



VALUING NATURE

Towards a Natural Assets R&I Agenda in Support of Business

Overview

1. Emerging R&I priorities

Cross-sector analysis

Current activity

Current activity	Infrastructure	Land Management	Financial Services
Biodiversity assessment, accounting, no net loss/net gain			
Natural capital assessment & accounting			
Generating data, information management			
Developing indicators, metrics			
Developing tools			
Modelling natural assets			
Developing standards			
Implementing nature-based solutions, green infrastructure			
Developing financial instruments			
Developing markets for natural assets			
Quality assurance, certification			
Capacity-building			

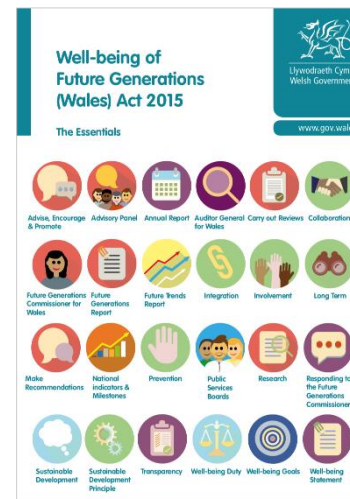
Cross-sector analysis Drivers

Cross-sector drivers

- UK
 - Industrial Strategy
 - Clean Growth Strategy
 - Environment Bill
 - Agriculture Bill
- Devolved
 - 25YEP and Natural Environment White Paper (England)
 - Wellbeing of Future Generations Act (Wales)
 - Programme for Government (Scotland)

Insurance/financial sector drivers

- SDGs
- Paris Agreement, EU and UK climate targets, TCFD
- EU Sustainable Finance Initiative



Barriers & Challenges	Infrastructure	Land Management	Financial Services
Knowledge gaps			
Data issues			
Availability, granularity, quality			
Monitoring costs			
Data for complex supply chains			
Approaches, standards, methods, tools, metrics			
Plethora of approaches, methods & tools; absence of standards; applying methods across scales; measuring and valuing biodiversity			
Regulatory constraints			
Net gain not mandatory			
Inflexible regulation (water quality, safety)			
Conflicting regulatory frameworks for natural assets			
Challenges around investing in natural assets			
Multiple asset holders and ecosystem services beneficiaries; absence of brokers; disconnect between natural asset value and land values			
Absence of suitable markets; demonstrating materiality; return on investment			
Knowledge exchange, awareness, training			
Securing corporate buy-in for consideration of natural assets in decisions			
Communications challenge across multiple actors at catchment scale			
Limited resources for co-creation of knowledge, limited training, shortage of skills across the project pipeline			

Research & innovation needs (1)

1. Better focus of R&I on business and policy needs

- Funding instruments: suitably-framed R&I **funding instruments**
- Increased investment in **co-creation** of R&I related to natural assets
- Appropriate partnership between business and academia in **R&I proposals**
- Appropriate attention to business impact in **proposal evaluation**
- Co-direction of **funded R&I programmes/projects**; outputs meet business needs, framed through business lens.
- **Better brokerage** of interaction across academia, business and policy in this complex, multi-disciplinary, multi-sector space.

Research & innovation needs (2,3)

2. Basic research on natural assets

- ...to underpin measurement and valuation

3. Data for business

- Assessing data needs and provision
- Making data accessible, usable
- Filling key data gaps
- Data quality assurance
- Enhanced long-term monitoring, including remote sensing

Research & innovation needs (4)

4. Frameworks, standards, models, metrics and other tools for business

- Developing coherent frameworks and standards
- Consolidating and validating methods, metric and tools
- Developing new methods, metrics and tools
- Developing natural capital accounting to better define boundaries, address ecological connectivity, etc.

Research & innovation needs (5)

5. Pilots, demonstrations, scaling of new business models/solutions

- Scaling uptake of natural capital thinking by business
- Piloting and demonstrating at catchment and regional scales
- Meeting sector specific needs, e.g.
 - relating to natural asset enhancement through the UK National Infrastructure and Construction pipeline
 - trials for post-Brexit agri-environment payments for public goods
- Developing a natural assets farm advisory service
- Building understanding on how to incentivise good land stewardship

Research & innovation needs (6)

6. Developing natural asset markets, stimulating investment in business solutions

- Regulation and policy for markets that value and enhance nature
- Accelerating investment in natural assets
- Markets for soil natural assets
- Linking to commercial value
- Leakage effect
- Ethics and risks of monetising and trading natural assets

Research & innovation needs (7)

7. Assessing risks and resilience in relation to natural assets

- Materiality
- Linking risk with impact assessments
- Links between physical and transition risks
- Stranded assets related to natural capital
- Understanding how natural assets deliver business resilience to climate change

Research & innovation needs (8)

8. Knowledge exchange, training and capacity-building

- Training for academics/professionals in relation to measuring and valuing natural assets for business
- Communicating research output, practical application experience
- Developing a knowledge hub
- Raising awareness and understanding, e.g.
 - common language on natural assets for making business cases
 - raising public awareness and shifting public opinion on the importance of natural assets.



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2. Policy alignment & appetite for collaboration

1. What are the key policies / direction of travel with which a *Natural Assets R&I Agenda in Support of Business* should align?

Climate

- Climate targets - net zero – need to engage with land use (e.g. woodland, peatland, soil carbon), NbS in the climate debate – Glasgow COP26
- TCFD – trend towards increasing transparency, influencing corporate decision-making on emissions. adaptation, risk
- Resilience/adaptation – e.g. for infrastructure, built environment – linked to flood risk, etc.

Natural Environment

- 25YEP (England), Wales Wellbeing of Future Generations Act, Scotland Programme for Government – strong natural capital / natural resources focus
- Environment Bill – mandatory biodiversity net gain (NCC pushing for natural capital net gain), OEP, etc.
- CBD post-2020 targets, Dasgupta Review
- Move towards mainstreaming of corporate NCA – could eventually lead to significant compensatory payments for recovery of natural assets

1. What are the key policies / direction of travel with which a *Natural Assets R&I Agenda in Support of Business* should align?

Agriculture

- Agriculture Bill, ELMS – public payment for public goods, balancing C net zero with other aspects of natural assets
- Longer-term trend to reduced meat production, food innovation, land sparing/land sharing – shift from farming to land management

Green finance

- Greening finance – e.g. EU and Central banks moving to differentiate regulation of green and brown capital
- Financing green – e.g. blended finance

2. Do the expressed R&I needs of business resonate for the policy community?

- In general, R&I needs expressed by business resonate strongly with most policy players – ‘ticks a lot of boxes’

1. Co-creation/co-delivery

- Many in policy community stressed need for collaborative approach between business and academia, maintaining dialogue throughout the R&I process, translation/application of R&I for business uptake
- Differentiate between businesses which own/manage natural assets, and those which use them but do not own/manage

2. Do the expressed R&I needs of business resonate for the policy community?

2. Basic research

- Ecological condition, connectivity
- Resilience
- Food systems – how to produce food and deliver environmental public goods, produce cheap food using less land, etc

3. Data for business

- Data, evidence for baselines, measurement of change
- Place-specific data
- Translation/application of data (we often have plenty)

2. Do the expressed R&I needs of business resonate for the policy community?

4. Frameworks, standards, models, metrics and other tools for business

- Modelling – e.g. around where to plant trees to optimise co-benefits C / social value, etc.
- Frameworks and standards that work across sectors – consolidating, resolving proliferation
- Standards, metrics, tools, etc. for:
 - biodiversity net gain – including condition, connectivity
 - environmental net gain
 - national and corporate NCA
 - ELMS

2. Do the expressed R&I needs of business resonate for the policy community?

5. Pilots, demonstrations, scaling of new business models/solutions

- Robustness of nature-based solutions – transferable or place-specific, scale of avoided costs (e.g. reduced water treatment costs), reduced losses (e.g. flood damages), increased revenues
- What level of information/data needed, extent of monetisation, to make decisions? – need to strike the balance simplicity/detail.
- What change needed in regulation? – e.g. water regulations/pricing - to enable investment in natural assets (e.g. moving beyond least-cost approach)
- Addressing challenges of working across sectors, e.g. at catchment/regional scales, across differing regulatory frameworks – potential for common principles, shared data
- Trialing of ELMS / public payment for public goods / agricultural transformation

2. Do the expressed R&I needs of business resonate for the policy community?

6. Developing natural asset markets, stimulating investment in business solutions

- Climate analytics & new financial instruments in support of resilient infrastructure
- Making environmental externalities financeable - attributing cash-flow to investment in natural assets
- Demonstrating financial relevance of natural assets to investment, quantification of risk related to decline in natural assets
- Blended finance – who pays for what?
- Finance-friendly, quality, place-based data and analytics
- Mandatory net gain – issues around single development-based approach vs cumulative effects
- Developing natural asset markets, e.g. Woodland, Peatland Carbon Codes

7. Assessing risks and resilience in relation to natural assets

- Current and future risks, scenario planning – e.g. what happens to natural assets in 1C, 2C scenarios and how does this affect business

3. What appetite is there in the policy community to collaborate on *Natural Assets R&I Agenda in Support of Business?*

- In general, **strong appetite** in principle across the policy community and ALBs to engage with business on natural assets R&I
- Strength of appetite will depend on the detail
- Appetite from public sector will be all the greater if private sector willing to put resources on the table



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3. Delivery options

Delivery options

3 options

- **Centre/hub** to coordinate and catalyse UK R&I investment and KE exchange on natural assets
- Addressing bundles of R&I needs through targeted **programmes**
- Addressing specific R&I needs individually through targeted **projects**

These options are:

- not mutually exclusive
- each have pros and cons
- deliberately not linked to specific URKI funding instruments

Wide range of R&I needs

- will probably require using a mix of the 3 options

Option 1. A Natural Assets R&I Centre/Hub

Why a Centre/Hub?

- Need for transformational change to slow/reverse depletion of natural assets
 - from business as usual (economic decision-making) to value-based decision-making taking account of natural (and social) capital
- R&I investment needs to support this transformational change, reflect interconnectedness:
 - across sectors, scales, geographies, disciplines

Option 1. A Natural Assets R&I Centre/Hub

Purpose of an R&I Centre/Hub

- Coordinate/stimulate R&I that helps business mainstream natural asset protection / restoration at required scale and pace
- Meet generic and systemic R&I needs of business and policy
- Meet specific needs of individual sectors
- Build coalitions and consensus, prioritise R&I investments
- Stimulate development of key datasets, data products
- Support development / coherence of frameworks, standards, approaches, methods, tools, metrics
- Support pilots, demonstrations, scaling activities, emergence of new natural asset markets
- Ensure synergies, reduce duplication, enhance cost-efficiencies in R&I investment
- Bring together, enhance accessibility of relevant knowledge and experience

Option 1. A Natural Assets R&I Centre/Hub

Funding

- Substantial start-up and core budget – several £10 millions?
- Initially largely public sector funding
- Increasingly private sector (as natural asset markets emerge - e.g. around mandatory net gain, delivery of C net zero...)

Governance

- Strong business steer, policy and academia representation

Duration

- 10-20 years – sufficient to develop/deliver coherent body of work

Ambition

- Consolidate UK as leader on natural assets R&I for business – expanding opportunities to export this expertise
- Support delivery of UK policy on climate, environment, agriculture, green growth and international policy (SDGs, climate & biodiversity targets....)

Option 2. Strategic Programmes

What?

- One or more thematic programmes, each picking up a bundle of related R&I needs
- Each programme runs c.5 years, involves one or more R&I calls

Pros

- Less complex to establish than a hub

Cons

- Likely to address only a part of the wide-ranging R&I needs identified
- May fail to deliver necessary coherence across the piece.
- Less likely to capture export value and international leadership from delivery of solutions that a fully integrated response could deliver.

Option 3. Projects

What?

- Targeted pieces of research and/or innovation
- Scale and duration of each piece depending on the nature of the need - from a few tens of thousands of pounds, to several million, and from a few months to several years.
- Requires co-creation and co-delivery with business.

Pros

- Pragmatic / rapid means to address specific R&I needs

Cons

- High risk of failure to deliver the necessary coherence across the piece.
- Projects likely to engage a small proportion of the cross-sector interests involved in natural asset management.

Players & scale

Players

- Business
- Government (UK, devolved) and arms-length bodies
- Academia
- Civil society – NGOs, foundations

Scale

- Wide range of R&I needs across sectors suggest substantial resource required
- Typical scales:
 - Hub/catalyst – £50-100 m+ (smaller if combined with programmes and projects)
 - Programmes – each £15-60 m
 - Projects – each few £ m