

# Adaptation Scotland

supporting climate change resilience

## Launch webinar: Adaptation climate finance guide and case studies

5 October 2022



The Adaptation Scotland programme is funded by the Scottish Government and delivered by sustainability charity Sniffer.



13:00	Housekeeping	Ben Connor, Sniffer
13:02	Welcome and scene setting	Peter Robinson, Chair of the Adaptation Scotland Climate Finance Working Group and former Head of Engineering, Scottish Canals
13:07	Guide to Adaptation Finance: Overview	Ben Connor, Senior Climate Resilience Manager, Sniffer
13:17	Adaptation Finance Business cases - case studies and key lessons	Paul Watkiss, Director, Paul Watkiss Associates
13:27	Panel discussion and Q & A	Chaired by Peter Robinson. Panellists: <ul style="list-style-type: none"><li>• Paul Watkiss</li><li>• Louise Wilson, Co-Founder and Managing Director, Abundance Investment</li><li>• Patrick Jean-Martel, Environmental Green Finance Manager, NatureScot</li></ul>
13:57	Wrap up and next steps	Peter Robinson

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## Guide to Adaptation Finance: Overview



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Enabling organisations, businesses and communities to adapt to the impacts of climate change

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- ‘Progress in delivering adaptation has stalled’  
*Climate Change Committee, March 2022*
- Significant adaptation finance gap



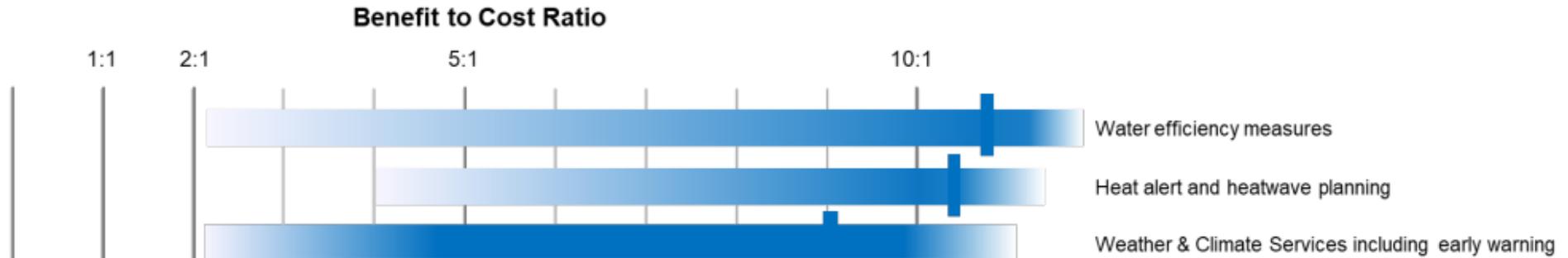


# A Guide to Adaptation Climate Finance

Adaptation  
**Scotland**  
supporting climate change resilience

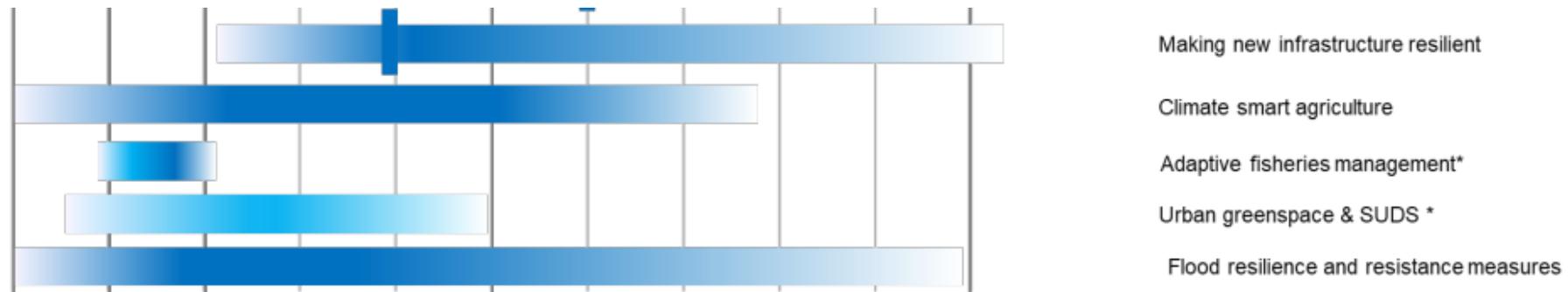
- The guide is an introductory resource – sets out key concepts, barriers and use cases
- Through developing knowledge and capability on adaptation finance, we can contribute to improving access to finance and increase adaptation action.
- Relevant for a wide range of sustainability, finance and project development professionals and is for anyone looking to assess financing options for climate adaptation related projects.

# Strong economic case for investment



The benefit-cost ratios typically range from **2:1 to 10:1**

Every **£1** invested in adaptation could result in **£2 to £10** in net economic benefits.



Average (if value available)

\*Based on single, limited or indicative studies

[Watkiss, P., Cimato, F., Hunt, A. \(2021\). Monetary Valuation of Risks and Opportunities in CCRA3. Supplementary Report for UK Climate Change Risk Assessment 3, prepared for the Climate Change Committee, London.](#)

## Economic

- Adaptation actions mainly produce **public goods** - they provide benefits to wider society – benefits that we all share.
- In contrast, **private goods** must be purchased, and their goal is profit making
- Intervention or incentives are often needed in order to motivate private actors to invest in adaptation.

## Financial

- Adaptation interventions often don't generate obvious income streams.
- Hard to monetise and involve up-front costs but longer term benefits.

## Technical

- Design of adaptation projects can be challenging, especially given site and context specific nature

## Political/ regulatory/ cultural

- Conflicting or competing policy objectives, lack of clarity
- Lack of flexibility and openness to change/ doing things differently

## Information

- Limited information to inform investment decisions, e.g. climate risk and vulnerability data and absence of quantified adaptation benefits

## Public use case

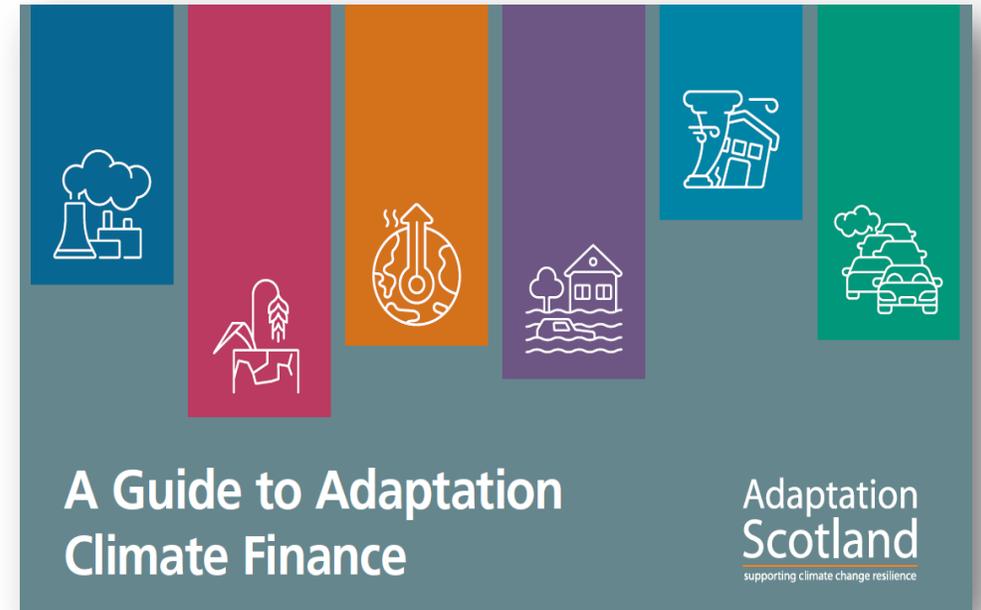
Governments are often responsible for adaptation planning. Public actors can enable adaptation through policy and actions and provide public finance or funding.

## Blended use case

Blended finance involves the public sector using funds to enable or de-risk private sector action and incentivise the private sector to develop new goods and services associated with adaptation.

## Place base use case

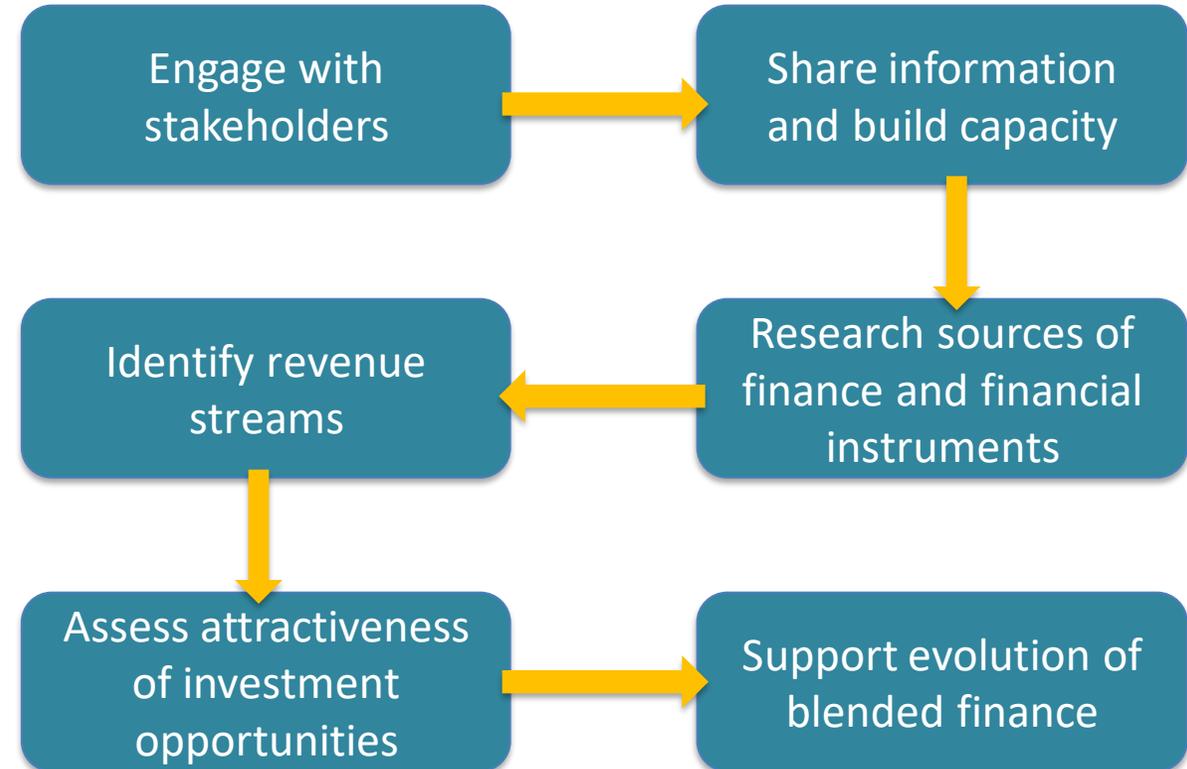
Financing activities relating to specific geographic place and/ or broader place-making projects. Includes public and blended finance relevant across a range of scales.



- Finance provided by the public sector
  - Support core adaptation and create enabling environment for private investment
- Financing options
  - Grants
  - Bonds
  - Household/business charge models
  - Debt
- Links to further resources and case studies



- “combining concessional public finance with non-concessional private finance, and expertise from the public and private sector”
- Financing options
  - Direct debt or equity
  - Guarantees
  - Collaborative revenue bonds
  - Insurance
  - Technical assistance grants
  - Value capture
  - Public private partnership



- “Creating economic and social outcomes through investing in a specific geographical region or community”
- Financing options:
  - Impact investing
  - Crowdfunding
  - Bonds
  - Value capture
  - Fees
  - Incentives
  - Grants
  - Payments for Ecosystem Services



**Athens Green Infrastructure for Urban Resilience – loan example**

**Claypits nature reserve –public finance**

**Vacant and Derelict Land Fund**

**Glasgow City Centre Surface Water Management Plan (SWMP) – B£ST tool**

**Copenhagen Cloudburst Scheme – household charge model**

**Green Growth Accelerator – place use case**

**Community Municipal Investment Bond**

**IGNITION Project – Manchester – place based use case**

**Climate Insurance-Linked Resilient Infrastructure Financing (CILRIF)**

**Stormwater Retention Credit trading Programme – Washington DC**

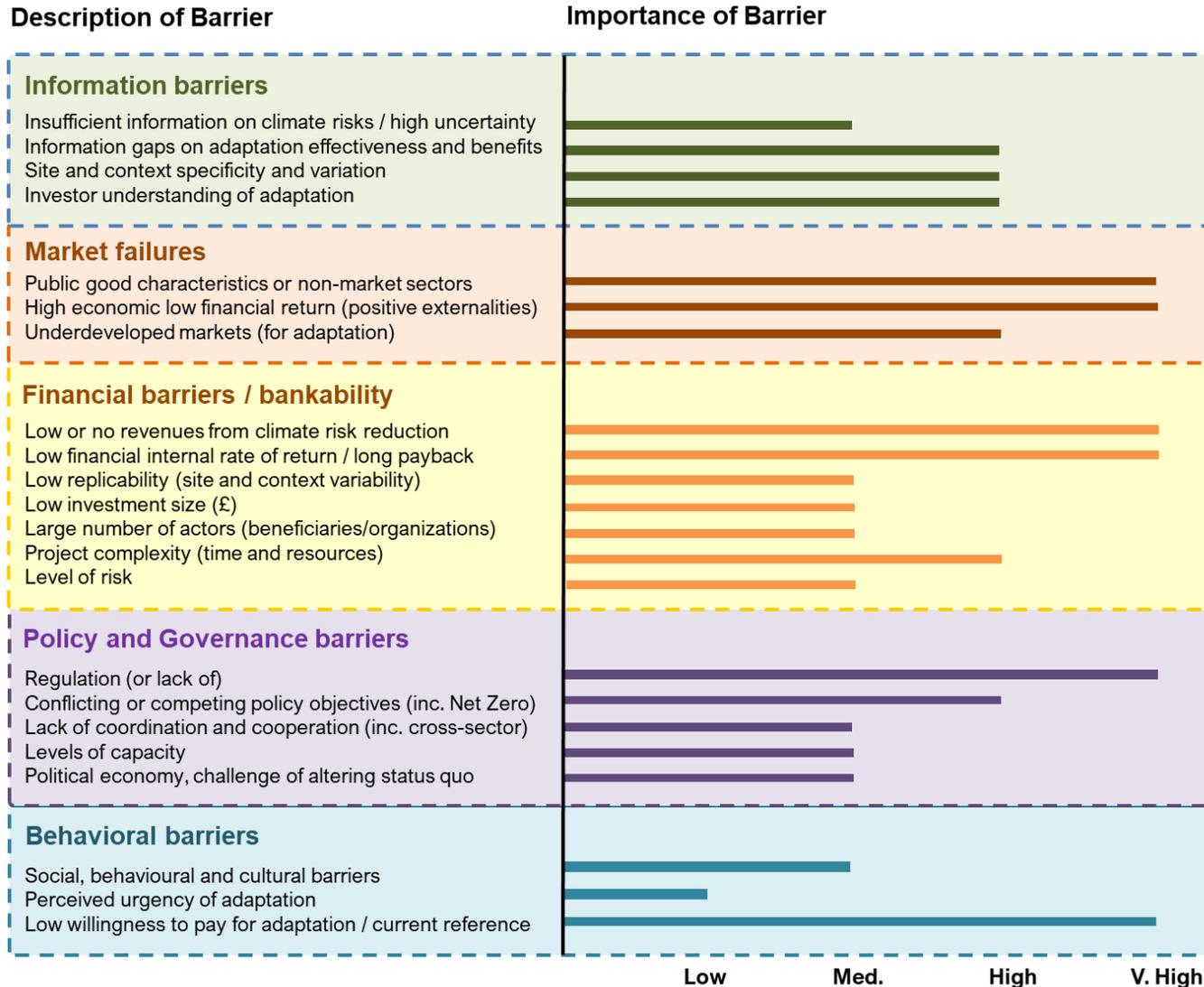
**Landscape Enterprise Networks (£1 Billion Challenge)**

# Adaptation Finance Business Cases

## – Case studies and key lessons

**Paul Watkiss and Sumalee Khosla**

# Adaptation Finance



- To date, adaptation primarily funded by public sector
- Increasing interest in private sector and blended finance to fill finance gap
- But there are important barriers to adaptation, GCR (2020), CCC (2022)
- These make it more difficult to finance adaptation than for mitigation

# Study Objectives

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- Support the development of three adaptation finance business cases from the Adaptation Scotland Climate Finance working group

Selected Projects	Project Proposer	Type of project
Uist Community Climate Resilience	NatureScot	<b>Coastal and pluvial flood protection for an island community</b>
Inch of Ferryton Managed Realignment	RSPB Scotland	<b>Managed realignment for coastal habitat</b> to address coastal flood risk
Newcastleton Flood Prevention Scheme	Scottish Borders Council	<b>Fluvial flood protection</b> and natural land management (including a re-meandering) for border community.

- Look at opportunities for public, private, third sector and blended finance – for set of projects that would traditionally have been public grant financed

# Study Method

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Develop business case considering

- Strategic case – justification for investment
- Economic case - net economic benefit as measured by value to society
- Financial case - affordability and financial viability of the investment

Investigate the potential for revenue generation

# Finance deep dive

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- Assessed number of alternative financing approaches
- Possible financial instruments
- Possible revenue generation options
- Potential application to each of three case studies

No.	Financing option
1.	Mitigation revenue streams from carbon sequestration.
2.	Payment for ecosystem services
3.	Tourism revenues
4.	Crowdfunding platform
5.	Biodiversity habitat bank/biodiversity credits
6.	Government grant funds
7.	Philanthropic based grant funds
8.	Equity financing
9.	Flood insurance based on a risk pool model
10.	Parametric insurance
11.	Resilience bonds
12.	Land-use development option/ Green infrastructure finance
13.	Household or local business charges
14.	Renewable energy revenues
15.	Landowner investment

# Finance deep dive – overview

No.	Financing option	Inch of Ferryton Managed realignment	Newcastleton Flood Protection Scheme	Uist Community Climate Resilience
1.	Mitigation revenue streams from carbon sequestration.	High	High	N/A
2.	Payment for ecosystem services	Low	Low	Low
3.	Tourism revenues	High	High	N/A
4.	Crowdfunding platform	High	Low	Medium
5.	Biodiversity habitat bank/biodiversity credits	Medium	Medium	Medium
6.	Government grant funds	High	High	High
7.	Philanthropic based grant funds	Medium	Medium	Medium
8.	Equity financing	Low/Medium	Low/Medium	Low
9.	Flood insurance based on a risk pool model	N/A	N/A	Medium
10.	Parametric insurance	N/A	N/A	N/A
11.	Resilience bonds	N/A	Low	Medium
12.	Land-use development option/ Green infrastructure finance	Medium	Medium	Medium
13.	Household or local business charges	N/A	Medium	N/A
14.	Renewable energy revenues	Low/Medium	Medium	N/A
15.	Landowner investment	Low/Medium	N/A	N/A

# What did we learn?

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- There are potential additional revenues streams and opportunities for finance adaptation – it is possible to move beyond grants (or grants alone)
- The opportunities differed by scheme – it is not one size fits all – influenced by local context
- In many cases additional revenue stream not associated with climate hazard – makes it more complicated – more beneficiaries – changes to design or additional activities
- Useful to start thinking about finance early in the project
- New revenue streams require work – dedication, time, expertise and resources
- The size of opportunities differ – though in many cases likely to be small and provide additional funding, not overall scheme costs – may require portfolios/combinations
- Need for targeted resource mobilisation and need TA and support....and

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