

Urban Natural Capital Accounting and Investment

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About eftec

- The first consultancy of environmental economists in the UK set up in 1992 (with support from Prof David Pearce and Prof Kerry Turner)



21 in core team / 20+ in associate network

- 600+ projects
- 100s of clients: public, private and NGO
- Land management natural capital accounting market growing
- We care about:
 - Environment
 - People
 - Economy

Natural Capital Accounting

- UK Urban Account


Greater Manchester

- Natural Capital Account
- Investment Plan

Why do organisations do natural capital accounting?

- Understand what assets they have and the benefits they provide the business and others
- Track changes over time
 - Assess dependencies
 - Assess risks and opportunities
- Communicate the importance of natural capital internally
 - Option appraisal
 - More efficient data collation and analysis
- Communicate with external stakeholders
 - Shared 'good', positive view of 'assets'
 - Private and external benefits and costs
- Make a better business case for investing in natural capital
 - Measuring the impacts of investment
 - Fill the gap left from financial and ESG analysis
 - Innovative finance – blended, green

National accounting (SEEA-EA)



Wealth vs Income



Income = monetary flow

= Turnover







= Ecosystem service value

Wealth = underlying assets

= Property, knowledge

= Natural environment

Natural Capital Approach

	Features of natural capital approach	Other approaches
	Focuses on stocks of natural capital assets (quality and quantity) as well as flows of benefits	Ecosystem services approach, and indeed most economic analysis, focus on flows of benefits – as such they are inputs to a natural capital approach
	Incorporates both biotic and abiotic natural resources	Ecosystem services approach considers biotic resources only
	Assesses how both stocks and flows are likely to change in the future	Environment Social and Governance analysis and financial accounting mainly consider past performance
	Considers both dependencies of an economic activity on natural capital and its impacts on natural capital	Most environmental regulation is about controlling the impacts of activities (such as reducing emissions); the implications of the impacts are considered separately
	Uses valuation* of impacts and dependencies	Different approaches use different measures, mostly of impacts
	Makes the links between all of the above, to support systems-based thinking	Research & decision making tend to be developed separately for different sectors or issues (like agriculture, water, biodiversity) even when they depend on the same natural capital assets

* Valuation is the process of estimating the relative importance, worth, or usefulness of natural capital to people (or to a business), in a particular context. Valuation may involve qualitative, quantitative, or monetary approaches, or a combination of these.

UK URBAN NATURAL CAPITAL ACCOUNT - Define urban

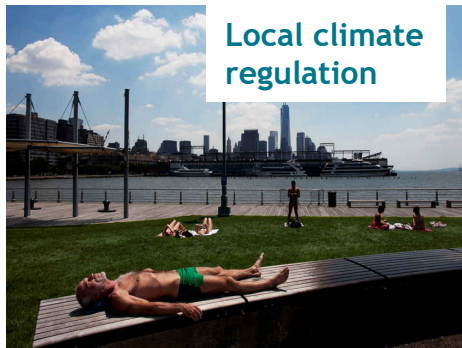
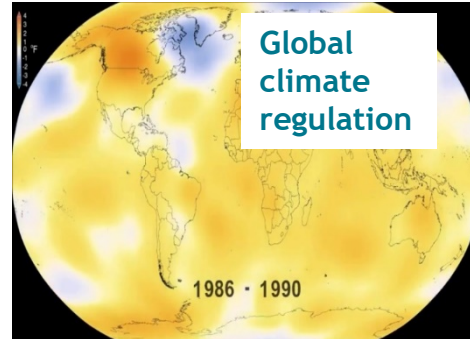
- Defining urban natural capital presented a mapping challenge
- Socio-political 'urban' boundaries are unsuitable for natural capital accounting
- Urban area defined based on ONS (2011) Built-Up-Areas dataset, plus a buffer and manipulations to ensure a logical boundary
- This means the account captures some natural capital (e.g. freshwater, woodland) covered in other accounts



Source: UK National Ecosystem Assessment Report

UK URBAN NATURAL CAPITAL ACCOUNT – Scope

- Covers 1.77m ha (approx. 7% of the UK)
- Values 6 benefits:



UK URBAN NATURAL CAPITAL ACCOUNT

- Identifies approx. £1.5bn/yr of value
- Most significant benefit is physical health from outdoor recreation:

	Monetary Flow	Asset Stock Value (PV, 100 years, 3.5%)
Total Avoided Health Costs	£900m p.a.	£26,840m p.a.
Welfare Value (base on QALYs)	£1,480m p.a.	£44,170m p.a.

Organisational natural capital accounting



Answer these key questions to...

...generate these natural capital accounting outputs

What natural capital assets are owned, or managed, or depended on?

- **Natural Capital Asset Register** - Registry of all natural capital assets owned / managed / dependent on

What flows of benefits do the assets produce?

- **A statement of physical flows** – Benefits, both for the organisation and for wider society, in physical metrics

What is the value of the benefits and to whom do they accrue?

- **A benefit valuation statement** - in monetary terms where possible

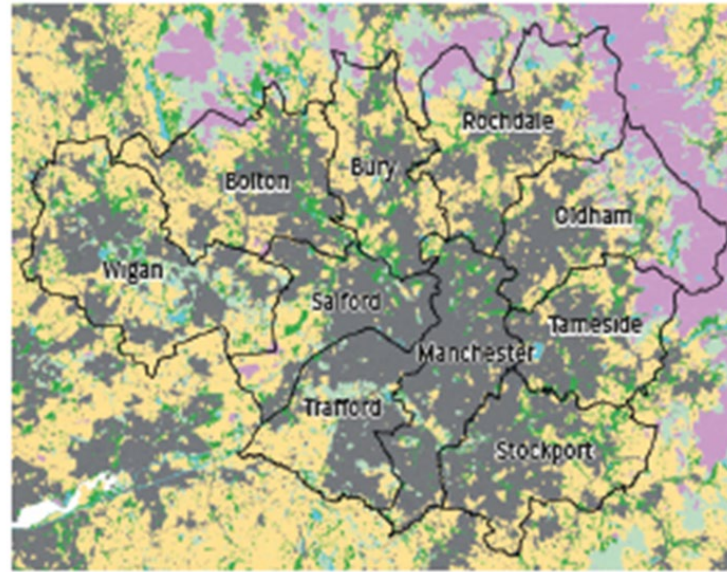
What does it cost to maintain the natural capital assets?

- **A schedule of maintenance costs** - Relevant activities and their costs

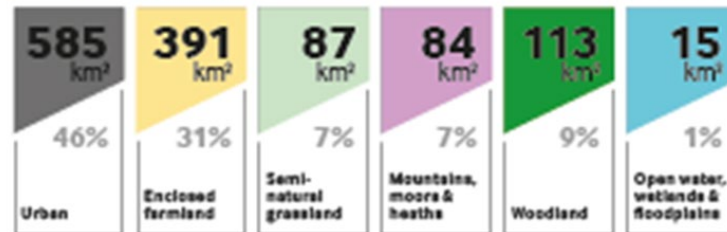
What's the net impact on natural capital?

- **A natural capital balance sheet** - Sum of natural capital benefits over time vs the sum of costs to maintain the natural capital assets in a condition that generates the benefits

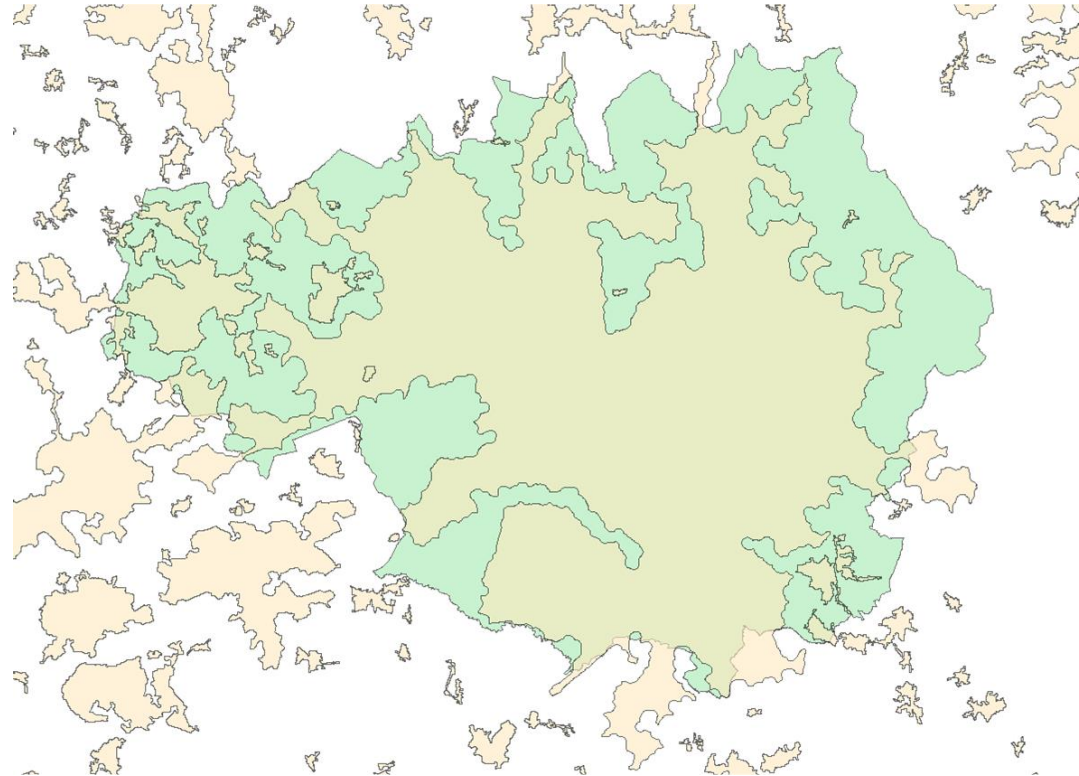
APPLICATION TO A CITY – GREATER MANCHESTER



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MANCHESTER NCA: SCOPE



- Urban extent polygons
- Boundary of GMCA

Manchester benefits flows & asset values

How does Natural Capital Benefit the City?

£860m - total annual benefit

£11bn – total value of avoided healthcare costs (over 60 yrs)




£372m


£274m


£92m


£74m


£3m


£50m


£41m


£41m


£2m



Preventing **370** hospital admissions, avoiding **1,200** life year's lost



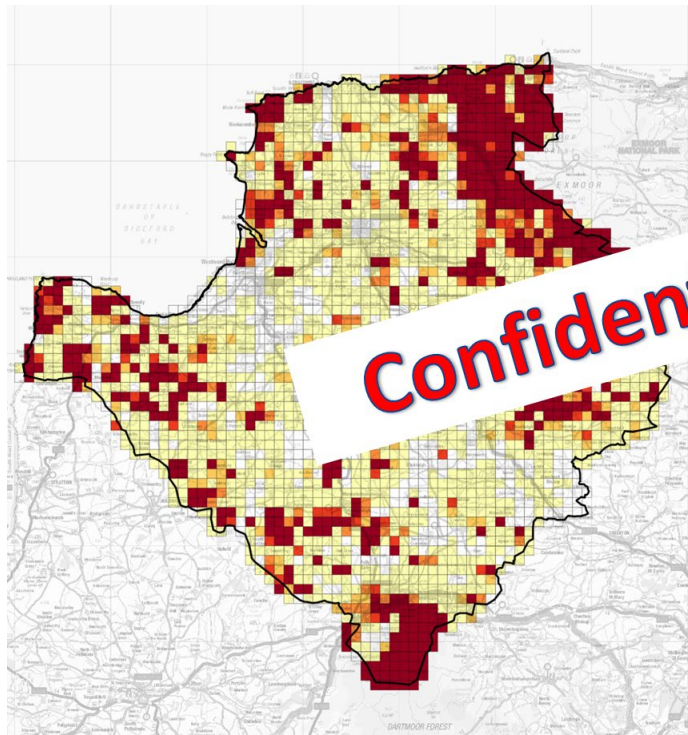
Approx. **430,000** buildings receive noise mitigation



135,000 people meet their physical activity guidelines, giving over **4,600** QALYs



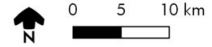
Natural Capital Applications



Natural England

Environmental Stewardship

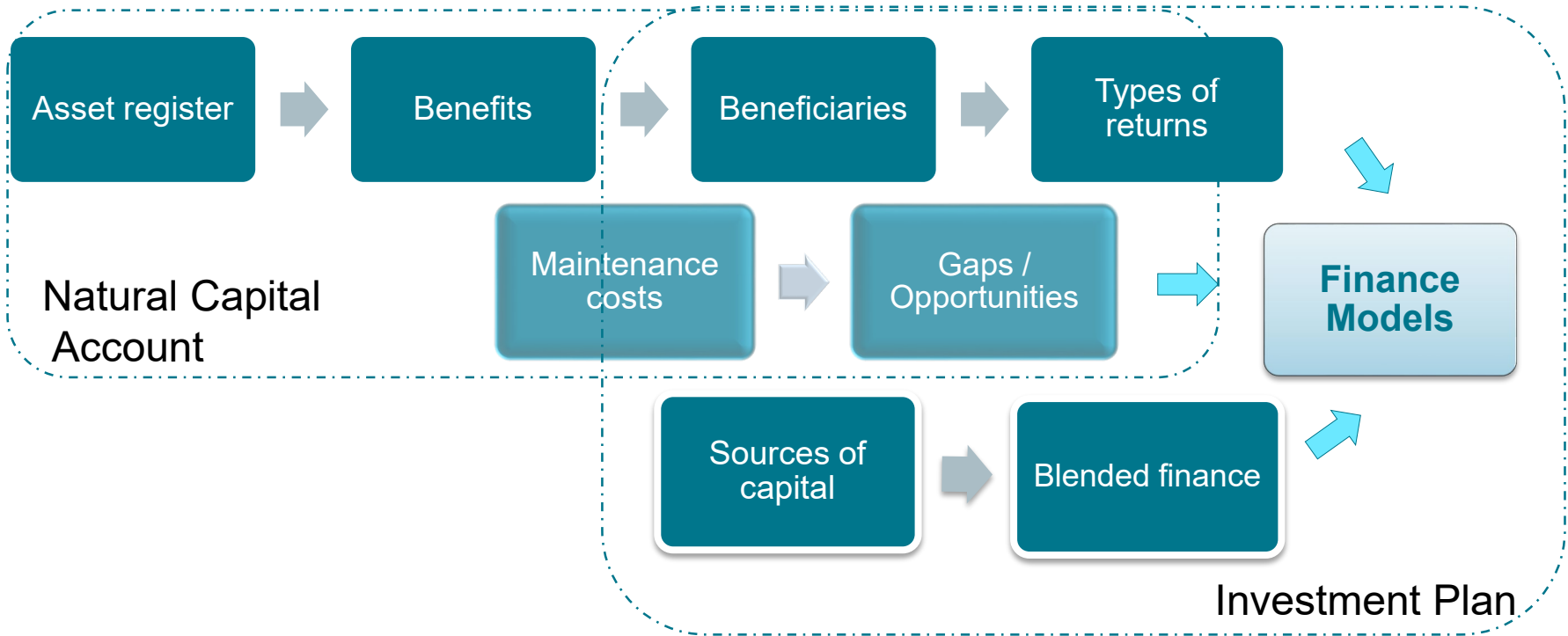
- Pioneer Area
- 1km grid
- Expenditure
 - >50% lower than mean
 - 10-40% lower
 - Mean +/- 10%
 - 10-40% greater
 - >50% greater than mean



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Greater Manchester Natural Capital Account & Investment Plan

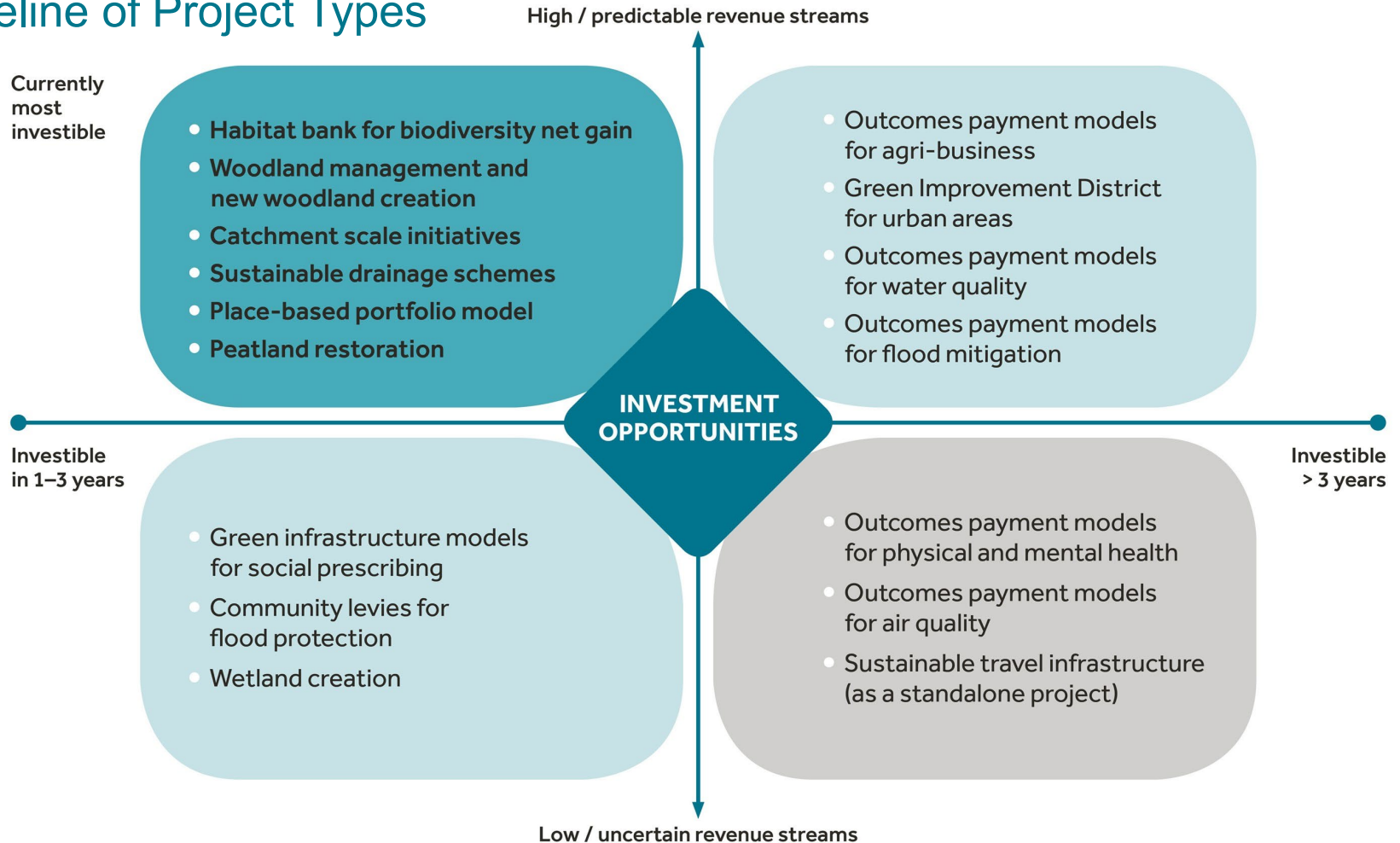


Greater Manchester NC Investment Plan?

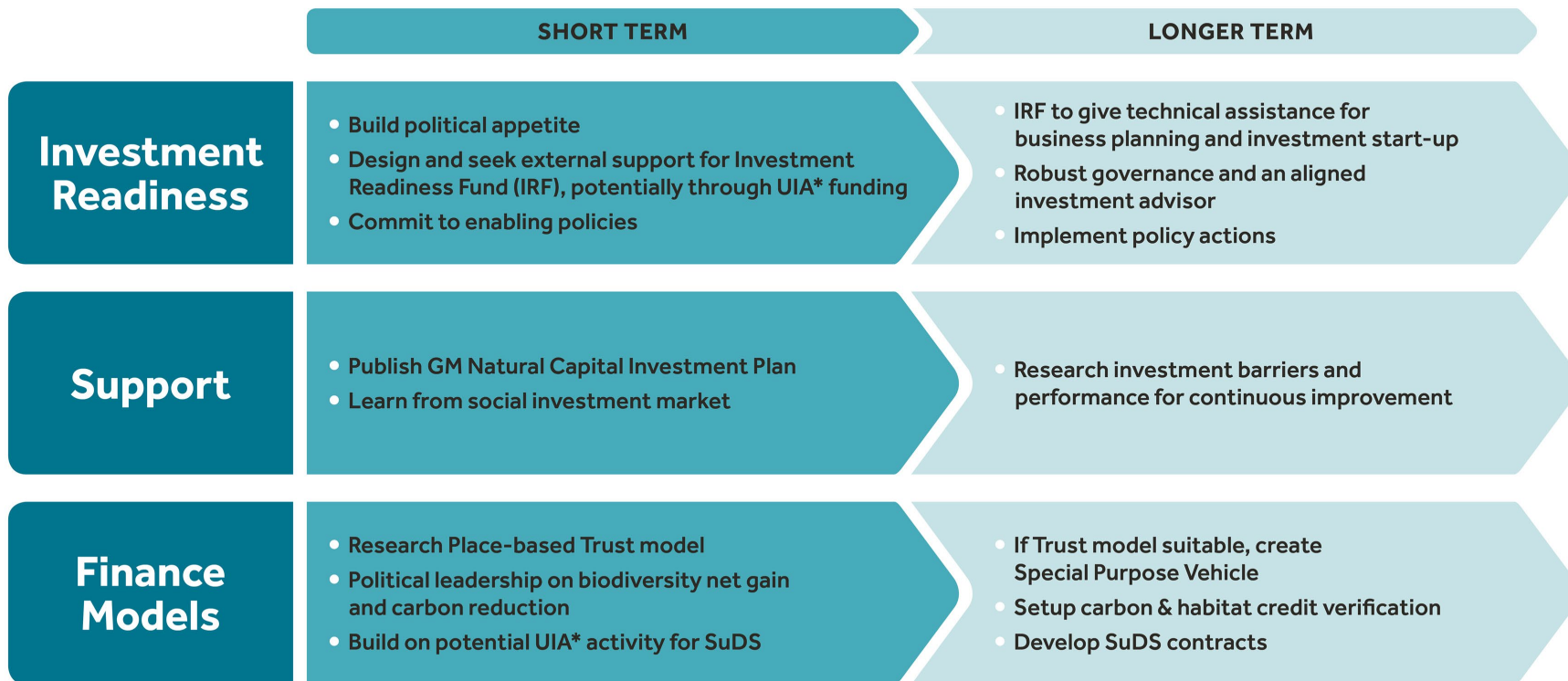
1. A pipeline of potential project types which need investment
2. Finance models to facilitate private sector investment and the role of public sector
3. Recommendations to put the plan into practice over the next 5 years



Pipeline of Project Types



GM Natural Capital Investment Plan Summary of Actions



*Urban Innovation Action – Funding TBC

The Natural Capital Investment Planning Process

- Build on Local Government & stakeholder knowledge of existing projects
- Raise awareness & build capacity in the environment sector
- Investment plan is bookended by natural capital:
 - Accounts give a baseline
 - Understanding benefits and beneficiaries shapes investment models
 - Accounting as monitoring and evaluation framework

Thank you



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