resource effectively?
2. Where (and how) should the CCC's 25% lowland peat restoration take place to maximise benefits to climate, nature and food production?
3. What does regenerative vegetable production look like on peat soils?

[1] Agriculture (fensforthefuture.org.uk)

4. What are the opportunities to relocalise/decentralise our vegetable production to other areas of the UK? Could this be an opportunity for farmers? Would it provide the incentive for mixed agriculture to be profitable? What are the trade-offs?
5. If there are opportunities to relocalise/decentralise our vegetable production, what are the main barriers and what needs to happen to enable this? Government policy? Sourcing standards? Technical/mechanical innovation?
6. What is the role of innovation and new forms of food production, such as vertical farming and paludiculture? For diversification for farmers and for food production?

These questions should be explored using a review of available sources, qualitative analysis of stakeholder views where appropriate and include conceptual and applied case studies that demonstrate workable solutions to the triple challenge in UK vegetable production.

In answering these questions, the main purpose of this study is to offer an evidence-based vision for the future of UK vegetable production. Solutions presented should include a mixture of both 'wizard' and 'prophet' ideologies.[2]

The scope of the work is UK wide (but can include global examples that could be applicable in a UK context).

Suggested stages 1-4 are set out below, however we welcome your own ideas and challenges to these proposed stages and how to address the questions set out above.

Stage 1: – Literature review

The first stage should seek to analyse the plethora of existing evidence (reports, journals, available data) on vegetable production and consumption in the UK, agriculture on peat soils, and restoration of peatlands, to build an evidence base to answer the questions above (with a particular focus on questions 1-4, to inform Stage 2).

The proposed structure of this review should be defined in the proposal. A list of relevant sources that should be included in this analysis is provided in the Appendix below.

Stage 2 – Think piece for stakeholder engagement

WWF-UK has submitted a proposal to participate at the Groundswell Regenerative Agriculture Show & Conference, through a panel discussion on the topic of the future of UK vegetable production.

In Stage 2, the consultant should present WWF with its initial findings through a 'think piece' that explains the triple challenge context of vegetable production and explores the following questions:

- What does regenerative vegetable production look like?
- What does regenerative vegetable production look like on peat soils? What are the opportunities and barriers to this? (Question 3 above)
- What are the opportunities and barriers for UK farmers to produce more vegetables elsewhere (not on peat soils) in the UK? (Question 4 above)

If our proposal for participation is accepted, this 'think piece' will form the basis of a panel discussion at Groundswell where we will look to test the assumptions and proposals set out, and any perceived barriers and opportunities, with farmers and expert audiences. If not, we

[2] Where Lies Humanity's Salvation—Conservation or Innovation? | Science History Institute

may still seek to engage similar audiences on this subset of questions through an alternative forum.

Stage 3 – Further analysis and evidence review

Stage 3 should comprise a deeper dive on questions 1 and 2 and use of evidence (if timings allow) from the forthcoming Lowland Agricultural Peat Taskforce recommendations and from other relevant research or industry initiatives, such as the Cambridge Centre for Landscape Regeneration programme[3]. This stage could also include a comprehensive mapping of what is currently grown on peat soils, to support our Basket Blueprint for Action.
To help shape the scope of this further analysis, consultants should consider future vegetable consumption scenarios (such as those provided in the Food Foundation's Veg Facts Report[4], or our recent Planet-Based Diets Report[5]) to estimate the extent of any future shifts in production, as well as the government's climate and nature targets, to ensure options presented are aligned.

Stage 3 should also include analysis of questions 4-6, in particular, looking at the opportunities and barriers to delocalising / decentralising vegetable production, and the role of new forms of food production and innovation. We welcome proposals on how best to explore these opportunities and barriers.

Stage 4 – Synthesis and final report

Using evidence from Stages 1-3, consultants should synthesise their findings into a public-facing final report, presenting an ambitious, evidence-based vision for UK vegetable production in a triple challenge context.

This report should include a summary of methodology, a literature review, results of stakeholder engagement (if any), options to address the triple challenge in vegetable production and any associated trade-offs, case studies, clear conclusions and recommendations for policymakers and businesses, and any limitations of the approach taken.

KEY OUTPUTS:

1. A publicly shareable 'think piece' (10-page max) for discussion at the Groundswell Show & Conference
2. A comprehensive, publicly shareable report in word and pdf format
3. A separate, publicly shareable short summary document with key findings and recommendations, in particular for businesses.
4. A presentation of the findings internally to the WWF/Tesco partnership team.
2. As an addition to the defined budget below, please provide a quote to host a panel discussion at the Groundswell conference

TIMELINE

Deadline for proposals: 18th March 2022 at 5pm
Review bids: w/c 21st March

Stages 1 and 2

[3] Cambridge researchers to tackle major threats to 'UK's vegetable garden' | University of Cambridge
[4] Peas-Please-Veg-Facts-2021.pdf (foodfoundation.org.uk)
[5] Planet-Based Diets | WWF (panda.org)

- Kick off meeting: w/c 4th April
- Draft think piece for Groundswell 3rd June
- Final think piece of Groundswell – 10th June
- **Groundswell – 22- 23rd June**

Stages 3 and 4:

- Review results of Groundswell engagement – July
- Lowland Agricultural Peat Taskforce recommendations – expected by July / August
- Draft report: mid-August 2022
- **Final report: late-August**

BUDGET

The budget for this work is £40,000 **including VAT**.

SUBMITTING PROPOSALS

Proposals and questions should be sent to Callum Weir, Sustainable Agriculture Specialist cweir@wwf.org.uk and Josephine Cutfield, Production Policy Advisor jcutfield@wwf.org.uk

We recommend that proposals are limited to eight sides in length. In your proposal, please include the following:

- A method statement to explain your proposed approach to carrying out the work.
- A brief project plan, showing key milestones and any interdependencies.
- Details about similar projects you have undertaken or your relevant experience in this field, including the experience of individuals on the project team.
- A fee proposal including resource allocations and charging rates for all individuals, and any third-party costs.
- Confirmation that you would be to accept the WWF Standard Terms and Conditions as the basis for contracting.

Thank you for expressing an interest in working with and supporting WWF-UK with this important piece of work. We look forward to receiving your response.

APPENDIX

RELEVANT WWF SUPPORTING MATERIAL

- WWF-UK Basket Blueprint for Action
- WWF-UK Global Footprint Report
- Planet-Based Diets | WWF (panda.org)
- WWF-UK Land of Plenty Report
- Aberdeen University - Pathways to Net Zero Report

RELEVANT EXTERNAL SUPPORTING MATERIAL

- Reports & Outputs | Lowland Peat (ceh.ac.uk)
- Defra LP2 paludiculture report - April 2020.pdf (ceh.ac.uk)
- Agriculture, land use and forestry - Climate Change Committee (theccc.org.uk),
- Food Foundation Veg Facts 2021
- IUCN UK Peat Strategy 2018
- IUCN PeatDataHub 2021
- UK Gov England Peat Action Plan 2021
- Fens for the Future – Strategic Plan for Fenland 2012
- CCC Land Use Report 2020
- Cambridge researchers to tackle major threats to 'UK's vegetable garden' | University of Cambridge
- Giving peat a chance: The Wildlife Trust's paludiculture project at Great Fen (cambridgeindependent.co.uk)
- New vertical farms will tackle global food challenges – and are set to be used by retailers, caterers and schools | Nottingham Trent University
- Vertical Farming: A new future for food production? | Farming Connect (gov.wales)