Assessment of demand and pathways for buyer engagement in water outcomes across the Forth water basin region



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Assessment of demand and pathways for buyer engagement in water outcomes across the Forth water basin region

Date: October 2026

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The report has been prepared exclusively for the use of Fisheries Management Scotland. It forms part of the project "Understanding demand and market pathways for water outcomes in the Forth basin through buyer engagement." The project is delivered by Fisheries Management Scotland, in partnership with the Forth Rivers Trust and the University of Edinburgh Business School. The work was supported through the FORTH2O Commissioning Fund. The FORTH2O Partnership (Stirling Local Policy Innovation Partnership) was funded by the Economic and Social Research Council, part of UK Research and Innovation (ES/Y502364/1).

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Revision Number	Date	Version	Author	Reviewer
1.1	20/09/26	DRAFT	Fiona Salter, Brady Stevens	
1.2	25/09/26	FINAL DRAFT	Dr Lorna Cole, Brady Stevens	Fiona Salter
1.3				

Contents

Glossary 4

1 Introduction 6

2 Methodology 8

2.1 Desk-based evidence review 8

2.2 Focus Group 8

2.3 Interviews 9

2.4 Limitations and caveats 10

3 Results and Analysis 11

3.1 Focus Group 11

3.2 Interviews 15

4 Discussion 22

4.1 Water-related outcomes most likely to attract demand 22

4.2 Key drivers and enablers influencing market development 23

4.3 Evidence and metrics required to build buyer confidence 24

4.4 Pooled and blended finance models 26

4.5 Intermediaries with local knowledge 27

5 Recommendations and next steps 29

6 Acknowledgements 32

References 33

Appendix: Interview questions 34

Glossary

Biodiversity Net Gain (BNG)	An approach that requires developers to leave biodiversity in a measurably better state than before development (either onsite or offsite). In England, BNG requirements can create demand for biodiversity units, with potential co-benefits for water.
Blended finance	Financing approaches that combine public and private sources of capital to support projects or outcomes.
Buyer engagement in outcomes	A wide variety of mechanisms to connect buyers to those supplying water-related outcomes through nature-based solutions. These may include formal contracts, partnerships, co-funding arrangements, and water credits/units.
Demand-side actors (buyers, investors, funders, etc.)	There are a range of types of individuals, organisations and institutions that make up the "demand-side" for NbS, those who provide funding for project development, delivery, and/or purchase outcomes. We have sought to be specific in the language we use. For the purposes of this report: *Buyers* are actors who provide funding for specific, targeted NbS projects or outcomes, typically because they have place-based, water-related dependencies / risk exposure in the area. Buyers are the key focus of this work and were the group targeted in our interviews. *Investors* are actors who are looking to provide capital to invest in NbS. They may or may not have physical risks or dependencies in the area but are typically understood to be investing in a project or group of projects with the expectation of making a return. Both these groups are important stakeholders in channelling increased finance to NbS projects along the project development pipeline, however this work focuses on buyers (as defined above).
Environmental, Social and Governance (ESG)	A framework used by organisations to consider environmental, social and governance factors in decision-making, investment and reporting.
Monitoring, Reporting and Verification (MRV)	Processes used to collect and communicate data and results about NbS outcomes, to ensure transparency and accountability in ecosystem restoration and natural capital markets.

Nature-based Solutions (NbS)	Actions to protect, sustainably manage and restore managed and natural ecosystems targeted to address societal challenges whilst providing wellbeing and biodiversity benefits (IUCN definition).
Payment for Ecosystem Services	The practice of providing financial incentives to land managers, in exchange for them undertaking practices intended to support or ensure ecosystem services.
Supply-side actors	The organisations and individuals responsible for identifying, designing, financing, delivering and maintaining the NbS that generate water outcomes. This includes land managers, project developers (organisations that design, package, and oversee delivery of NbS schemes, often acting as the intermediary between landowners, funders, and buyers); and a wider group of supporting actors (aggregators / intermediaries, contractors, etc.). Together, these actors constitute the delivery chain that converts demand for water outcomes into interventions on the ground.
Water credits/units	Quantified units representing a defined water-related outcome or benefit that can potentially be purchased, funded or otherwise used within a financing or market mechanism. For example, the Woodland Water Code currently under development in Scotland.
Water-related outcomes	Benefits or changes in the water environment that on-the-ground action is intended to deliver. These can include improvements in water quality, ecological condition, physical condition, wider societal benefits or risk/damage mitigation.

1 Introduction

Scotland has long been recognised for its abundant and high-quality water resources. However, increasing pressures from climate change, changing land use, population growth and economic development are placing these assets under growing strain. Scotland is already experiencing more frequent and severe weather events, including periods of water scarcity, flooding and intense storms, while also seeking to support sustainable economic growth and maintain healthy, functioning ecosystems.

Ensuring the long-term resilience of Scotland's water environment presents a significant challenge. Protecting and enhancing water quality, securing reliable water supplies and reducing flood risk will require innovative approaches that recognise water as a critical natural asset. Nature-based solutions (NbS), such as wetland restoration, peatland recovery and catchment-scale land management, offer opportunities to deliver multiple water-related outcomes alongside wider benefits for biodiversity, carbon sequestration and climate adaptation (Cole et al. 2026).

At the same time, Scotland faces ambitious targets for climate resilience, nature recovery and sustainable water management. Delivering these outcomes at the scale required will demand substantial investment, beyond what can be achieved through public funding alone[1] [2]. Blended finance approaches, which combine public and private sources of capital, are increasingly important in unlocking investment in NbS and creating sustainable, long-term benefits. Understanding where demand exists for water related outcomes and how these outcomes can be valued and financed will be critical to developing investable opportunities that support Scotland's environmental and economic ambitions.

In this research project, using the Forth Basin as a focal area, we explored the following:

1. Water-related outcomes most likely to attract demand
2. Nature-based solutions, which offer the most appealing investment opportunity
3. Types of evidence and metrics required to build buyer confidence
4. Key drivers and enablers influencing market development

The Forth Basin covers more than 3,000 km² and is home to over 25% of Scotland's population (Figure 1). Land use across the catchment is highly diverse, encompassing agriculture, forestry, urban development, industry, natural habitats, and 13 major river catchments. As a result, demand for, and pressures on, water resources are high.

While substantial investment and improvements are being delivered across the basin, achieving long-term resilience and sustainability requires a clear understanding of how businesses and organisations are responding to these challenges. Through stakeholder

[1] Scottish Government (2024) Natural Capital Market Framework. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2024/11/natural-capital-market-framework/documents/natural-capital-market-framework/natural-capital-market-framework/govscot%3Adocument/natural-capital-market-framework.pdf

[2] Science Based Targets Network (2024) Corporate water stewardship and science-based targets for freshwater: Alignment and interoperability between leading approaches. Available: https://sciencebasedtargetsnetwork.org/wp-content/uploads/Corporate-water-stewardship-and-science-based-targets.pdf

engagement, we explore the drivers, enablers and barriers that influence organisations' motivations and ability to financially contribute to water outcomes across the catchment.

These insights help to shed light on the metrics, evidence and priorities that can shape financial decision-making. They also provide an indication of the potential future demand for sustainable water outcome contracts and the conditions required to support their wider adoption.

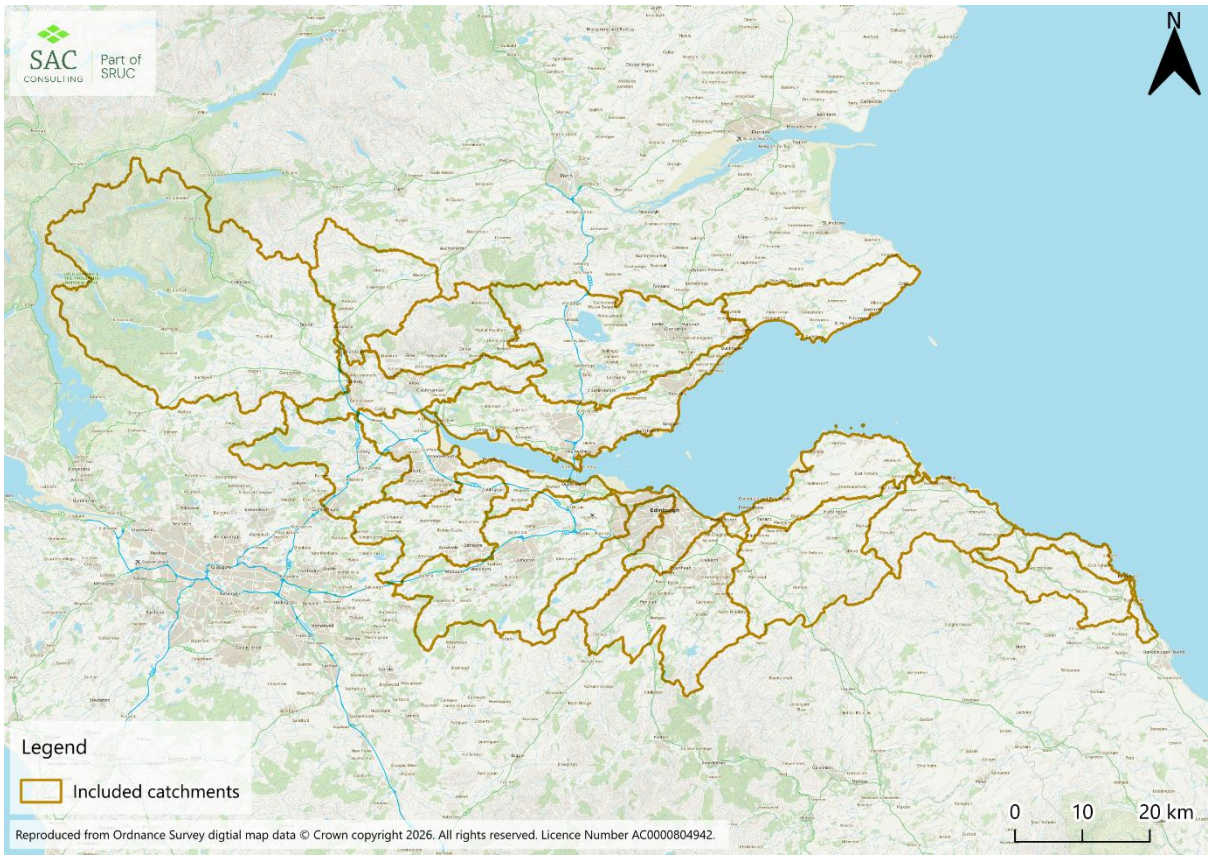


Figure 1: Forth Catchment

2 Methodology

This research project included three key phases, outlined below. All stakeholder engagement activities were reviewed and approved by SRUC's ethics committee, ensuring adherence to ethical research principles (e.g. informed consent, voluntary participation, right to withdraw, accessibility). To ensure accessibility, we gathered information through multiple formats (i.e. online/telephone interview and online workshops). Data collection, use and storage was compliant with GDPR and SRUC's institutional Data Protection Policy.

2.1 Desk-based evidence review

To develop an understanding of the challenges and potential opportunities for water outcomes in the Forth Basin, a rapid evidence review was undertaken in June 2026. The review drew on both grey and academic literature to build a robust evidence base. Utilising literature from across the globe, the evidence review focused on four principal themes:

- **Drivers of demand** for water-related outcomes, including policy, regulation, corporate commitments, and risk management considerations.
- **Water-related outcomes and associated metrics**, focusing on how benefits can be defined, measured, and monitored.
- **Nature-based solutions**, including their effectiveness in delivering multiple environmental, social, and economic outcomes.
- **Delivery and financing mechanisms**, exploring contractual and partnership models, market structures, and blended finance approaches capable of supporting the purchase of outcomes and long-term economic viability.

The output of the desk-based evidence review is available via Fisheries Management Scotland's Website (Cole, Stevens and Salter, 2026. Assessment of demand and pathways for buyer engagement in water outcomes across the Forth water basin region: Targeted evidence review).

2.2 Focus Group

Following the evidence review, a stakeholder focus group was held. The focus group was centred on exploring how water outcome contracts could work in practice, with discussion around demand, enabling conditions and priorities for implementation. The attendees were project managers, researchers, Advisory Group members,[3] and businesses and organisations with a shared interest in the development of water outcome market mechanisms within the Forth Basin and beyond.

The aim of the focus group was to inform and build the stakeholder interview questions. Utilising attendees experience, information was captured via Padlet[4], an online visual collaboration tool, as shown in Figure 2. In addition to refining the stakeholder interview questions, the focus group responded to four main questions:

[3] The project Advisory Group was established by FMS to support delivery of the project, offering guidance at key points and reviewing draft outputs prior to publication.

[4] www.padlet.com/

1. What sources of private finance have you explored for water outcomes?
2. What barriers are preventing private funding from flowing into water-related outcomes within the Forth Basin?
3. What data/metrics or tools would be required to increase participation?
4. What financial/policy frameworks would be beneficial/required?

For each question, participants were given ten minutes to input comments online, followed by group discussion for each question. The focus group was recorded and transcribed. The information was utilised to hone the interview questions and provide practical insight into the enablers and barriers to developing water outcome contracts in the Forth Basin.

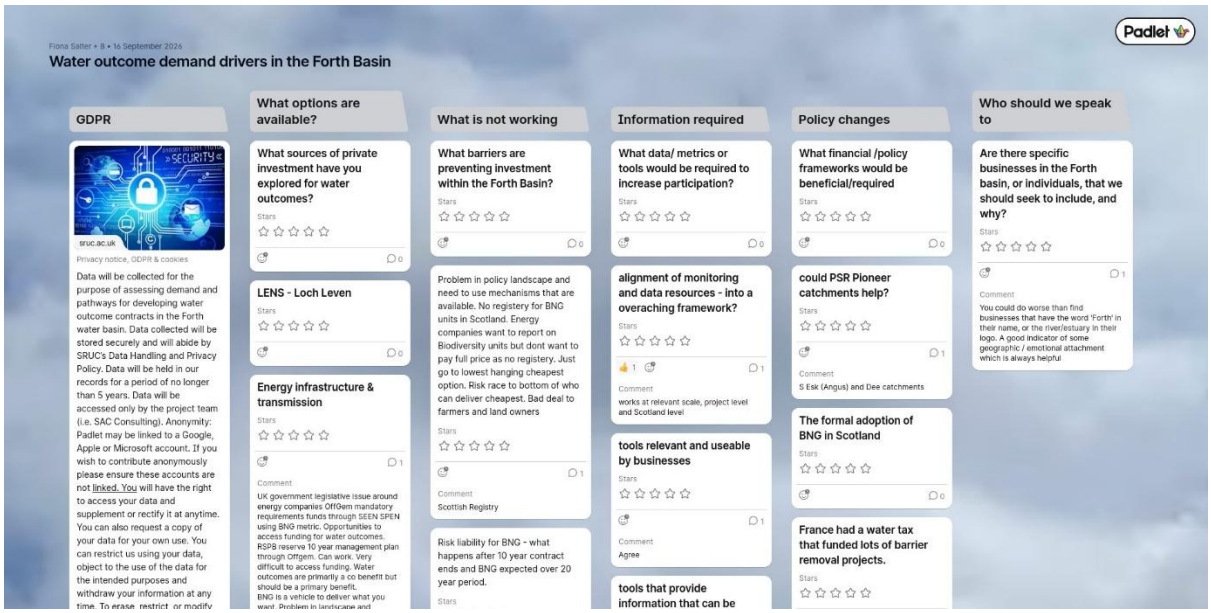


Figure 2: Example section from Padlet board used to capture stakeholder thoughts.

2.3 Interviews

The interview questions were grounded on information from the evidence review and focus group and approved by the project Advisory Group and SRUC's ethics committee. Once approved, the team progressed to interview key stakeholders within the Forth Basin. Potential participants were identified through a stakeholder mapping exercise conducted by Forth Rivers Trust in June 2026 and interviews conducted July to September 2026. The mapping process highlighted public, private and community groups throughout the Basin. Over 40 key stakeholders were contacted, resulting in 13 interviews conducted. The interviews were held via Teams and recorded and transcribed with consent from all interviewees. The semi-structured interviews were tailored to each participant's level of knowledge of NbS and water outcomes within their sector. A full overview of the semi-structured interviews is provided in **Appendix: Interview questions.**

2.4 Limitations and caveats

This was a relatively small project focusing on a large and fast-evolving topic, and its findings should be interpreted as being indicative rather than exhaustive. The evidence base rests on 13 semi-structured interviews, a modest sample for a region as varied as the Forth Basin. While the interviewees spanned a wide range of sectors and geographies across the catchment, the final sample did not reach every sector previously identified as having significant exposure to, or interest in, water outcomes; some perspectives are therefore likely under-represented or absent.

This gap was partly mitigated by triangulating interview findings against the initial stakeholder focus group and the final dissemination workshop, both of which drew on a broader and partially distinct set of participants. Finally, the sample likely reflects an element of self-selection bias: organisations were more likely to agree to take part if they already had some interest in, alignment with, or active engagement in, water-related nature outcomes, which may skew the findings toward more receptive audiences.

Nonetheless, the achieved sample did include a genuine spread of knowledge levels and degrees of interest, from organisations with well-developed water strategies to those encountering these concepts for the first time, which lends some confidence that the findings are not confined to only the most engaged end of the market.

3 Results and Analysis

3.1 Focus Group

The focus group was attended by seven participants from public and private bodies throughout the UK. Responses to the four key questions outlined in the Methodology above are summarised in Figure 3.

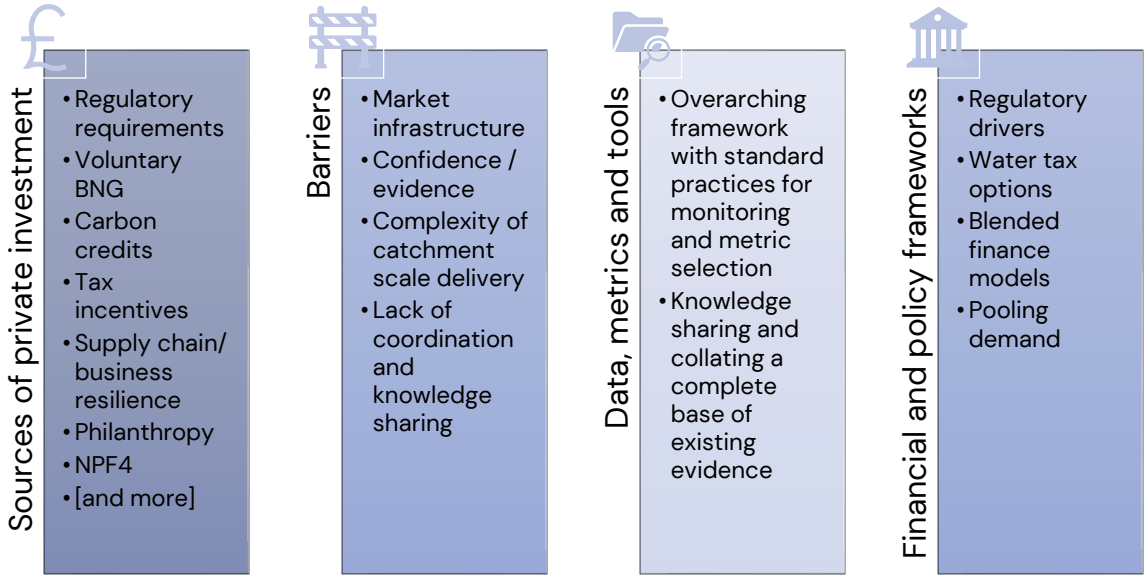


Figure 3: Visual overview of key findings from the focus group.

3.1.1 Sources of private finance explored for water outcomes

The main sources of private finance participants had investigated are highlighted in Figure 4. It was raised that many of the projects to improve water outcomes were within carbon or biodiversity focused projects, where there are established metrics and resources available. In many cases, water was considered a secondary or even tertiary benefit of the project. Participants reflected that opportunities that offer a combination of NbS options tend to be more successful with buyers/investors.

Looking to capital costs, discussions focused on timeframe and evidencing impact. When discussing NbS, key constraints included difficulty in evidencing the impact of NbS, alongside the time delay between implementation and benefits being delivered. Understanding how to bridge this gap will be critical: whether through insurance, contractual agreements, or other means of support, the capital expenditure to implement projects needs to be in place to ensure project success.

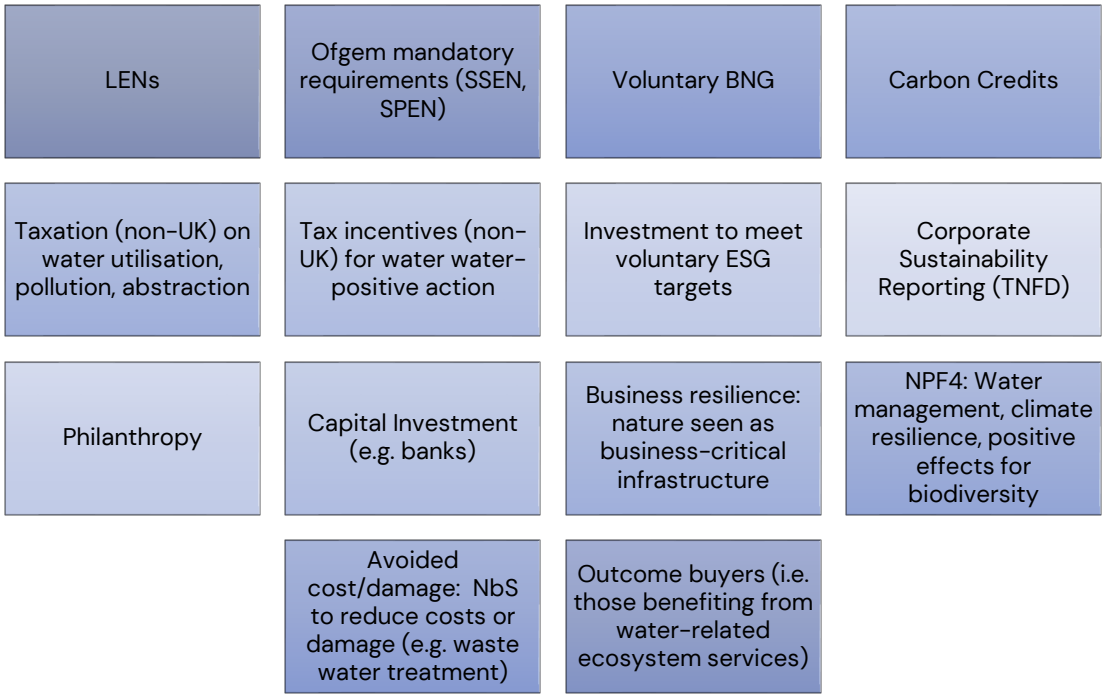


Figure 4: Overview of potential sources of private finance identified by the focus group

3.1.2 Barriers preventing private finance

When asked what the key barriers to increased private finance were within the Forth Basin, the focus group outlined several barriers which are summarised below.

Lack of market infrastructure and mechanisms: This included both a lack of regulatory drivers that could support compliance markets and the absence of established registries for biodiversity or water credits/units in Scotland. There were concerns that this could lead to companies only committing to the minimum required, potentially reducing impact. However, it was also noted that conventional credit-based approaches are not always what investors and buyers are looking for, and could add unnecessary monitoring, reporting and verification (MRV) costs. In some instances, demand-side actors are focused on financially contributing to place-based, specific actions with well-demonstrated impact that relate to business risks or sustainability reporting frameworks. In such cases, working through trusted local intermediaries (e.g. non-governmental organisations) maybe more desirable than purchasing verified credits/units.

Lack of confidence/evidence in outcomes delivered by NbS: Focus group participants identified an uncertainty around the demand for water and nature-related outcomes, with buyers uncertain about the value of these outcomes and whether there will be sufficient demand for them in the future. They also perceived a lack of understanding and trust in NbS among some beneficiaries. This knowledge gap, alongside difficulties in evidencing impact and consequently returns on investment, was seen to hinder the uptake of NbS. Participants noted that often demand side actors were still favouring

grey engineering approaches, with which they were more familiar, and for which impacts are easier to evidence.

Complexity of catchment scale delivery: Participants noted that achieving impact requires NbS to be implemented at sufficient scale. This requires significant coordination to identify both suppliers willing to implement NbS and demand side actors who are seeking specific water outcomes within the catchment. Catchment-scale initiatives, therefore, require significant coordination to develop, implement, manage and monitor interventions and their impacts. This requires long-term commitment and a centralised funding mechanism to support coordination and successful delivery.

Additional barriers and detail are included in the

4 Discussion section, below.

3.1.3 What data/metrics or tools would be required to increase participation?

Overarching framework: Workshop participants identified the need for an overarching framework for monitoring and data utilisation. It was recognised that such a framework would need to be flexible to meet the requirements of a variety of potential funders, investors and buyers. Metrics should align with business requirements (e.g. corporate sustainability reporting targets), while being proportionate and appropriate to the level of evidence required to support investment decisions.

Knowledge sharing and existing evidence base: A priority identified was the need to better understand the environmental data, metrics, and monitoring information that has already been collected across Scotland. The value of learning from existing projects, particularly those operating at a similar scale or within comparable catchments, could reduce risk, provide established evidence, and offer practical learnings to save time and contribute to successful delivery. This will help all parties (both the supply and demand side alongside supporting intermediary bodies) make informed decisions that support both environmental outcomes and organisational and business objectives. Strengthening the evidence base will be critical to increasing confidence in NbS and in demonstrating their ability to deliver measurable, long-term benefits.

There was also recognition of the importance of showcasing successful examples of upper catchment interventions that have delivered positive outcomes downstream. Evidencing how investment in one part of a catchment can improve specific ecosystem services and reduce impacts in other areas could encourage organisations to spend beyond their immediate geographic or operational boundaries. A more holistic source-to-sea perspective will support long-term resilience and shared environmental outcomes that improve the whole catchment.

3.1.4 What financial/policy frameworks would be beneficial/required

Workshop participants identified a number of financial/policy frameworks that could support the development of water-related market mechanisms. The prospect of what can be achieved is great, however, at present it is too confusing, contradictory and cumbersome for investors, buyers, companies, intermediatory organisations and land managers to fully understand and develop key projects for the future. This will need to be overcome through a multi-stranded approach:

Regulatory drivers: The development of regulatory mechanisms was identified as a key policy vehicle to drive increased private financing. A Scottish equivalent of Biodiversity Net Gain (BNG) or mandatory corporate sustainability reporting (e.g. Corporate Sustainability Reporting Directive[5]) were raised as examples. Participants also indicated the potential for greater quantification of corporate dependencies and impacts on natural resources, where businesses are required to recognise and pay for their use of natural resources and the ecosystem services they provide.

[5] Directive - 2022/2464 - EN - CSRD Directive - EUR-Lex

Taxation: This could be delivered either through a water tax where companies pay a tax based on water use/abstraction or other impacts on the water environment, or through tax incentives for funding water-positive action.

Blended finance models: Blended finance was identified as crucial, with a need for public funding to be designed specifically to align with and supplement private co-funding mechanisms rather than sit alongside as a separate income stream (e.g. Defra's Landscape Recovery Programme[6]: see below for details). Making this work in practice requires pragmatic thought and procedures. Combining different funding sources should be encouraged, but this will require proper scrutiny to ensure the same outcome is not being paid for twice (double counting / requirement for additionality).

Defra's Landscape Recovery Programme

This ambitious new programme, delivered through the Environmental Land Management Schemes (ELMs), aims to deliver nature restoration at the landscape scale. It combines public and private money through an innovative blended finance model, for example by using Biodiversity Net Gain and carbon markets to unlock private funds. This blended model is intended to increase the economic viability of large-scale nature restoration projects enabling more ambitious, longer-term projects. Round 1 saw an investment of £55 million of combined public and private funds. Taking a landscape-scale approach, the programme is designed to deliver specific benefits for the water environment, including improved water quality, flood mitigation, and resilience to climate change.

Pooling demand: The group discussed the advantage of building systems to bring together multiple demand-side actors, perhaps with different end goals, within a catchment, to create a project that can deliver multiple benefits. The presence of multiple buyers reduces individual risk, as the cost of the project is split between different organisations, and allows innovative projects that promote significant environmental gain to be considered. The initial aims of each buyer can still be met and successfully delivered.

3.2 Interviews

Over 40 potential interviewees were contacted between July and September 2026. Of these, 13 responded positively and semi-structured interviews were completed and analysed. Our interview sample targeted organisations identified as potential buyers of water outcomes, including both businesses from a range of sectors and public bodies, all operating or with interests in the Forth Basin region.

Our final group of interviewees contained enormous variety, both in terms of sectors, business models, scale of operation and land footprint. This should be considered when interpreting the results. While some of the interviewees had knowledge of the concept of payments for upstream NbS interventions, others had less. In addition, while upstream interventions were relevant to some organisations, several others had more scope to implement NbS on their own sites or within their own footprints, negating the need for a

[6] Landscape Recovery: first projects move into delivery phase – Farming

buyer-seller relationship or contract. These caveats are flagged throughout the results below.

The figures in brackets throughout this section show how many of the 13 interviewees mentioned each theme. They indicate the spread of a view across the sample, not its strength or priority for any individual. An overview of the key findings from the interviews is provided in Figure 5.

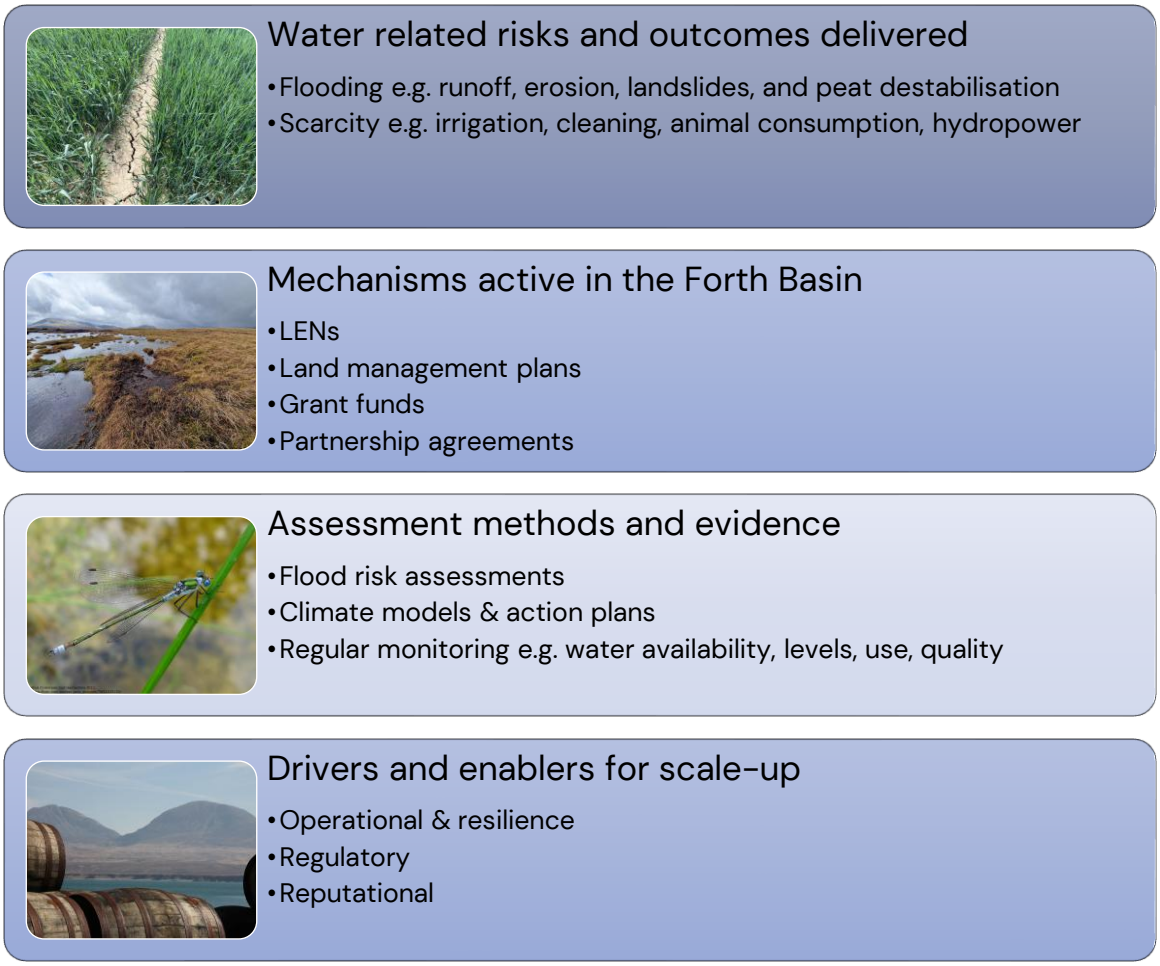


Figure 5: Visual overview of key findings from interviews. Photos are from SRUC.

3.2.1 Key water-related outcomes delivered through natural infrastructure

The risks these outcomes mitigate against

Our first set of interview questions concerned water-related risks faced by each organisation, if any. These risks identify important pressure points that could translate to demand. Two risks dominated: several types of *flooding* (9) and *water scarcity* (9) (Figure 4).

Flooding related to both *surface water* (i.e. rivers and burns overrunning their banks, 8) and *rainfall-driven* (i.e. extreme weather events leading to standing water or flooding on sites, 8). These risks can cascade into several harmful knock-on effects, such as:

- *Runoff and erosion from neighbouring land* (4)
- *Contaminated runoff from site* (3) - i.e., a contamination event from operations on the group's own site
- *Landslides* (2) or *peat destabilisation* (1)

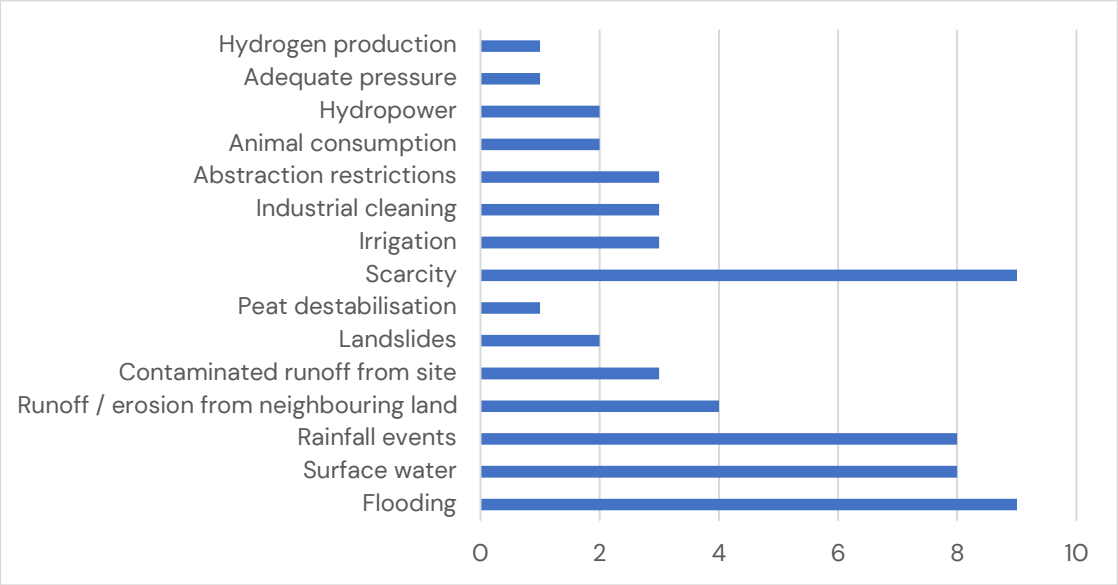


Figure 6: A bar chart displaying the number of respondents who mentioned specific water-related risks.

Scarcity was disaggregated into *industrial cleaning* (3), *irrigation* (3), *anticipated abstraction restrictions* (3), *animal consumption* (2), *hydropower* (2), *maintaining adequate pressure* (1) and *future hydrogen production* (1).

Water quality risks were less frequently identified (4, plus 3 on *mine water* and *pollution*). This was an unexpected finding. We expected more interviewees to be reliant on abstracting from a clean source of water, however, most interviewees used treated mains water, mitigating the direct impact of water quality on operations.

While it was perhaps predictable that flooding and water scarcity are the most pressing risks for organisations, a key value added by this research is this further level of detail and granularity. Through this research, we have gained a better understanding of the specific operational exposures to water risks that are already being felt by these groups in the Forth Basin. This result confirms that flooding and water scarcity are both key demand drivers due to operational pressure points. With climate change predicted to intensify both these risks, these pressures are likely to grow further driving demand.

Actions and approaches being taken to deliver outcomes

The actions interviewees described to mitigate water-related risks clustered into three tiers that differ sharply in scale, contractability and who controls the land (Figure 5).

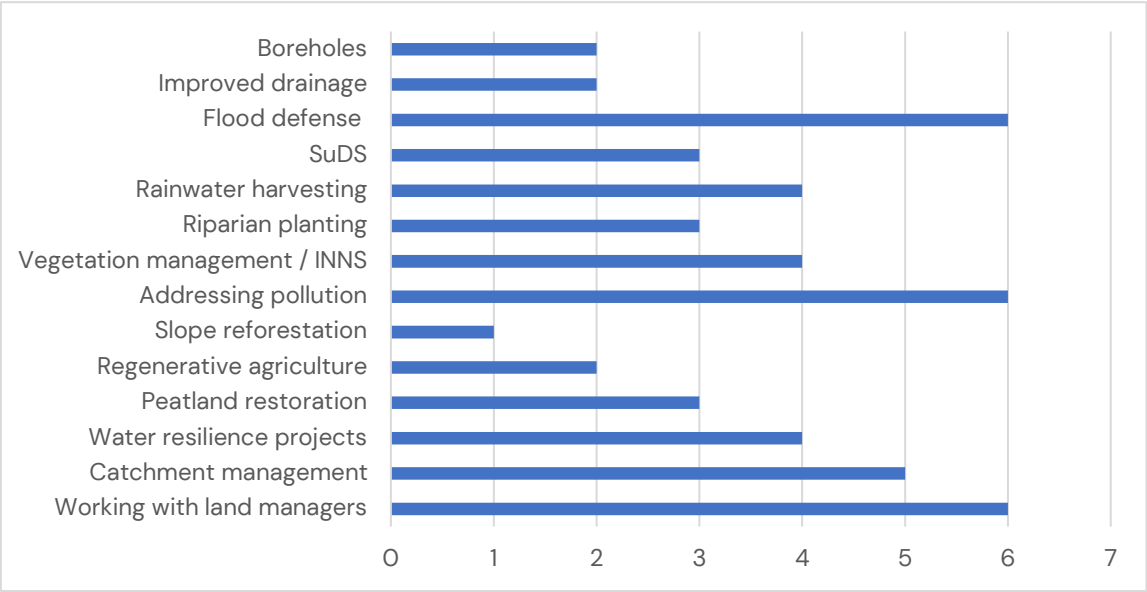


Figure 7: A bar chart displaying the number of respondents who mentioned specific actions they have taken to address or mitigate against their business's water-related risks.

Catchment-scale land management: This was the most widely shared frame. Interviewees described *working with land managers to find practical solutions* (6) and *catchment management* more generally (5), with *water resilience projects* (4) (e.g. a *retention pond* (1)) identified as key delivery vehicles. Specific interventions included *peatland restoration* (3), *regenerative agriculture* (2) and *slope reforestation* (1). Notably, most of this activity sits on land the buyer does not own, necessitating a contractual agreement between these demand-side actors and land managers.

River and riparian restoration: *River restoration addressing pollution* (6) and *small-scale pollution remediation* (5) were the two most frequently cited discrete interventions in the whole dataset. *Vegetation management and INNS control* (4) and *tree and riparian planting* (3) followed. A cluster of channel-scale works (*re-profiling banks, de-culverting* and *remeandering*) (1 each) — plus *brownfield toxic remediation* (1) were raised by single interviewees, but are the interventions with the most established delivery routes.

On-site water management: *Rainwater harvesting* (4), *SuDS* (3) including *swale creation* (2) and *retrofitting buildings for water recycling and rainwater planters* (3). These actions were self-funded and within the buyer's control, which makes them the least likely to generate contractual demand. However, they also surface the binding constraint: *limited area to implement NbS on site,* a barrier identified by four interviewees, with one indicating that the *project pipeline was insufficient to deliver on-site or adjacent NbS*. That gap is precisely what an off-site contract would fill.

Interviewees also described an active grey infrastructure toolkit: *flood defence systems* (6), *improved drainage* (2), *boreholes to diversify supply* (2), *storage tanks and buying in*

water at peak usage (1 each). Two stated plainly that grey infrastructure can offer guaranteed results and five characterised current practice as prioritising flood protection rather than resilience. Five, however, also pointed to combining grey and green infrastructures. This aligns with the rapid evidence assessment, which highlighted the need to consider grey and green infrastructure as complementary rather than opposing components of resilient catchment management.

An overall reflection on actions that interviewees had actually spent money on is that these tend to be skewed towards water dependencies and issues which are already present and affecting operations. However, larger organisations with larger land footprints and portfolios of built infrastructure or capital tended to be both taking action to address current impacts as well as future-proof against the intensifying impacts of climate change. Overall, the interviews present a spectrum of actions, from on-site actions with immediate effects to catchment-scale work which will only bear fruit after multiple years.

3.2.2 Viable contract models allowing buyers to purchase these outcomes

This was the thinnest part of the dataset, and that itself is the finding. Almost nobody described a contract to purchase a water outcome. What they described were partnerships, collaborations, or bounded agreements.

Partnerships and collaborations (6) was the only arrangement coded more than once, perhaps because of the wider definition of this category. Everything else was a single mention, with many of these actions also relating to partnerships:

- *Land management plans* – In which land managers agree to abide by certain practices, with or without reward.
- *LENs* – See https://landscapeenterprisenetworks.com/
- *Distributing grant funding* – Organisations fund grants to be carried out by local land managers or communities (making them "funders" rather than "buyers").
- *Partnership agreement or charter with defined criteria* – Building in environmental performance or sustainability action into partnership agreements.
- *Commercial procurement exercises* – Organisations open up the opportunity to carry out projects to contractors.
- *Access agreements / contractors maintaining sites* – In which land managers agree that NbS, or other environmental works, are carried out and maintained at regular intervals by contractors of the organisation.

Willingness, by contrast, was near-universal: 12 of 13 said they were *willing to collaborate*. The forms offered were *joint evidence gathering* (6), *partnerships* (6), *combined public and private finance streams* (4) and *working with co-located or interdependent businesses* (3). The gap between that willingness and the absence of contract models is the central opportunity this project aimed to address.

Current funding sources for NbS

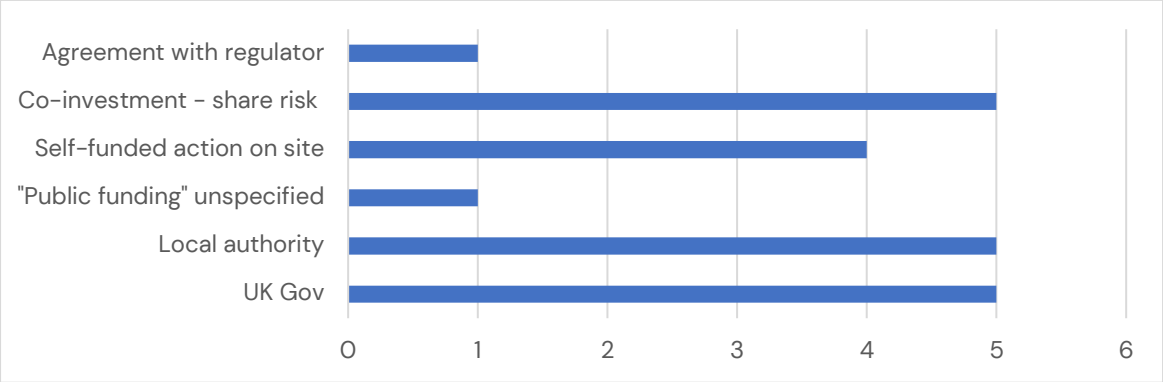


Figure 8: A bar chart displaying the number of respondents who mentioned specific funding sources for NbS.

Two interviewees supplied a monetary figure for the budget they have available to fund NbS. Two others said decisions are made on economics and are market-led. Three key constraints were identified across market mechanisms: *Agreements with landowners are cumbersome and slow* (5), and one interviewee flagged that *land ownership can change over the decades nature finance contracts run*. *Tenure and land ownership* was also raised independently (3). Two interviewees objected to monetising water at all, on the grounds that water units offset problems that need fixing in specific locations, rather than elsewhere.

3.2.3 Assessment methods to evidence the delivery of these outcomes

Interviewees are already measuring water-related outcomes, but almost entirely for risk assessment rather than outcome verification (i.e. quantifying the outcomes that a specific action delivered, such as a change in peak water flow). The most common instruments are *flood risk assessments* (6), *risk mapping* (5) and *climate models and assessments* such as UKCP18 (4), with *climate action plans* (2) as the reporting vehicle. These allow an organisation to assess how exposed they are to a specific risk and prioritise action. There were few if any mentions of anything which could be described as ongoing MRV of whether outcomes were being delivered.

There was good evidence, however, that some organisations are undertaking routine operational monitoring, which could provide a useful baseline:

- *Water availability* (4) and *water use* (4)
- *Rainfall* (4) and *water levels* (3)
- *Water quality testing* (3)
- *Soil health* (3), including *soil organic matter* (2)
- *Ongoing monitoring* as a stated commitment (2)
- Single mentions: *annual crop yield, indicator species, SEPA data, the WWF Water Risk Filter*

Measurement cadence was rarely specified: one interviewee described five-yearly recurring reviews and another annual recurring tests. For contracts, this matters: buyers' existing reporting cycles likely determine the verification cycle they will accept.

3.2.4 Relevant demand drivers and enablers to scale up the suggested model

Drivers

Reputation leads on frequency, but operational necessity and regulation are the drivers that are most likely to convert directly into budget being specifically allocated for water-related outcomes ("effective demand"). The regulatory driver is mostly undifferentiated: only two interviewees mentioned incentives and one penalties, so regulation is currently felt as background pressure rather than as a specific obligation leading to purchasing NbS.

Voluntary commitments were scattered and weak: *Biodiversity Net Gain BNG* (2), *trade body accreditation* (2), *self-imposed targets* (2), *tree planting* and *LEAF certification* (1 each). BNG itself was contested, with one interviewee saying it could drive action on the ground, while another called it the wrong approach. The more interesting framing is *nature as critical infrastructure* (4), which places NbS in the capital planning conversation rather than the sustainability one.

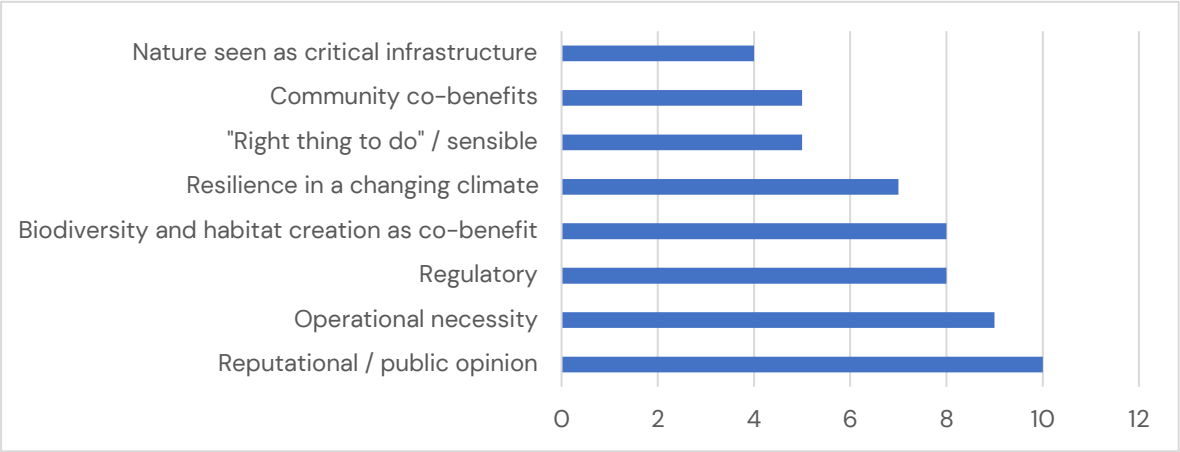


Figure 9: A bar chart displaying the number of respondents who mentioned specific drivers behind their decision to invest in NbS.

Enablers

Partnerships and collaboration (8) are the single strongest enabler in the dataset, matched by *resilience* (5) and *improving water* (5) as the outcomes worth organising around. Beyond that:

- *Educating stakeholders who access the site* (4)
- *Trade organisations sharing best practice* (3) and *using projects as case studies* (3)
- *The rigidity of infrastructure timescales* (3) — Plans lock in years ahead, which pushes organisations toward NbS options
- *Local bodies* such as Forth Rivers Trust or Tweed Forum, River Tweed Commission, and Tweed Foundation acting as intermediaries to reduce friction (2)

- *Identifying funders of different ecosystem services* — One project, different end goals, a shared budget (2)
- Overlaps: *synergies where BNG adds to operational resilience* (2) and *schemes providing both flood and ecological benefits* (2)
- Public-sector budget mechanics: *five-year budget blocks which give certainty* (1), but have the restriction that the *budget must be spent within defined periods* (1), a timing constraint that cuts both ways for multi-year contracts.

Barriers

Cost is the leading barrier (8), followed by *lack of evidence* (6) and *slow landowner agreements* (5). Then a cluster at four apiece: *risk of failure, limited on-site area, lack of collaboration between private and public bodies, different land management goals within the catchment,* and the *need to apply for external funding*. The internal case is hard to make: three described it as a hard sell against competing uses for the same money, three cited education and understanding of the problem, and three cited not knowing what to finance for best effect.

Evidence is a bottleneck, not the availability of specific metrics. *Lack of evidence* was a barrier for six interviewees, *risk of failure* for four, and *knowing what to finance for best results* for three. Two interviewees independently cited *evidence-informed metrics* as an enabler, a reasonable target for what a first generation of contracts can carry. Three others pointed to *using existing projects as case studies* as the way to close the gap, which suggests the demonstration route may do more for demand than metric refinement will. This aligns with key findings from the focus group on the importance of knowledge sharing and building the evidence base to unlock private financing of NbS.

Two further themes should shape recommendations. Four interviewees want NbS spatially targeted close to their area of operation and two specifically in communities with Just Transition concerns. However, one interviewee raised a tricky aspect of NbS: they often need to be deployed upstream of the communities of interest, making them less visible, which can present challenges around fairness, accessibility and public awareness of positive action.

4 Discussion

Over the course of this research, the decision-making processes, enablers, and barriers shaping the potential for implementing water outcome contracts within the Forth Basin were evaluated. This section draws together evidence from across the project's four stages:

1. The desk-based review of global water outcome contract models and natural infrastructure evidence
2. The initial focus group that scoped stakeholder perspectives and helped shape the interview questionnaire
3. 13 semi-structured interviews with prospective parties interested in and financially contributing to water outcomes across the catchment
4. The final stakeholder workshop that tested emerging findings with a wider audience of project partners, the Advisory Group, and prospective buyers

This discussion section synthesises across these evidence streams, identifying what appears to work, under what conditions, and why, within the Scottish context. This moves from the discrete themes reported above toward a more integrated account of the pathways, and the constraints, most likely to shape the development of water outcome contracts in the region.

4.1 Water-related outcomes most likely to attract demand

> "*While it is often water companies and farmers that face the brunt of water resource and pollution issues, water is fast becoming a risk for the entire UK economy*."[7]

This research found that organisations that identify clear water-related risk either currently, or in the future, are more likely to put money into NbS, or indeed grey infrastructure, to reduce these risks. This is in line with the thinking that informed this research: That the establishment of a market, or increased private finance, in water outcomes must be demand-led.

Stakeholders felt that financial decision-making should focus less on transaction mechanisms alone and more on the underlying outcomes and benefits that NbS projects can deliver. In practice, demand-side actors were typically motivated by operational and strategic needs, such as securing water supplies, reducing flood risk, improving resilience and protecting reputation, rather than by purchasing water units or credits. For sectors that depend heavily on water resources, including food and drink production, manufacturing and data centres, water security is a fundamental business requirement and may represent a stronger driver of demand than emerging environmental markets.

This was echoed by both interview findings and the final workshop: Flood mitigation and water security emerged as the two outcome categories most likely to attract near-term

[7] Aldersgate Group: The Business Case for a National Water Framework 2026.

commercial demand for water outcomes in the Forth Basin, with water quality outcomes likely to be better suited to a longer-term or regulation-led pathway. Analysing what organisations have actually allocated funds to (rather than what risks they report) revealed a pattern: action was skewed toward water-related dependencies and issues that were already live and affecting operations, rather than anticipated future risk. A further pattern emerged across the sample: larger organisations, with larger land footprints and greater portfolios of built infrastructure and capital, were more likely to be pursuing both (i.e. addressing present-day impacts and future-proofing against intensifying climate risks). Smaller organisations, on the other hand, which operate within tighter margins and thinner capital buffers, tended to focus on interventions that resolve issues they are already experiencing.

This has a direct implication for structuring water outcome contracts. There is unlikely to be a single "product" capable of attracting demand across the full range of prospective buyers in the basin. Smaller organisations are likely to focus on purchasing NbS that directly alleviate a current, tangible problem: where NbS out-compete grey infrastructure on cost and reliability for a defined, near-term outcome. Larger regional organisations and corporations, on the other hand, have both the risk exposure and the resource to look beyond their own site boundary, and are better positioned to fund (or co-fund) catchment-scale interventions, where benefits accrue over a longer time horizon and depend on whole-catchment functioning, rather than a site-scale fix.

A viable model for scaling water outcome contracts in the Forth basin could therefore offer differentiated tiers of buy-in: near-term, site-level, outcome-guaranteed actions pitched at cost-sensitive smaller buyers, alongside longer-horizon, catchment-scale propositions aimed at larger organisations whose exposure and resources make them natural benefactors for whole-catchment resilience.

4.2 Key drivers and enablers influencing market development

A key concern raised throughout focus group discussions was the widespread uncertainty experienced by both buyers and land managers. Potential funders often lack a clear understanding of where funding can deliver the greatest environmental and financial returns, while those managing land are hesitant to commit to new approaches until markets, standards and funding mechanisms become more established. This uncertainty appears to be creating a "wait and see" culture, where fear of making the wrong decision or losing future opportunities is driving inaction. As a result, the implementation of NbS risks slowing or stalling at a time when acceleration is required.

Stakeholders highlighted that significant innovation is already taking place within supply chains, particularly among larger organisations. Many companies are supporting farmers and land managers to adopt regenerative agriculture and other sustainable land management practices through premium payments, incentives, or funding mitigation options. However, while companies may monitor outcomes and evaluate performance, the wider benefits delivered at a catchment scale, along with examples of economically viable projects, are often not fully captured or shared. As a result, valuable learnings, evidence of impacts and opportunities to leverage additional funding could be lost. A

coordinated, cross-sector approach could help increase transparency, showcase success stories, align incentives and create opportunities for wider participation and co-funding.

Throughout this project, several stakeholders expressed caution around the development of environmental markets around water outcomes, particularly where opportunities are framed primarily as offsets. Many participants felt that credit/unit-based approaches can risk focusing attention on offsetting impacts rather than addressing the underlying causes of environmental degradation. There was also a perception that such models do not always align with the needs or motivations of corporate buyers, who are often seeking demonstrable operational, compliance, resilience, or reputational benefits rather than tradable environmental assets. For some organisations, environmental credit markets can appear overly complex, resource intensive and disconnected from their core business objectives.

Participants stressed the importance of robust governance, transparency, and outcome monitoring to ensure financial contributions result in real and lasting benefits. There was also recognition that environmental improvements are unlikely to be achieved through short-term interventions and that successful NbS projects require long-term commitments supported by stable policy and funding frameworks and regulatory certainty.

While there are only relatively weak regulatory levers to compel the private sector to make meaningful improvements to the water environment, policies in the space that were mentioned as being relevant included:

- Flood Risk Management (Scotland) Act 2009, which placed a duty to consider natural flood management and structures SEPA's Flood Risk Management Plans and the local authority FRM cycle. SEPA's NFM handbook is also a useful source.
- NPF4: Water management, climate resilience, positive biodiversity outcomes
- Biodiversity Net Gain (BNG) and Nutrient Neutrality (England)
- Regulation of infrastructure providers to address biodiversity impacts and deliver environmental improvements (e.g. Ofgem and Ofwat)
- Regulator incentives and penalties for good / poor environmental performance
- Corporate sustainability reporting (e.g. TNFD)

4.3 Evidence and metrics required to build buyer confidence

Allocating funds to NbS was perceived to carry inherent risk. Ensuring that that NbS deliver water-related outcomes in a given catchment requires thought, evidence and development (Irving, 2023). The water environment is shaped by actions across the whole catchment, making the impact of NbS difficult to evidence and even trickier to quantify (Ogilvy et al. 2022; Williams et al. 2024). Success depends on which NbS are implemented, where they are implemented, how they are managed and the scale of implementation (Cole et al. 2026; Ogilvy et al. 2022; Williams et al. 2024). With each catchment being unique, there is no one set of actions that will succeed in every environment. Evidencing impact is further hindered by the fact that nature takes time to

respond to change resulting in a significant delay between the implementation of NbS and the delivery of water-related outcomes (Allan 2025).

Buyers and decision-makers tended to be more familiar with traditional grey infrastructure, where costs, performance standards and expected outcomes are relatively instantaneous and well understood. NbS, by contrast, were perceived to carry greater uncertainty due to natural processes and longer delivery timescales. Establishing an understanding of what is deemed an acceptable level of risk, performance expectations, and success criteria will be critical if NbS are to attract demand at the scale required to deliver catchment-wide environmental improvements.

Robustly quantifying the impact of NbS through direct measurement or modelling is important to inform cost-benefit analyses. With the capital costs of implementing and maintaining NbS often lower than traditional grey engineering solutions (United States Environmental Protection Agency 2007), such analyses can help build the business case for NbS. Cost-benefit analyses should encompass the wide range of benefits (e.g. biodiversity, climate resilience, societal) delivered by NbS. Recognising and valuing these multiple benefits will provide a broader portfolio of outcomes, potentially attracting a wider range of investors/buyers. Above all, grey infrastructure and NbS should be viewed as complementary actions when it comes to mitigating risk and building resilience at a catchment scale.

Long-term monitoring is crucial to build the evidence base that investors/buyers require. It is important to factor monitoring costs into project development, and where possible draw on existing monitoring frameworks and citizen science initiatives to ensure their long-term viability. Furthermore, monitoring can act as an early warning system identifying where expected outcomes are not being realised, allowing for management to be adapted. Adaptive management has an important role to play in mitigating risks and increasing confidence in NbS.

There is an opportunity to leverage big data and statistical modelling to build the evidence base for private demand. Scotland has a significant body of evidence gathered through a variety of catchment-scale initiatives. Bringing these data together could help quantify the outcomes of NbS and to identify factors that influence these outcomes (e.g. placement, management, scale of implementation). Bringing together these datasets with spatial analysis could underpin the development of decision-support tools that translate the evidence base into practical information for project developers to use to better target action on the ground. Such tools could also help quantify expected outcomes improving buyer/investor confidence.

4.3.1 Selecting appropriate water metrics

There is a wide diversity of water metrics spanning outcomes associated with water resources, water quality, societal benefits, risks and economics, ecological condition and physical condition. This diversity can make it difficult to determine what metrics are suitable for a specific project. Selecting the most appropriate metric(s) will depend on a variety of different things: the outcome(s) being measured, how these outcomes link functionally to the water environment, the scale at which change needs to be

demonstrated, the timeframe of interest, and the reporting needs of project managers, investors and buyers (e.g. funding or disclosure reporting requirements). Above all, monitoring needs to be viable to implement throughout the duration of the project, and often beyond.

The evidence suggests there is a need to develop a standardised monitoring framework to guide developers/investors/buyers in selecting metrics that are scientifically robust, meet reporting requirements, and are viable to implement (McCarthy 2025, Cole et al. 2026). Adopting a more consistent approach to monitoring across catchment-scale initiatives would facilitate comparison of project success, while also allowing data to be collated for further analyses and monitoring.

4.4 Pooled and blended finance models

The focus group highlighted strong support for the development of catchment-scale projects as a means of attracting greater demand and delivering multiple benefits. Taking a catchment-based approach can create opportunities to blend different sources of funding, aggregate projects across multiple landholdings and generate improvements across a range of ecosystem services, including water quality, biodiversity, flood resilience and climate adaptation. There was broad recognition that existing mechanisms, such as LENs, have significant potential to support financial flows into NbS, although further investor participation will be needed to scale these models.

Participants emphasised that the primary objective should not be to create projects solely to meet the requirements of large corporate buyers. Instead, action should be directed towards achieving long-term environmental enhancement and business resilience, with finance serving as an enabler rather than the end goal. Herein lies a central challenge explored through this work: Securing funding is easier where a clear business case exists and where environmental improvements can be connected to tangible organisational benefits. How then can finance be directed towards locations and communities where environmental need is greatest, but commercial drivers are weaker?

Addressing this imbalance will require innovative funding models and collaborative approaches that combine public and private funding streams. Across the interviews, focus group, and final workshop, models that combined public funding with private capital were viewed particularly positively. Structured this way, a single catchment project could accommodate multiple stakeholders co-funding simultaneously, each realising the specific outcomes most relevant to their own operations (e.g. flood resilience for one, water quality for another, BNG for a third) while collectively supporting a more integrated approach to catchment and ecosystem management than any one organisation could deliver alone. Blending contributions from multiple sources spreads and lowers the risk across the demand side, making it more commercially viable to support broader catchment outcomes that would otherwise be difficult to justify for a single buyer's business case.

The evidence points to a natural sequencing for actors who are positioned to be early movers. Organisations already carrying a duty to improve the water environment are

best placed to act as "anchor buyers". This could be through a polluter-pays obligation, a regulatory requirement, or budgets earmarked for delivering positive environmental outcomes, as raised in relation to bodies such as SPEN and SSEN. Several participants pointed to water companies such as Scottish Water as key potential anchor buyers for a blended approach. Crucially, however, the roles of such anchor buyers should be exactly that - anchoring and de-risking a project in its early stages, not shouldering its full cost indefinitely. Their early commitment is what unlocks, rather than substitutes for, wider private involvement.

The harder task, and one identified explicitly in the final workshop, is avoiding a free-rider problem: actors with genuine exposure to water-related risk (e.g. through operational dependency, regulatory expectation, or reputational pressure) declining to contribute once anchor buyers and early movers have made a project viable. Guarding against this will require catchment schemes to be flexible and agile by design, structured so that there is a continuing business case for later entrants to join rather than wait. Further finance should translate visibly into additional, attributable outcomes, so that joining a scheme remains more attractive than sitting outside it.

If this can be achieved, private finance has the potential to make a substantially greater contribution to water outcomes across the Forth Basin than it currently does. Even so, it is unlikely that private money alone will be sufficient to deliver against the full range of catchment-level outcomes, particularly in locations where environmental need is high, but the commercial case remains inherently weak. Public funding is therefore likely to remain a necessary, permanent component of the economic model, not a transitional one.

4.5 Intermediaries with local knowledge

Collaboration was identified as a major factor in reducing risks associated with spending on NbS, building trust amongst stakeholders and providing sufficient financial support to deliver at the scale necessary to demonstrate change. Participants emphasised the need to reduce traditional hierarchies within financial and project development processes, ensuring that land managers, communities, buyers, investors, regulators and other stakeholders are engaged. Creating space for land managers to share their knowledge, business needs and perspectives would help ensure that projects are practical, deliverable and capable of generating lasting benefits for all parties involved.

Intermediary organisations within the Forth Basin (e.g. Forth Rivers Trust, Fife Coast and Countryside Trust) with a long-term interest in the catchment and local community play a key role in:

- **Stakeholder mapping** - Identifying which supply- and demand-side actors are present in a catchment and where their risk exposures or operations overlap
- **Building collaborations through trust** - With local knowledge and trust, such organisations are in an ideal position to work with stakeholders across a catchment, bringing land managers, communities, buyers/investors and other stakeholders to the table. Stakeholders emphasised that project development

should be based on collaboration rather than prescription, recognising that land management decisions are ultimately business decisions.

- **Facilitation and co-design** - As a trusted intermediary between actors with different interests, knowledge types, and types of power, these organisations can translate across gaps and mitigate interpersonal dynamics.
- **Strategic perspective** - Business or demand-side interest will always be linked to their sectoral / operational risks or constraints. Intermediaries, on the other hand, can look more broadly at the catchment in general, act as a voice for nature, fill gaps to ensure actions are mutually reinforcing and ultimately bring about impacts at catchment level, drawing in public finance where necessary to fill gaps.
- **Ongoing education** - Continuous learning is necessary for all stakeholders: Public understanding and acceptance were viewed as particularly important for securing long-term support for NbS projects. For the demand side, broadening their perspective on the NbS options available could increase funding for wetland restoration, natural flood management and catchment-scale habitat enhancement for water quality and flood/drought resilience but also for biodiversity recovery, carbon sequestration and community wellbeing.

Such intermediary bodies tend to be non-governmental organisations (NGOs) and consequently it is important that their contribution is adequately supported. Public funding streams such as the Nature Restoration Fund Transforming Nature Development Phase[8] and The Facility for Investment Ready Nature in Scotland[9] (FIRNS) have provided an important source of funding for project design. To maintain this role and support project legacy (e.g. including long-term management and monitoring) continued funding will be needed. Both public and private funding could contribute to sustaining this capacity and supporting the longer-term management and monitoring of projects.

[8] Nature Restoration Fund (NRF) - Transforming Nature - Development Phase Guidance | NatureScot

[9] FIRNS - The Facility for Investment Ready Nature in Scotland | NatureScot

5 Recommendations and next steps

Based on the findings from our multiple evidence streams, the research team suggests the following actions to take this work further. While this work was focused on the Forth Basin, our evidence review and conversations with stakeholders suggest that the barriers and enablers detailed here likely apply across Scotland and beyond. These recommendations are therefore relevant to, and designed for, a wide audience, including NGOs and advocacy groups, research initiatives, policymakers, the private sector, and others.

Quick win: Support and increase the capacity of trusted intermediaries

Continued funding is needed to ensure intermediary organisations can maintain their critical role in building collaborations and supporting project design, financing and delivery of NbS at the catchment scale. Both public and private funding should be considered as potential sources to underpin this capacity, including the long-term management and monitoring of projects.

As laid out in the section **above**, organisations that bridge the gap between the supply and demand side provide several key supporting functions, including engaging and building trust with land managers and educating all stakeholders as to what might be possible in a catchment (including land managers, demand-side business interests, the public and local communities, and/or buyers/investors).

Properly resourcing these groups, expanding their reach, or seed funding new organisations in new catchment areas where they are absent will be key to addressing many of the barriers highlighted in this work. Chief among these is the lack of capacity to understand the demand drivers in a catchment, map the landholdings which could address these, and to build and present a business case for NbS as an alternative to engineered / grey solutions. Working from a catchment-wide perspective but drawing on evidence specific to an individual organisation's issue, these intermediaries create the channels through which funding can flow.

Supporting action: Evidence synthesis

To build buyer/investor confidence in NbS and underpin the work of these intermediaries, data should be collated and evidence synthesised across multiple catchments. This will provide stronger evidence of NbS impacts and improve understanding of where, how and at what scale they are most likely to deliver outcomes.

Key tasks required to build this evidence base include:

- Centralising a clear, searchable, signposted database of important datasets, tools, and repeatable methodologies which can support catchment-scale initiatives.
- Integrating these data with spatial modelling to support the development of a user-friendly decision-support tool to assist with project development, identify where NbS are most likely to deliver specific water-related outcomes and inform decision-making.
- While broad, national-scale datasets are useful, the key to unlocking demand-side interest (effective, actionable demand) is evidence which can prove that the

proposed NbS will deliver comparable or better results than the alternative grey infrastructure intervention. This may not always be possible as it may require new hydrological modelling.
- Where definitive proof is not available or practically accessible to support a business case for NbS, a database of successful case studies from similar catchments and socio-environmental contexts is an important fallback option. For some aligned / amenable demand-side actors, these may provide sufficient evidence to unlock financial flows.

Actioning these key tasks could help reduce uncertainty and build buyer/investor confidence. In terms of taking the research presented in this report further, next steps could include:

- Testing some of the key insights with a wider stakeholder group, including organisations that could not be included in the interview sample.
- Zooming in on specific elements not considered in this study, such as stakeholders in the financial/insurance sector. One example could be studying the relationship between farmers and NFU Mutual, to understand relationships to water-related risk (both flooding and water scarcity), and risk profiles and appetites in this setting.

Future project: Develop a standardised monitoring framework

A standardised framework is required to assist project developers to identify appropriate metrics to monitor project outcomes. This framework should consider the water-relrated outcomes of interest, the functional linkages between the water environment and these outcomes, spatial scale, investor/buyer requirements, impact timeframe, existing monitoring initiatives and resource availability. Consistent application of the framework across catchment-scale initiatives would support the generation of comparable datasets contributing to the wider evidence synthesis.

Robust MRV is a key principle of ecosystem markets, particularly those based on units/credits or payment for ecosystem service transactions. However, an unexpected finding of this research was that backward-looking MRV is actually the less important data gathering exercise for most current and potential buyers in the water environment: What is more important is forward-looking modelling that indicates the proposed NbS is highly likely or guaranteed to deliver its intended outcomes, and that these outcomes are permanent, or at least at low risk of being reversed. This is what underpins the business case that can unlock funding and make projects happen.

While some light-touch MRV is important and contributes to building the base of positive case studies, some demand-side actors likely perceive more exhaustive, granular, *in situ* MRV to be just another ongoing operational cost, which detracts from the attractiveness of NbS. Therefore, a standardised monitoring framework should contain a menu of metrics to choose from, with some core, easier to collect ones (that can contribute to a decent baseline and indicate broad direction of travel), then additional, more detailed or costly ones (which can be integrated if more robust quantification of outcomes is required).

Related to this, this research also identified that it is fair and sensible for land managers such as farmers to be paid on their actions or "outputs", such as implementing regenerative agriculture. This is as opposed to paying them only when water-related outcomes have been realised, which may take time. In this scenario, the risk of non-delivery of outcomes sits with the demand-side or funder of the NbS.

Longer-term, strategic objective: Building towards a structured, scalable, transferrable, fit-for-purpose blended finance model

NbS are still widely perceived by many demand side actors as inherently risky, with value-for-money and return on investment uncertain or unpredictable relative to conventional grey infrastructure. Blending private and public funding via a clear, well-defined mechanism is a practical way forward. Existing public funding schemes (e.g. the Nature Restoration Fund and the Agri-Environment and Climate Scheme) should be explicitly designed to be compatible with private finance, so that public money actively facilitates a blended approach rather than competing or undermining the case for private financing. Central to this design is ensuring additionality is properly addressed: mechanisms must be structured so that the same outcome is never paid for twice, as double-counted outcomes would undermine confidence in the model.

Blended finance models should be designed to support multi-ecosystem-service projects, widening the potential funding scope beyond water outcomes alone to integrate carbon, biodiversity and societal outcomes within the same project. Due to its nature as a critical operational concern for many organisations, water can serve as a valuable "hook," drawing commercial interest that might not otherwise materialise for carbon or biodiversity projects alone. This integration should be pursued, however without drawing transactions into the complexity of formal ecosystem markets and credit systems, which remain contested and liable to slow delivery rather than accelerate it.

Red tape needs to be reduced or streamlined: The barriers identified throughout this research (slow and cumbersome landowner agreements, lengthy regulatory approval timelines, and the general burden of navigating multiple funding and permissions regimes) will continue to deter engagement, unless they are actively simplified. Second, policy alignment matters more than it might first appear. The closer Scottish, UK, and international frameworks and standards are to one another, the easier it becomes to make the case to multinational buyers/investors (organisations who may already be financing in NbS elsewhere) that Scottish and UK projects belong in the same portfolio. Misalignment between frameworks adds friction.

Finally, addressing the free-rider problem identified at our final workshop cannot rest on voluntary participation alone. Regulation should continue to be ratcheted down over time, narrowing the space in which businesses with genuine exposure to water-related risk can benefit from improved catchment outcomes without contributing to them. This is not a call for regulation to replace voluntary and blended finance, but for regulatory tightening to work in parallel with it, steadily reducing the viability of free-riding as blended finance mechanisms mature and become more established.

Taken together, a well-functioning blended finance model has the potential to maximise the contribution of private finance to water outcomes in the Forth Basin and beyond. Achieved well, this would represent an efficient and equitable allocation of both private and public resources, delivering water security, biodiversity gain, and climate resilience

at catchment scale, for the benefit of businesses, communities, and the water environment.

6 Acknowledgements

We would like to thank Federica Foiadelli and Paul Sizeland from Fisheries Management Scotland for the support they have provided throughout this project. We are also grateful to the members of the project Advisory Group, our initial focus group, our interviewees, and participants who attended the final workshop for generously giving their time and insights to our research process. We would like to thank our initial focus group attendees for sharing their knowledge and experience specifically: Great Yellow, Fife Coast and Countryside Trust, James Hutton Institute, Scottish Enterprise, SEPA and Will McDonald. We are also extremely grateful to the 13 organisations we interviewed who provided information and insight on their operations, including 2Agriculture Ltd, CVS Falkirk & District, Diageo, Fife Council, Fife Golf Trust, Forth Ports, and seven organisations who wished to remain anonymous.

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Appendix: Interview questions

1. What are the main challenges your organisation is facing at the moment?
2. How important is water as a commodity/resource for your organisation?
3. Do you perceive any water risks to your organisation?
    a. How do you currently assess these risks – to what level of hierarchy?
    b. Have you costed this risk?
4. Looking at the risks identified, have you identified actions to reduce this risk to your organisation?
    a. What is the outcome you are aiming for?
5. What pathways are you looking at to achieve these outcomes?
6. Have you considered working with nature to reduce this risk/build resilience to your organisation?
    a. If yes: Probe further into what extent – discuss enablers and type of NbS.
    b. If no: What are their barriers
7. If you are currently investing in water, what was your driver(s)?
    a. What factors would most influence your decision to invest in water outcomes?
    b. What concerns or barriers would need to be addressed before entering into such arrangements?

<u>Follow-ups for those who understand and can answer these questions</u>

8. Do you currently measure or use water metrics to make business decisions?
    a. If not, what are your barriers?
    b. If you do, why do you use the ones discussed (e.g. reporting or risk)?
9. Contract models and preferences
    a. What type of actions would you be willing to invest in?
    b. Do you have budget allocated to reducing water related risk?
    c. Would type of contractual arrangement would be most feasible or appealing for your organisation?
    d. What types of organisations are you able to contract / do business with?
    e. Would you consider forming/joining collaborations within the catchment to improve water outcomes?