

Coastal Change Adaptation – funding call for case studies & coastal monitoring



Scottish Government
Riaghaltas na h-Alba
gov.scot



Scottish Environment
Protection Agency



DynamicCoast.com

@DynamicCoasts



knowledge brokers
for a resilient Scotland

Welcome

- Sniffer is delighted to host this webinar on behalf of the Scottish Government
 - Net zero is no longer enough, stabilising warming below 1.5C now seems to be beyond us
 - As a result, serious climate impacts are now inevitable and will continue for decades after we reach net zero
 - Sniffer champions climate justice, and people and nature-centred transformational adaptation
 - We connect policy makers, practitioners, communities and academia to share learning and collaborate
- Thank you for being here!



We act as a catalyst, fostering collaboration across sectors and places to ensure transformation towards a flourishing and fairer future for all in a changing climate



Housekeeping

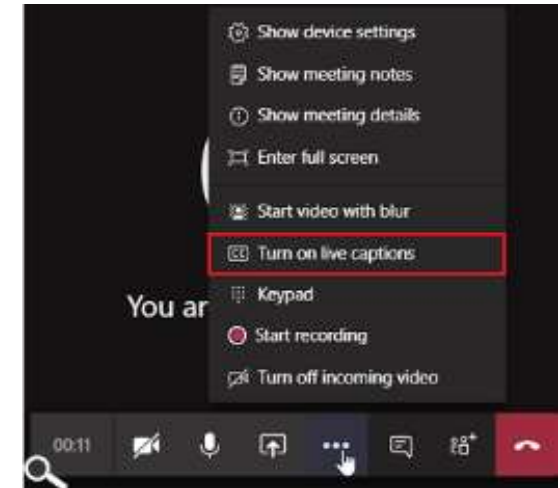
- This webinar is being recorded
- If possible, please display your name and organisation

How do I change my display name on Teams calls?

Open Teams, tap your profile picture in the top-left corner, and tap your display name.

1. Tap your display name to edit it. Alternatively, tap Edit on your profile picture and select Edit name.
2. Enter your preferred display name and tap Save.

- To make use of Teams closed captions:
 1. Click on the three dots
 2. Select the 'Turn on Live Captions' option
 3. Closed captions will appear along the bottom of the call



Ground rules

- Please mute yourself if you are not speaking
- Introduce yourself and your organisation when you speak
- There will be time for Q&A after the presentations, if you have a question, please:
 - raise your hand or
 - type it in the chat
- Slides and the application form will be sent out to all delegates afterwards

Agenda

13.00	Welcome and housekeeping	Cat Payne, Sniffer
13.05	Introducing the Water Resource Planning and Coastal Erosion team	Dr Lorraine Gormley, Scottish Government
13.07	Introduction to the 2025-26 funding process Monitoring Case studies	Tracy McKen, Scottish Government
13.17	Overview of need Latest science and observations and what this means for the coastal zone	Dr Alistair Rennie, Nature Scot
13.27	Links to statutory planning policy Links to CCAP, SNAP3, FRS and NPF4 evidence reports CCAP and local place planning	Chloe Harris, Planning, Architecture & Regeneration division, SG
13.32	Improving Scotland's coastal monitoring Existing data and data gaps, what is eligible for funding?	Dr Alistair Rennie, Nature Scot
13:52	Q&A	Chair: Cat Payne,
14:27	Wrap up (14.30 close)	Tracy McKen,

New to coastal change adaptation?

- Join the knowledge hub <https://khub.net/group/scotland-coastal-change-adaptation-scots>
- Familiarise yourself with the CCAP guidance and Dynamic Coast findings <https://www.dynamiccoast.com/cca>
- Previous webinars provide good information for newbies
 - The type of projects which have been funded
 - Experiences of previous applicants
 - Updates on the latest science and observations
- Watch them here: <https://www.sniffer.org.uk/coastal-change-adaptation-funding-call>



News from SG

- Introducing the Water Resource Planning and Coastal Erosion team
- Headed up by Dr Lorraine Gormley



Introducing the 2025-26 funding call for case studies & coastal monitoring

Tracy McKen, Scottish Government



Tracy McKen

Senior Policy Advisor

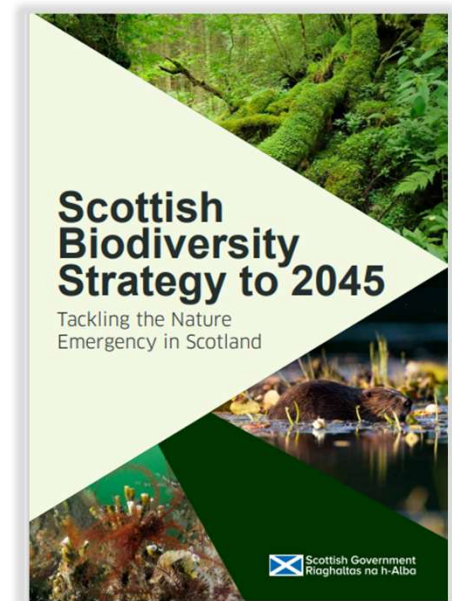
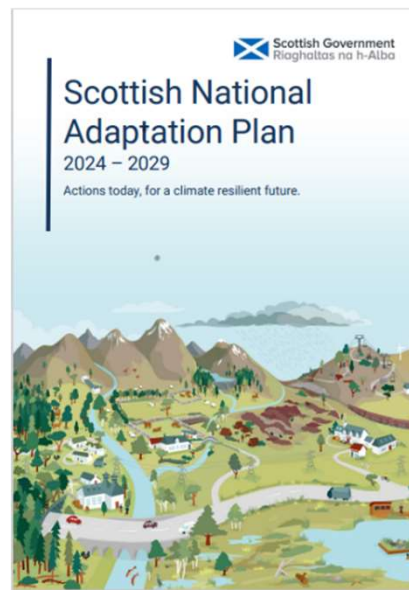
Water Resource Planning and Coastal Erosion Team



Scottish Government
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gov.scot

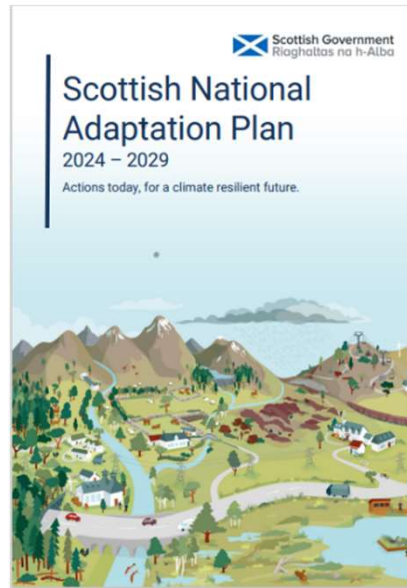
Coastal Adaptation and Wider Policies

- Scottish National Adaptation Plan
- National Planning Framework 4
- Flood Resilience Strategy
- Biodiversity



Coastal Adaptation and Wider Policies

- **Scottish National Adaptation Plan**
 - Objective: Coastal communities (C6)
 - Coastal communities are preparing for and adapting to coastal erosion and sea level rise.

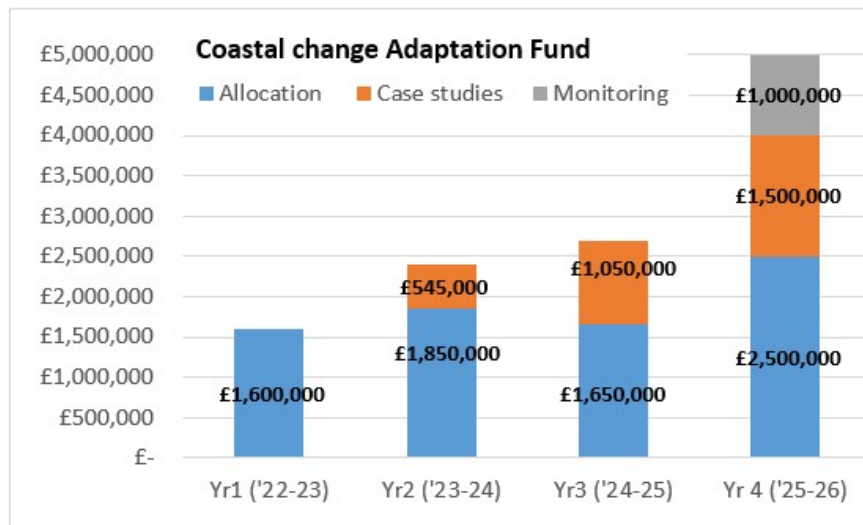


Coastal Change Adaptation Planning

- Dynamic Coast (DC2) identified the risks for coastal erosion
- August 2021 – Funding for CCAP announced
- £11.7m over four financial years to Local Authorities



Coastal Change Adaptation Fund

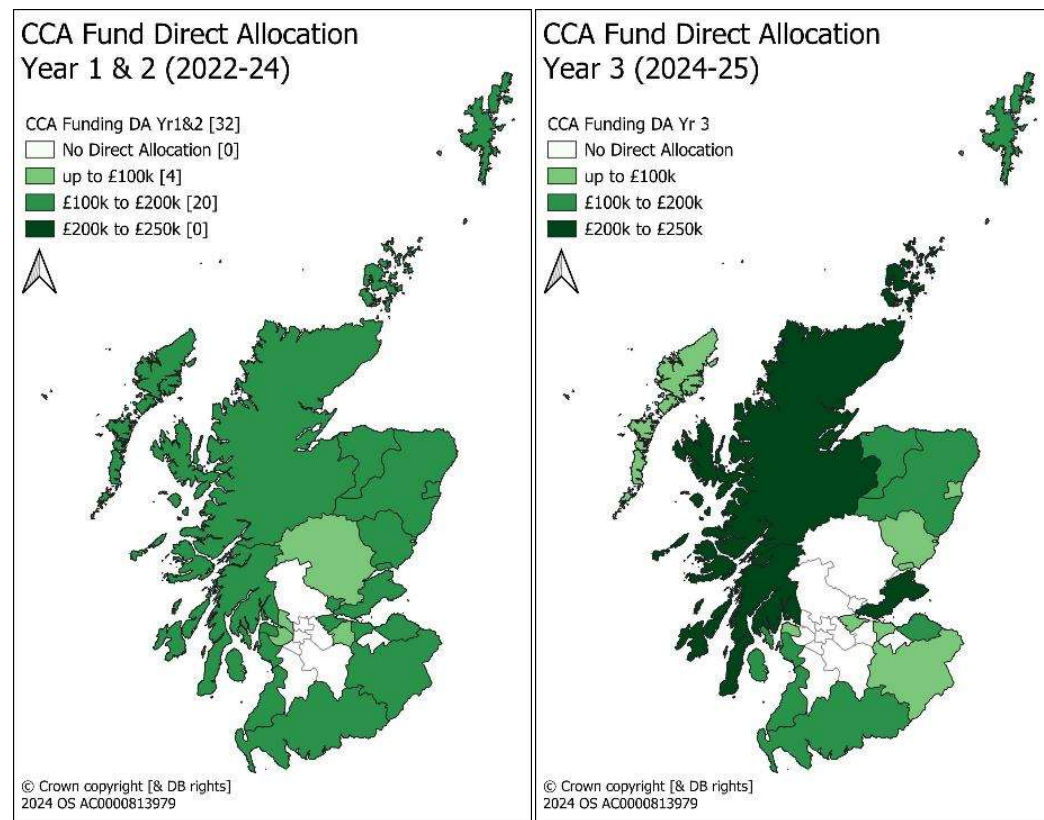


- £11.7m to LAs (2022-26) via capital grant, to support CCA.

Coastal Change Adaptation Fund

Capital Funding Breakdown per year

- 2022-23 - £1.6 million – direct to 10 LAs
- 2023-24 - £2.4 million
 - £1.85 direct to 14 LAs
 - £0.55 distributed to LAs for case studies
- 2024-25 - £2.7 million
 - £1.65 direct to 19 LAs
 - £1.05 distributed to LAs for case studies

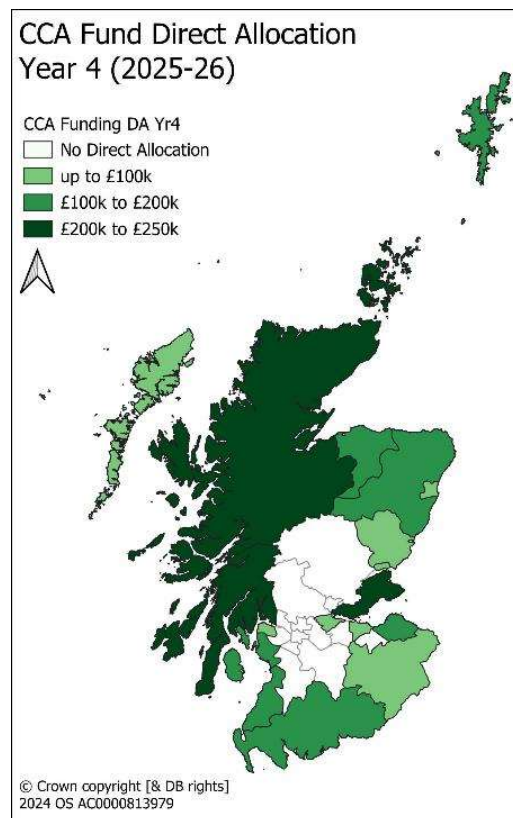


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Coastal Change Adaptation Fund

Capital Funding Breakdown per year

- 2025-26 - £5.0 million
 - £2.5 million direct allocation to LAs
 - £2.5 million for case studies and monitoring:
 - £1.5 million to be distributed to LAs for case studies
 - £1 million to be distributed to LAs for monitoring

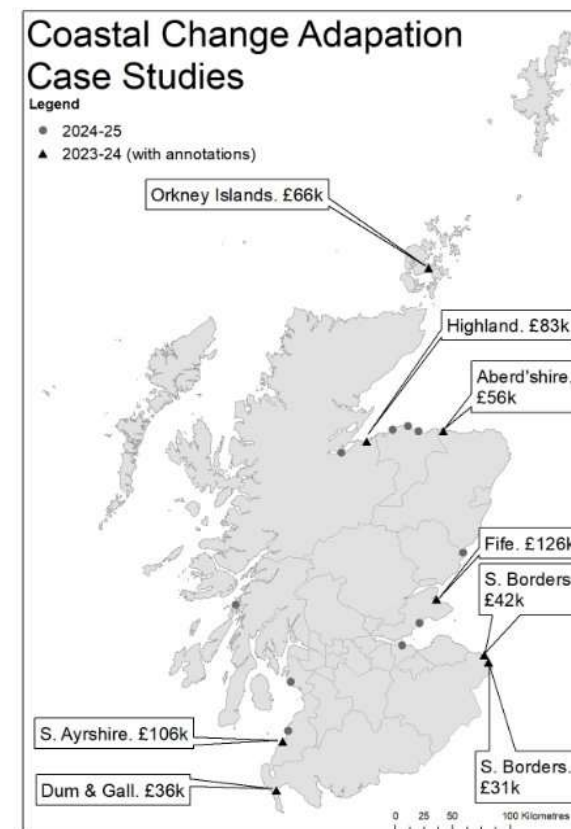


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Coastal Change Adaptation Fund

Previous case studies

- From different geographic areas
- Topics include community engagement, technology to inform trigger points and replenishment of natural defences
- More information on the Dynamic Coast website



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Applying for Funding – part 1

Case Studies

- The application form for Local Authorities is available in the Knowledge Hub Library
 - The form is based on the forms used in previous years, taking in feedback received
 - We have kept as short as possible to gather the information we need to assess the case studies
 - Please keep sections 1 -14 within four pages.
 - You can also add maps, pictures and links to videos
 - Contact details are included on the introductory page

COASTAL CHANGE ADAPTATION BUDGET – 2025-26 Case study application (Oct 2024)

CCA Advisory Group seek capital fund applications from local authorities and their partnerships for case studies to help advance Coastal Change Adaptation in Scotland.

Instructions:

Please complete form and ensure **sections 1-14 do not exceed four pages**. Authorities can submit more than one proposal, please use separate form for each. Authorities can apply for both monitoring and case study funding. For any questions or for technical help email Tracy.McKen@Gov.Scot. Return the completed form by cop 8 January 2025 via email (hard copies not required) to Tracy McKen ccing Alistair.Rennie@nature.scot.

Background & helpful information:

The UK Climate Change Committee was critical of Scottish Government and local authorities stating that *'adaptation had stalled'*. The CCA Fund directly addresses these issues by funding adaptation planning and resilience actions that can be undertaken immediately. This heralds a new way of working, allowing authorities to identify and address their priority risks, in a way that suits their circumstances.

The CCA Fund supports iterative, adaptive and nature-based approaches.

There is £2.5m funding available in 2025-26 for Case studies and Monitoring. The CCA Advisory Group have provisionally agreed £1.5m for Case studies and £1m for Monitoring, though there is some flexibility with these nominal allocations. Local authorities have autonomy to reprioritise General Capital Grant between financial years should any slippage occur.

Case studies must include adaptation and may include (but not limited to) restoration of natural coastal defences (e.g. sand dunes or salt marsh), purchase of fall-back land for coastal paths to be relocated into, development of adaptation options on urban shore and community consultation etc. Examples from 2023-25 are available [here](#).

Whilst we welcome applications that initiate adaptation planning work, we particularly welcome applications that address more challenging aspects including: implementing difficult decisions, managed retreat of assets from at risk areas, securing carbon & biodiversity benefits, addressing substantive climate risks via transformative change etc. Proposals for ambitious projects which support actions in a CCAP (or pre-existing SMPs) are welcomed. Proposals from a group of adjacent local authorities working together are also welcomed, with one local authority the agreed lead. Community projects are welcomed, though payments must be routed through the authority.

Authorities are able to use match funding to leverage greater benefits, though this is not a prerequisite. You may want to consider the following funds: Existing council funds, Coastal Change Management Revenue Funds, Water Environment Fund, Nature Recovery Fund (local authority allocation or applications), Coastal Communities Fund, Community funding and private finance etc.

Applying for Funding – part 2

- Match funding is not required, but it is useful to work in partnership and note either in-kind or financial contributions from partners
- There is no minimum or maximum (up to the total fund limits) amount for individual projects, but we do encourage ambitious projects
- All projects will be assessed by the Coastal Change Adaptation Advisory Group, which has members from local authorities, Dynamic Coast, SEPA, SG Agencies, CoSLA and SG

Applying for Funding – part 3

Monitoring

- Separate application form is available on the Knowledge Hub website
- It is still draft – but the important information of geographic areas to be covered will be required
- It will be useful if local authorities can work together on adjacent areas
- I am still working with colleagues on possible procurement routes

Timeline

Key Dates

- All applications to be received by 8 Jan 2025
- Applications will be assessed by the Coastal Change Adaptation Advisory Group
- Recommendations for funding then go to the Cabinet Secretary and CoSLA
- Local authorities should be informed late January/early February

Coastal Change Adaptation Planning

Case Studies

- Possible Gaps in knowledge
 - Salt Marsh
 - Urban Shores
 - End of Life of Existing Structures

Coastal Change Adaptation Planning

Case Study Reporting

- We provide templates for reporting
- 3 updates over the case study project – start, in progress and final
- Examples are on the Dynamic Coast website: [Dynamic Coast - Coastal Change Adaptation](#)
- We can all use these to promote the work

Sandhead: Rewilding Project

April '23 to March '24 £36,000 Dumfries & Galloway Council

Sandhead, damage to natural vegetation caused by parked vehicles.
© Alex Whannel (2023)

Overview:
The project establishes an area for re-wilding. It will be fenced and signed to prevent vehicle parking, which compacts the sand and damages the fragile vegetation. This aims to help reduce coastal erosion and flooding, given the potential benefits that nature-based solutions may have in coastal erosion control, whilst supporting wildlife, and allowing visitors to enjoy the beach.

What we are hoping to learn:
We will use nature-based solutions to slow down the coastal erosion in this area.
It is expected that the re-establishment of the natural vegetation / dunes will act as a natural barrier to help retain the beach and make it more resilient.
This case study can be seen as a practical example of the use of nature-based solutions in the adaption for the future effects of climate change in Scotland's coastal environment.

"Where overuse has accelerated erosion, we hope that employing a nature-based solution will aid in the adaptation to the expected coastal changes which will occur as a result of climate change."

Brian Templeton, Team Leader – Dumfries and Galloway Council's Flood Risk Management Team

#adapt #community #ReWilding

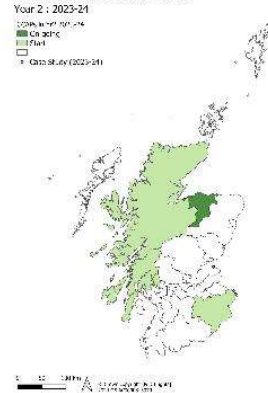
The Scottish Government
Dumfries & Galloway Council
Dynamic Coast
#1. April 2023

Coastal Change Adaptation Plans

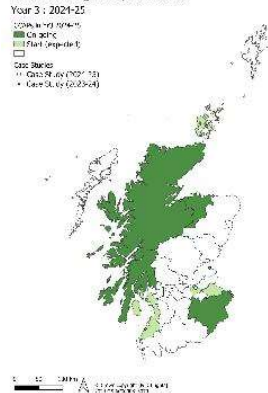
Coastal Change Adaptation Fund



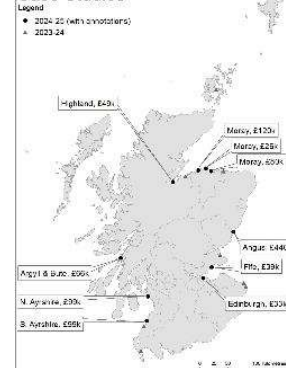
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Coastal Change Adaptation Fund



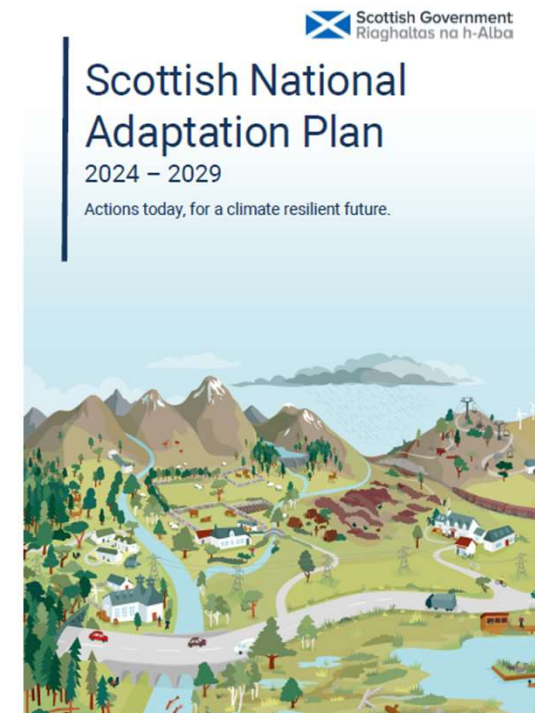
Coastal Change Adaptation Case Studies



- CCA Plans being developed (green maps) & adaptation case studies (grey map).
- Monitoring essential to inform Dynamic Adaptive Pathway Approach within CCA Plans.

Long term coastal monitoring

- As well as the monitoring through the 2025-26 CCA Fund, SG is also considering a long-term coastal monitoring programme, as set out in SNAP3:
- **Coastal Monitoring** – the Scottish Government will identify the most efficient and effective way to establish a national coastal monitoring programme to ensure that up to date information on coastal change is collected, analysed and made available. This will be led by Chief Scientific advisers within the Scottish Government Coastal monitoring is essential to develop and trigger adaptation actions within CCAPs. It is also essential for the production of accurate Flood Maps and flood/storm warning as well as wider benefits such as information on natural habitats and Blue Carbon.



Knowledge Hub

This is your space to share information

- Links to key documents
- Examples of documents used by other local authorities
- [Home - Scotland Coastal Change Adaptation \(SCOTS\) - Knowledge Hub \(khub.net\)](#)

Got a Question?

If you have a query then please get in touch.

- Email Tracy.mcken@gov.scot
- [Knowledge Hub \(khub.net\)](https://khub.net)
- Contact details are also on the application form

Overview of need

Dr Alistair Rennie, Nature Scot / Dynamic Coast



Why do CCA?

Coastal Change Adaptation Workshop

Thursday 14th October 2024

Dr Alistair Rennie
DynamicCoast.com
DynamicCoast@nature.scot
@DynamicCoasts

What is Dynamic Coast?

The Scottish Government's Dynamic Coast project was funded by CREW, NatureScot and St Andrews Links Trust, with the research conducted by the University of Glasgow.

Dynamic Coast aims to:

- Improve the evidence on coastal change in Scotland;
- Improve awareness of the impacts of coastal change in Scotland;
- Support decision-makers to ensure Scotland's coast and assets can flexibly adapt to our future climate.



the home of golf®



HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA



Timeline

Pre 2015 Poor awareness

2015 DC1 starts

2017 DC1 published

2018 DC2 starts

2021 DC2 published

2050 + 0.44m sea level

2100 + 1.16m sea level

(IPCC RCP 8.5 95%)



- Prior to 2015, Scotland's coastal erosion problem was devolved to local authorities & landowners, relying on inaccurate legacy data, with **limited national awareness of future implications.**
- Over the last 7 years Dynamic Coast has driven huge improvements in Science and Governance... **'Laggards to leaders.'**
- Like many countries, our risk appraisal shows that past approaches aren't enough: **'In a changing world, business as usual will fail'**
- Dynamic Coast is a game-changer, delivering a step-change in awareness but **improvements, delivery and action are now required to realise the benefits.**

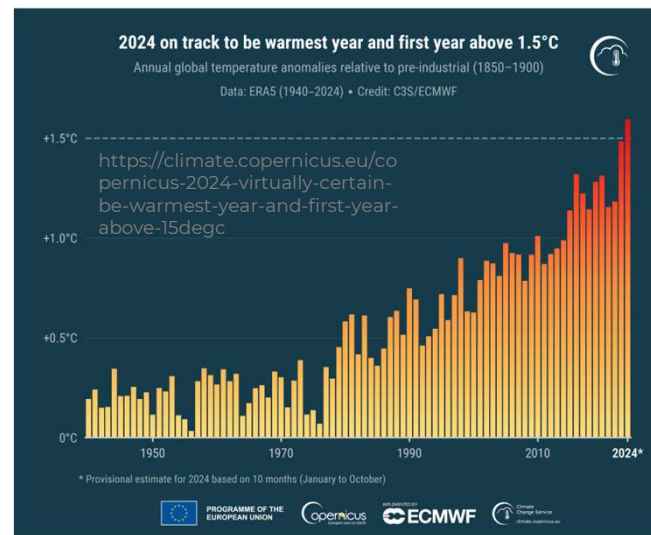
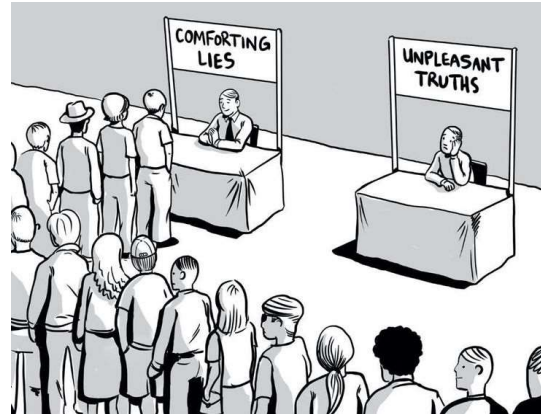
What is going to be covered next?

- Update on some climate change science
- Recent storm impacts
- Science & policy summary
- Data gaps & uncertainty
- Shift in approach (trigger points etc)



Why is this important?

- People don't like change, uncertainty and bad news
- Our climate metrics are not improving & this matters to us all.
- We need to act now.



United Nations Secretary General Guterres said at COP29 in Azerbaijan:

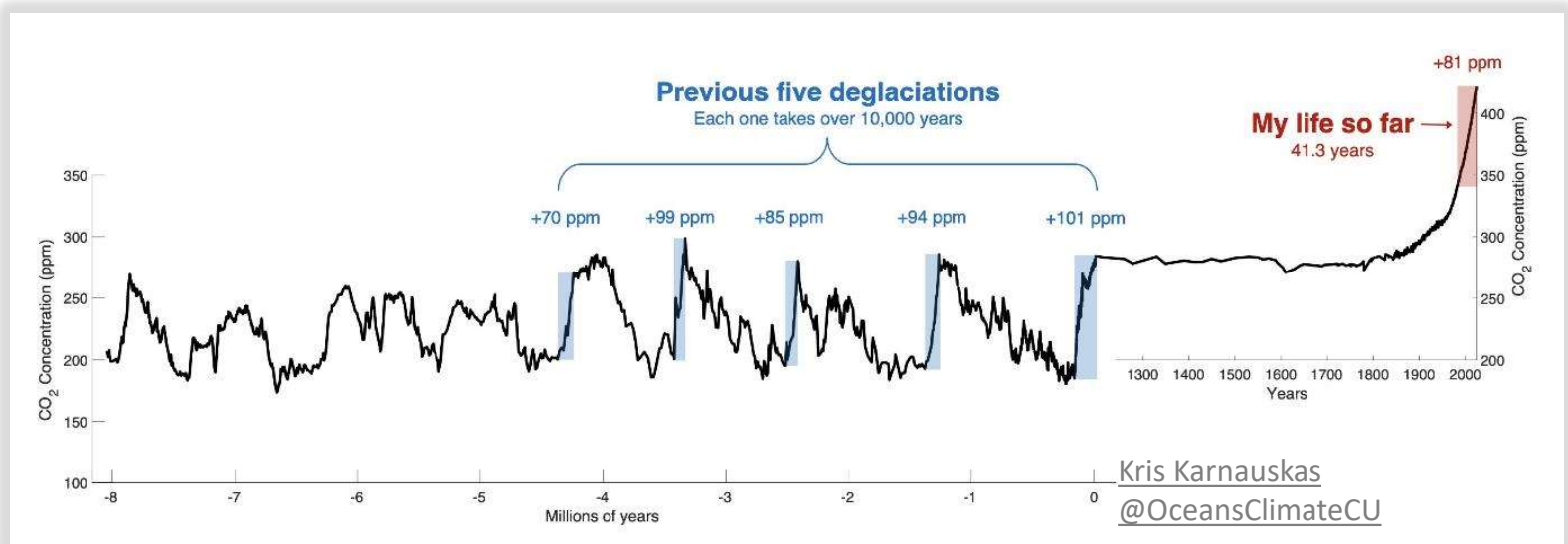
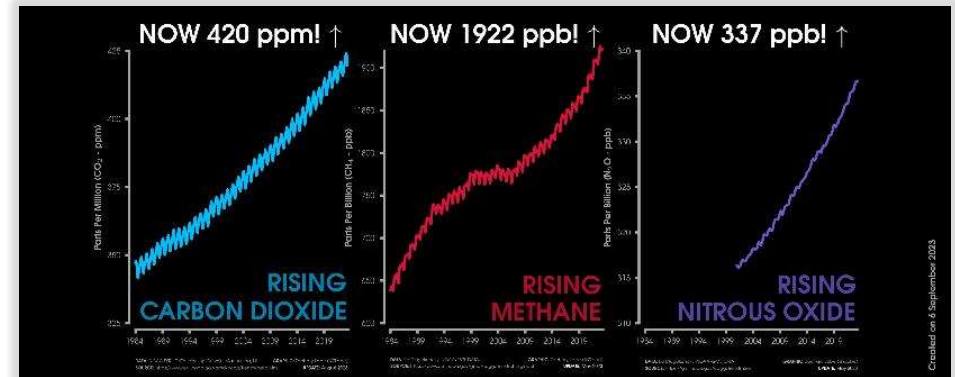
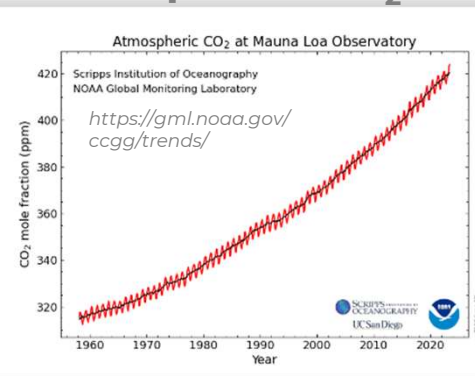
"the world is in the "final countdown" to limit global temperature rise to 1.5°C."

"2024 has been a masterclass in climate destruction"

Climate observations

Anthropogenic climate change is:
↑ Global GHG,

Atmospheric CO₂

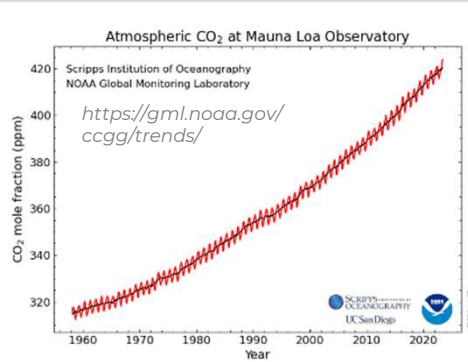


Climate observations

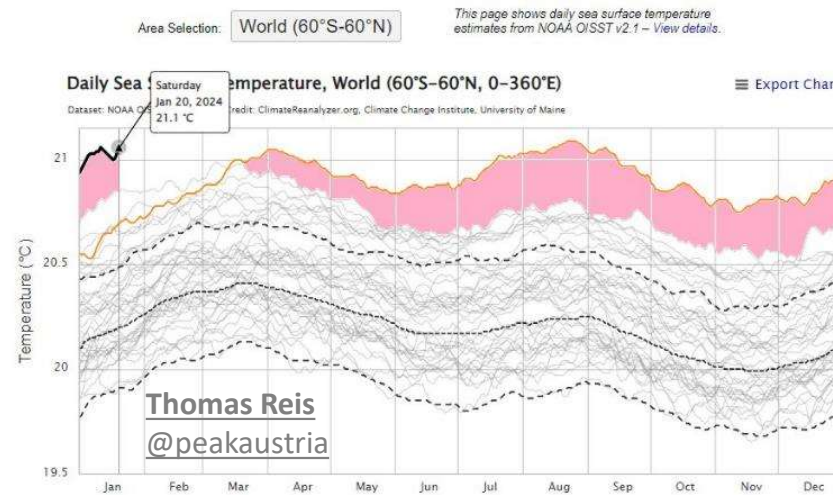
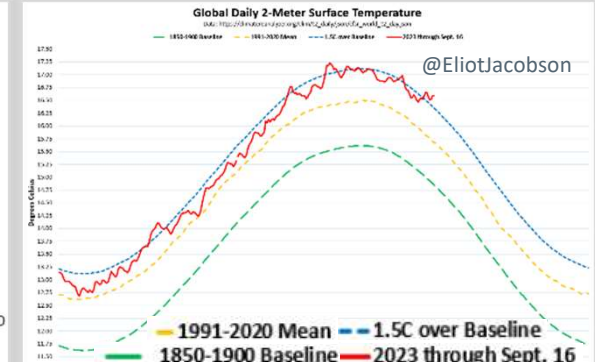
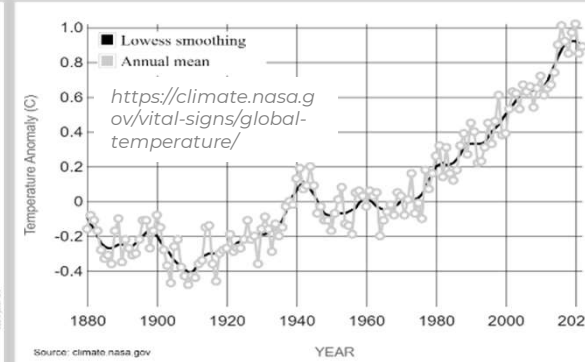
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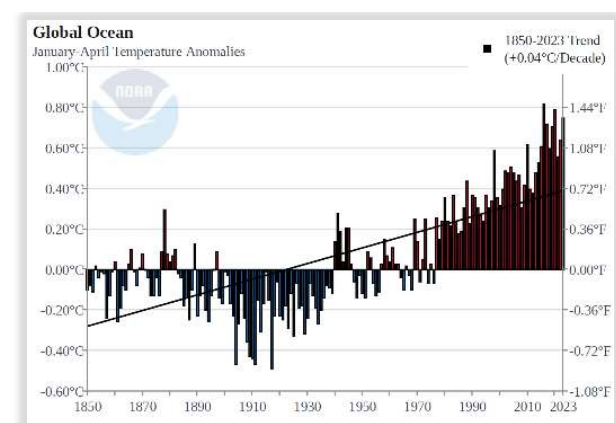
Atmospheric CO₂



Global atmospheric temperature



Global ocean temperature



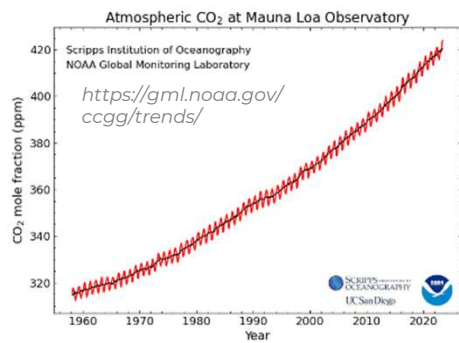
www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/global/time-series/globe/ocean/yt/4/1850-2023

Climate observations

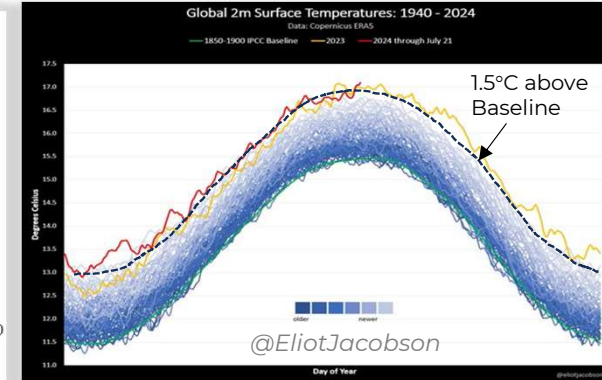
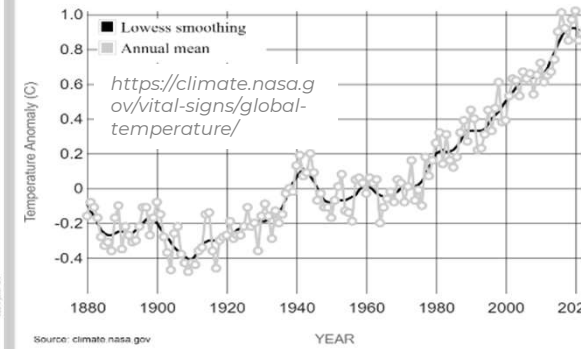
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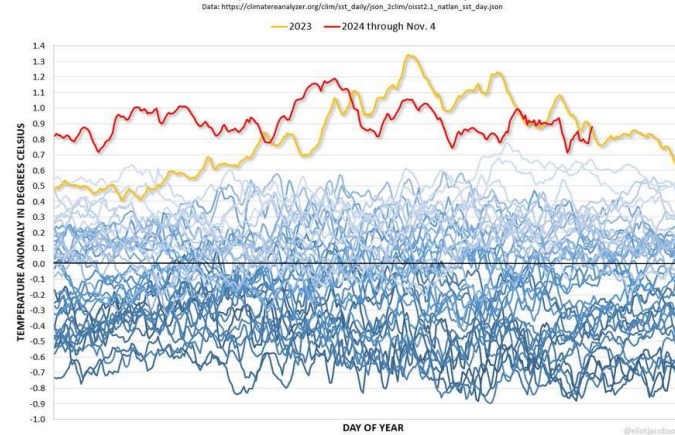
Atmospheric CO₂



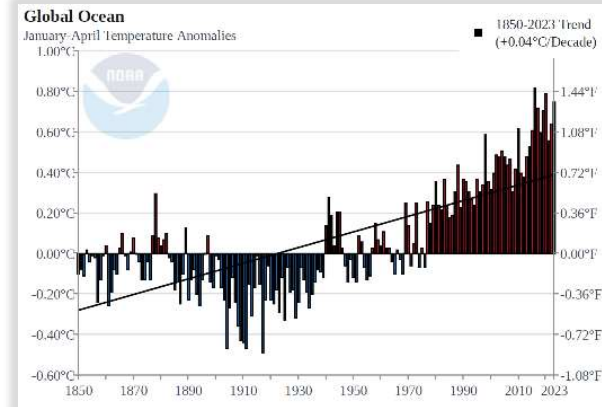
Global atmospheric temperature



North Atlantic Sea Surface Temperature Anomaly: 1982 - 2024 (Difference from 1991-2020 Mean)



Global ocean temperature



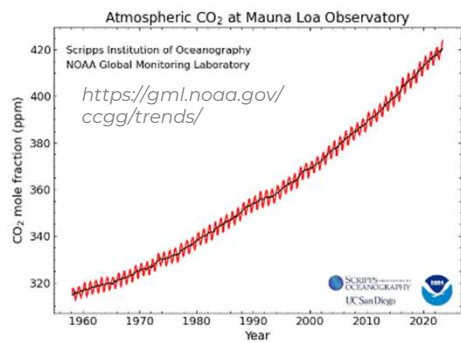
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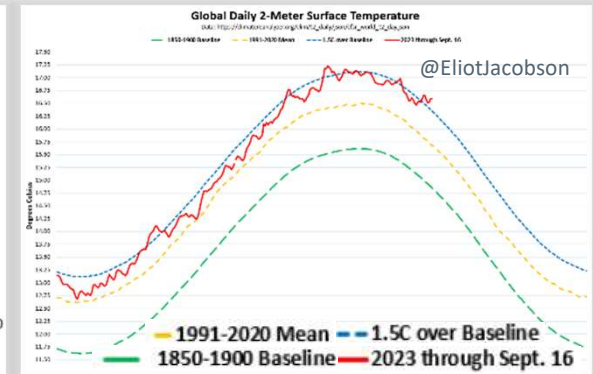
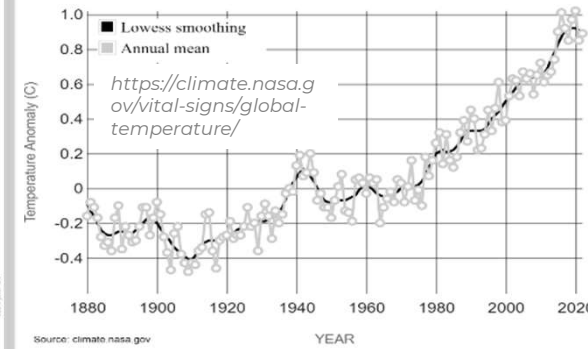
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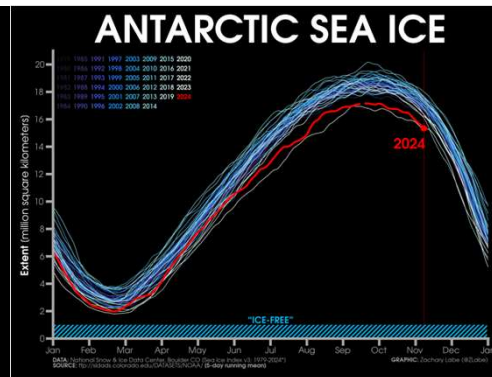
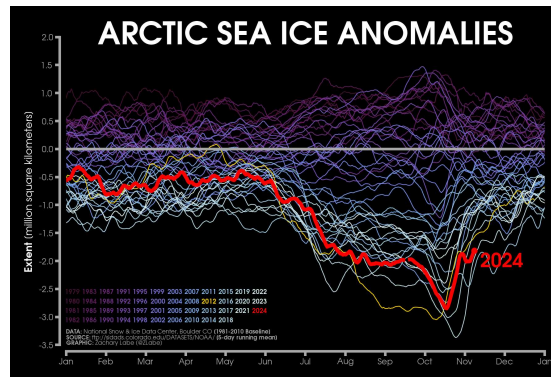
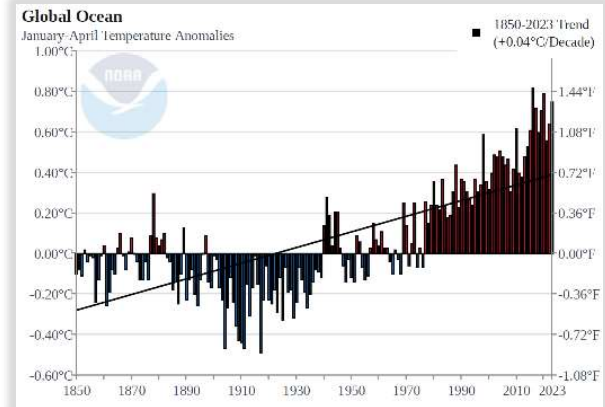
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Global ocean temperature



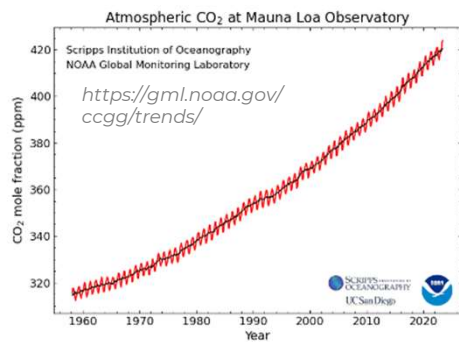
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Climate observations

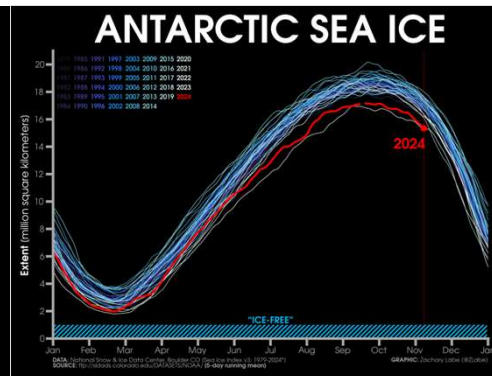
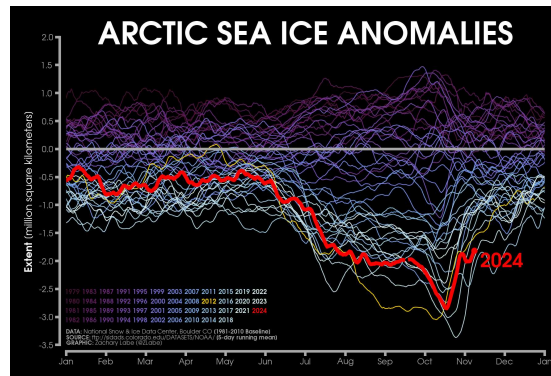
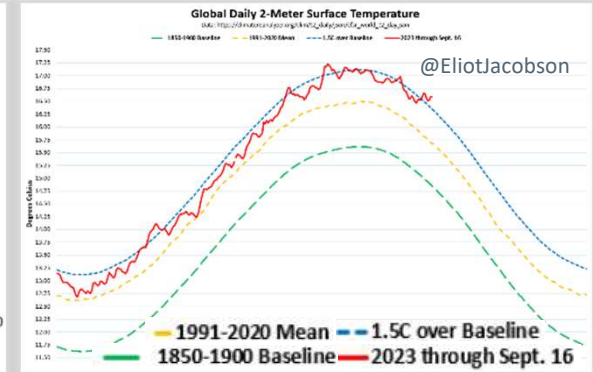
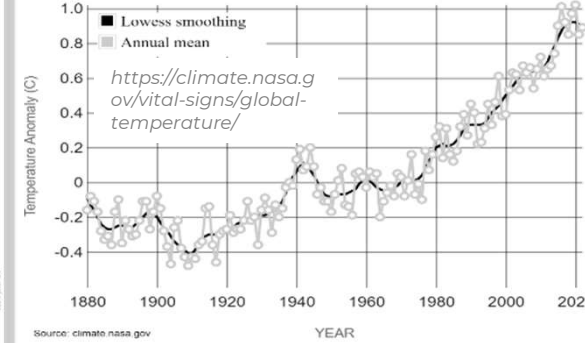
Anthropogenic climate change is:

- ↑ Global GHG,
- ↑ Global air and sea surface temperatures
- ↑ relative **sea level rise**:

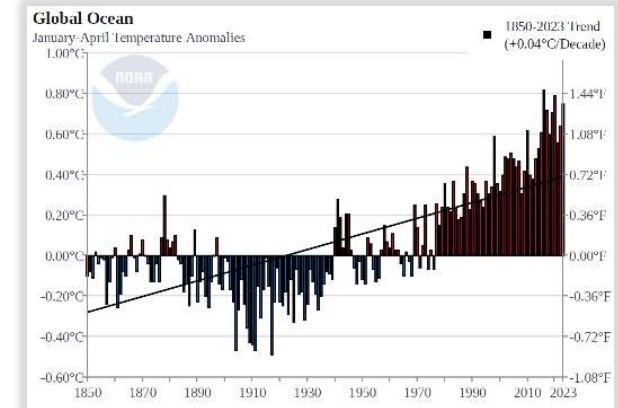
Atmospheric CO₂



Global atmospheric temperature



Global ocean temperature



www.noaa.gov/access/monitoring/climate-at-a-glance/global/time-series/globe/ocean/yt/4/1850-2023

Climate observations

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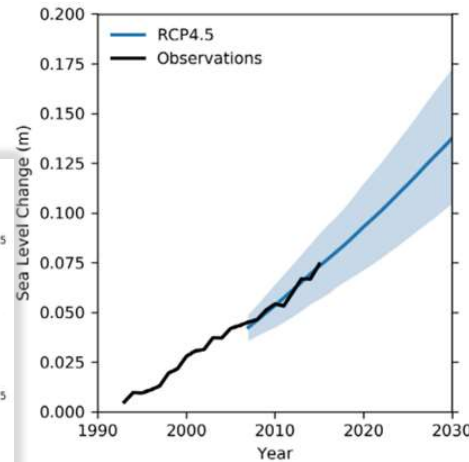
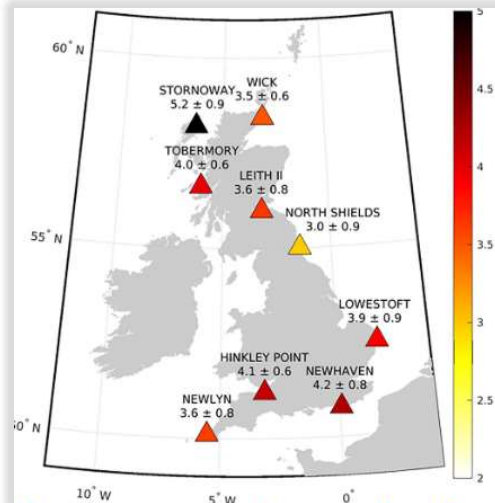
- ↑ Global GHG,
- ↑ Global air and sea surface temperatures
- ↑ Relative sea level rise:

Now faster than UKCP18 expectations.

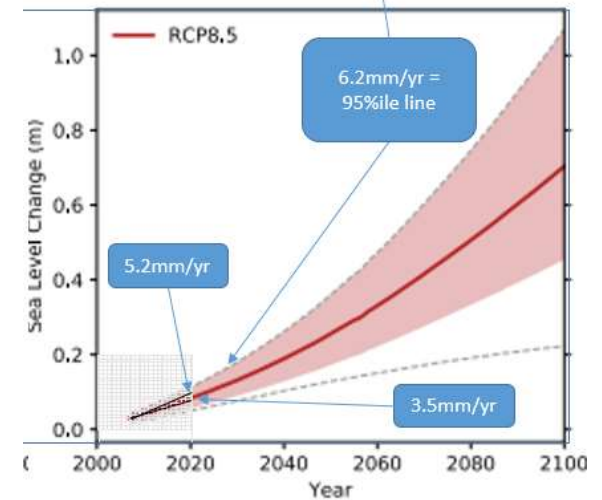
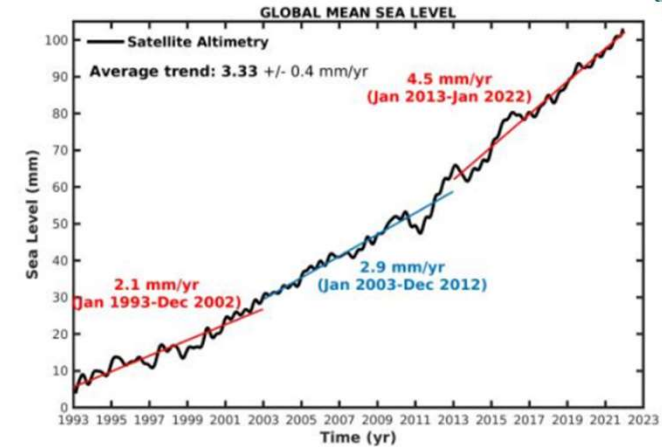
RCP8.5 95% isn't the worst case,
We may already be on track with it!
This is why CCA Guidance says use a range of #.

In 2018 UKCP18 demonstrated that Global MSLR was occurring at 3mm/yr in line with RCP4.5 central estimate.

Relative sea level rise
3.6-5.2mm/yr in Scotland

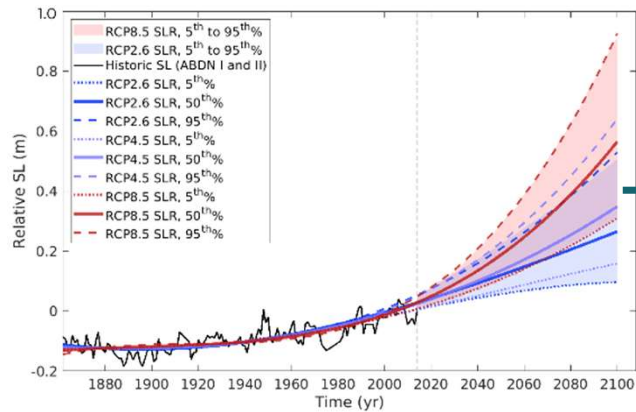


MetOffice (2022)
<https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.7787>



Climate observations

Sea level (Aberdeen)



Flooding (surge heights) increasing, Aberdeen (Sniffer 2008)

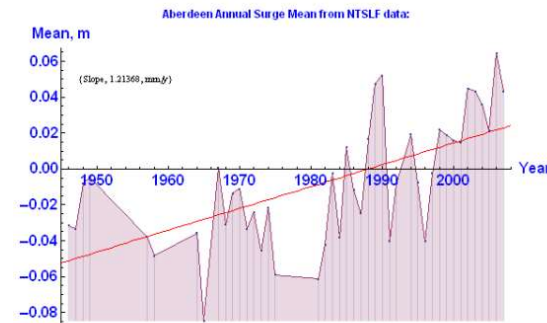


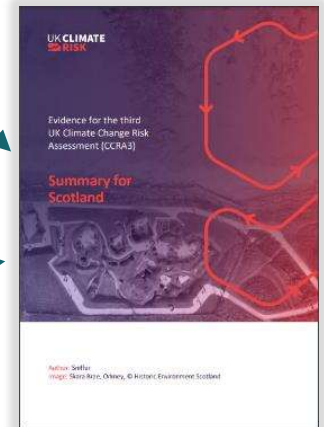
Figure 23 Mean surge level at Aberdeen

Phasing with spring tides & surges



Coastal erosion & flooding, one of Scotland's most severe climate risks.

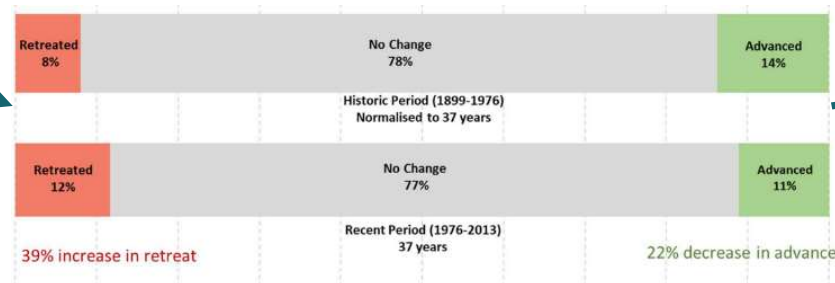
(CCC 2021)



Phasing with spring tides & surges

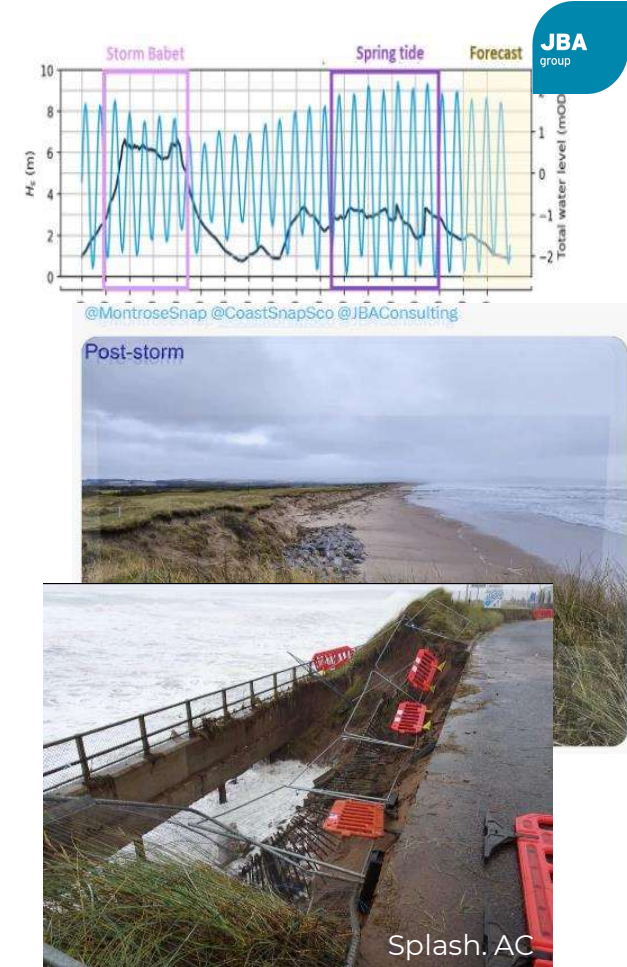
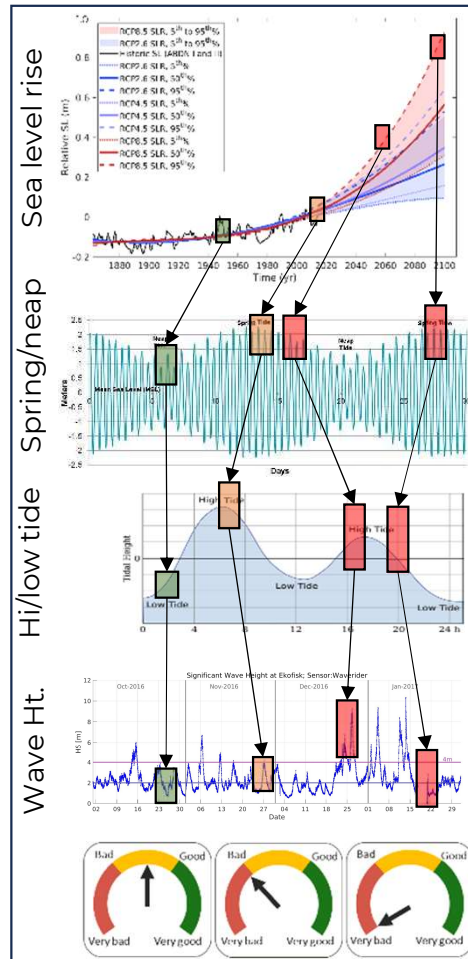


Increasing extent of erosion in Scotland (Dynamic Coast 2017)



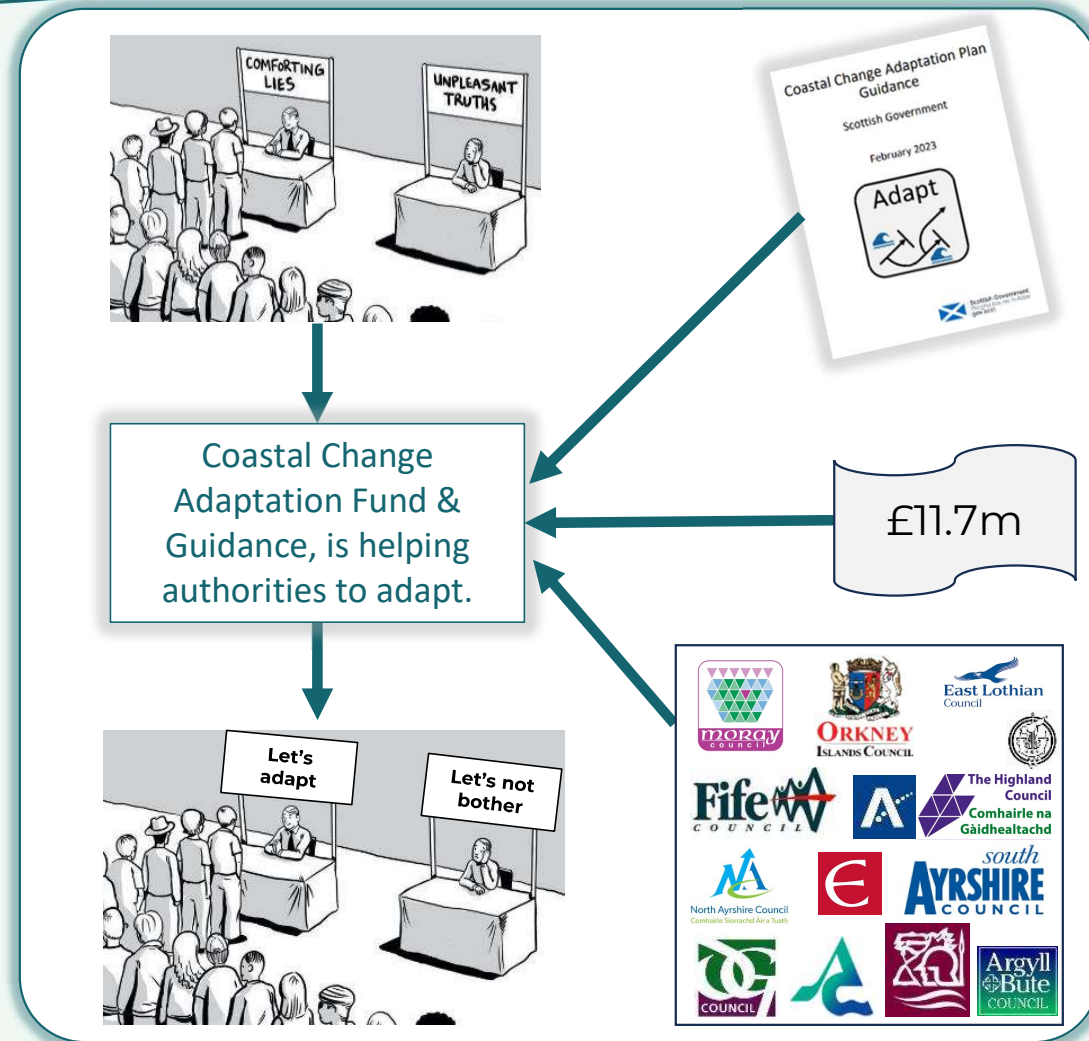
What does this look like?

- Our coast is a 4D complex space, where phasing and antecedent conditions are critical.
- RSLR underlies, tides, surges and waves.
- We are rolling the dice every day, without even knowing it.



What we do now is important

- Which of these ‘futures’ do we want versus what we plan for? Incl. precautionary principle.
- As a community we need to inform public & decision makers to support sensible & sustainable options.
- CCAP (& FRS) are the mechanisms to do this. Let’s explore and set the policies and trigger points, adapt as events unfold and keep on incorporating the latest science.
- Whilst we’re just about to hear more on the science, I hope you will also appreciate the practical adaptation steps our peers are also undertaking.
- Visit [DynamicCoast.com](https://www.dynamiccoast.com) and click ‘Adapt’ to see the progress!



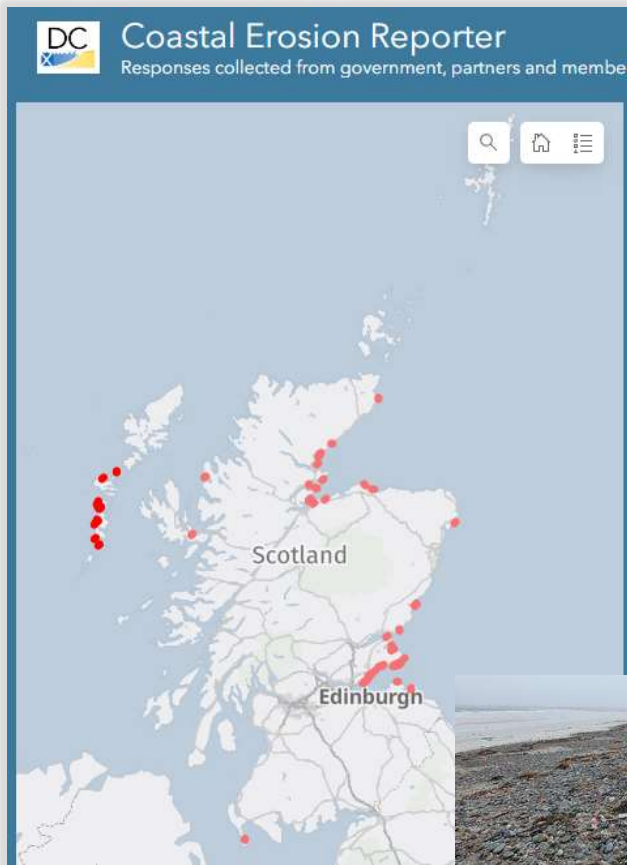
Recent storm impacts

- 2023-24 winter had 11 named storms, and several unnamed storms that impacted our coasts.

- At least 55 locations, ½ of these in Fife.

2024:

- Storm Ashley, 12 locations in WI.



DynamicCoast.com/index2

Science & Policy Summary

- Coastal erosion and flooding risks are Scotland's most severe climate risks. (CCC, 2022)
- Both are already increasing in frequency & will continue to under all emissions scenarios. (DC & SEPA)
- Billions of £ of assets & many lives at risk.
- Climate Change Act (Scotland) 2009 places duties on public sector to Mitigate & Adapt to identified risks. Obligations under LDP & FRM.
- Collaboration essential, given SG & LA roles.
- Coastal Change Adaptation Fund (£12m) supports CCA Plans, to adapt to these risks.
- Coastal Monitoring is essential to inform adaptation planning, actions & other policies.

“Scotland lacks effective monitoring and evaluation systems meaning that ... many climate-related risks are largely unknown. For adaptation plans to be effective these systems need to be created and implemented without delay.” (CCC, 2022)



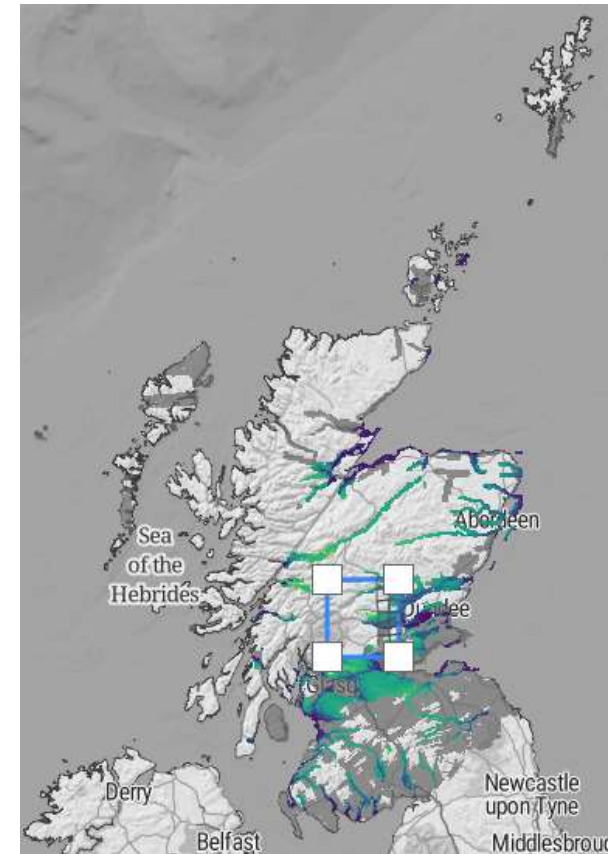
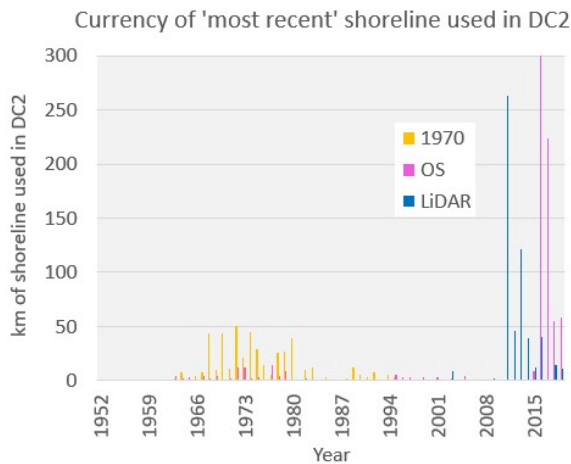
Data gaps and uncertainty

- Whilst Dynamic Coast used available data, often the 'latest' MHWS might be quite old.
- This means we're unable to be confident how our coasts are changing and what the actual risks are.
- We are also in a transitional period, where DC1 noted the 3 shoreline (1890, 1970, modern). DC2 used available lidar to update, but calculations based on 2 lines.
- Recent updates (Bay of Skail, Musselburgh & Montrose) have more data and we can be more selective (best – worst case scenario etc).
- For adaptation planning we need more than shorelines..

Dynamic Coast 2

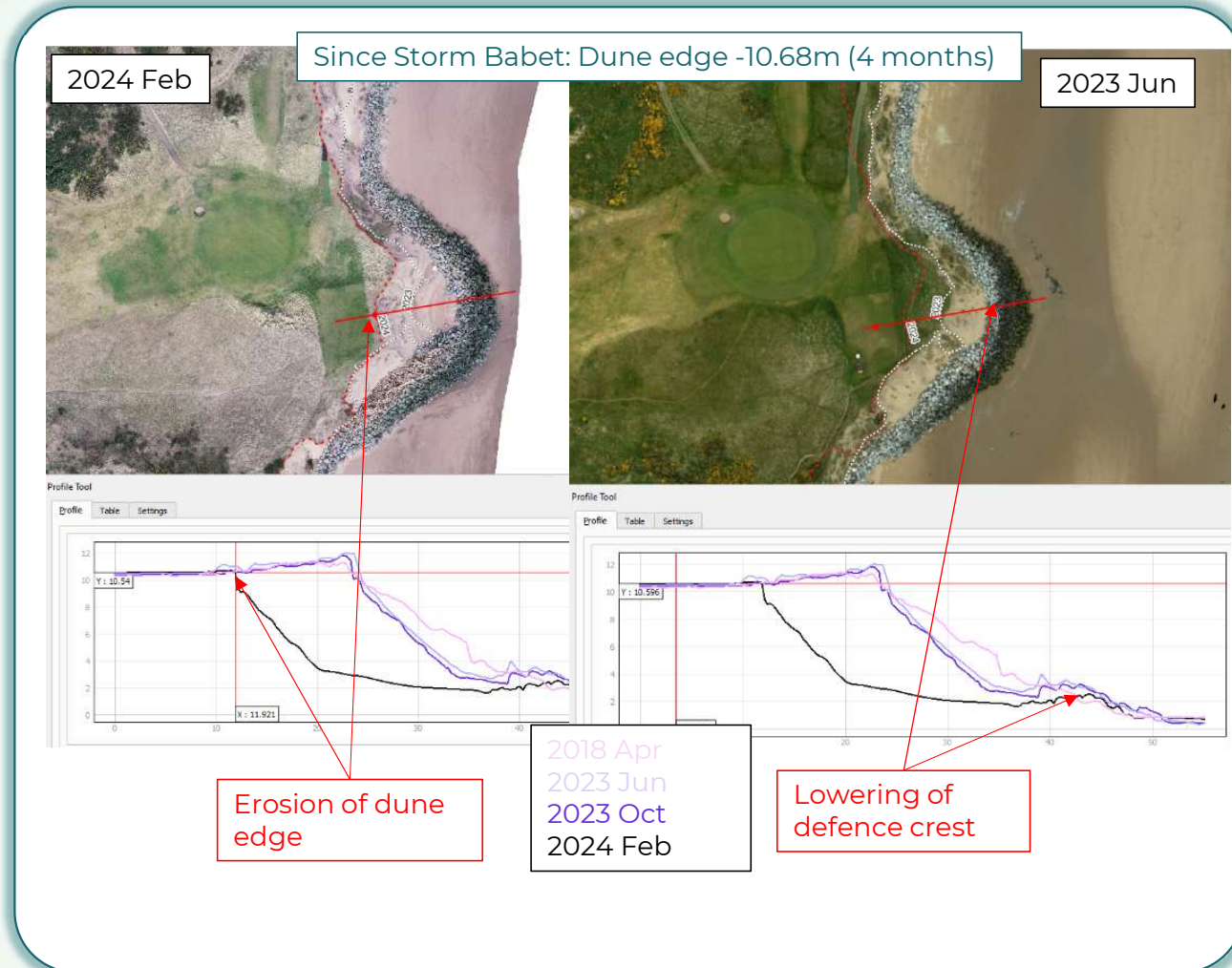
Change calcs on open erodible shores based on latest MHWS were derived from:

1970s MHWS	23%	477 km
OS MHWS	47%	969 km
LiDAR MHWS	30%	624 km



A shift in approach

- Whilst change intelligence can be informed by an update of MHWS, many of the consequential questions need 3D datasets to inform them.
 - MHWS has moved inland 10m
 - What surface lowering, volume change has resulted? Where has this occurred? How much is important? What does this mean for wave run-up, undermining and other risks?
 - We need high resolution surface models (Digital Surface Models & Digital Elevation Models).
 - Drone or Plane, LiDAR or Photogrammetry
- CCAPs use Trigger points
 - When Veg Edge or MHWS comes within x m of our asset, we reappraise adaptation actions.



Links to statutory planning policy

Chloe Harris, Planning Architecture and Regeneration
Division, SG

Chloe.harris@gov.scot





National Planning
Framework 4

NPF4



Sustainable places

SDGs: 7, 11, 12, 13

National outcomes:
Environment,
communities, economy



Liveable places



Productive places

Sustainable places

1. Tackling the climate and nature crises
2. Climate mitigation and adaptation
3. Biodiversity
4. Natural places
5. Soils
6. Forestry, woodland and trees
7. Historic assets and places
8. Green belts
9. Brownfield, vacant and derelict land and empty buildings
10. Coastal development
11. Energy
12. Zero waste
13. Sustainable transport

Local Development Plan spatial strategies should consider how to adapt coastlines to the impacts of climate change. This should recognise that rising sea levels and more extreme weather events resulting from climate change will potentially have a significant impact on coastal and islands areas, and take a precautionary approach to flood risk including by inundation.

Spatial strategies should reflect the diversity of coastal areas and opportunities to use nature-based solutions to improve the resilience of coastal communities and assets. Local Development Plan spatial strategies should identify areas of developed and undeveloped coast and should align with national, sectoral and regional marine plans.

Sustainable places

Policy 10

Coastal development

Policy Principles

Policy Intent:

To protect coastal communities and assets and support resilience to the impacts of climate change.

Policy Outcomes:

- Coastal areas develop sustainably and adapt to climate change.

**Local Development Plans:**

LDP spatial strategies should consider **how to adapt coastlines** to the impacts of climate change. This should recognise that rising **sea levels** and more **extreme weather** events resulting from climate change will potentially have a significant impact on coastal and islands areas, and take a **precautionary approach to flood risk including by inundation**. Spatial strategies should reflect the diversity of coastal areas and opportunities to use **nature-based solutions to improve the resilience** of coastal communities and assets. LDP spatial strategies should identify areas of developed and undeveloped coast and should align with **national, sectoral and regional marine plans**.



Local Development Plans Guidance

<p>Legislative requirements</p>	<p>NPF4 policy advice - information likely required in taking account of NPF4 policy</p>
<p>Considerations of development planning sections of the Act or the Regulations</p>	<ul style="list-style-type: none"> • Areas of developed and undeveloped coast, with particular consideration of projected coastline changes. • Projected sea level changes and probability of flooding from all sources.
<p>Section 15(5)</p>	
<p>The principal physical and environmental characteristics of the district.</p>	<p>Other information planning authorities may wish to: prepare, or review for spatial implications</p>
<p>Regulation 9</p>	
<p>Have regard to</p> <ul style="list-style-type: none"> • the national marine plan • any regional marine plan. 	<ul style="list-style-type: none"> • Coastal Change Adaptation Plans (CCAPs), where available.

10. Coastal development

Step by step guide – Evidence Reports – advice on relevant evidence for NPF4 policy topics



Relevant sources of information

Policies / strategies / plans / guidance / designations

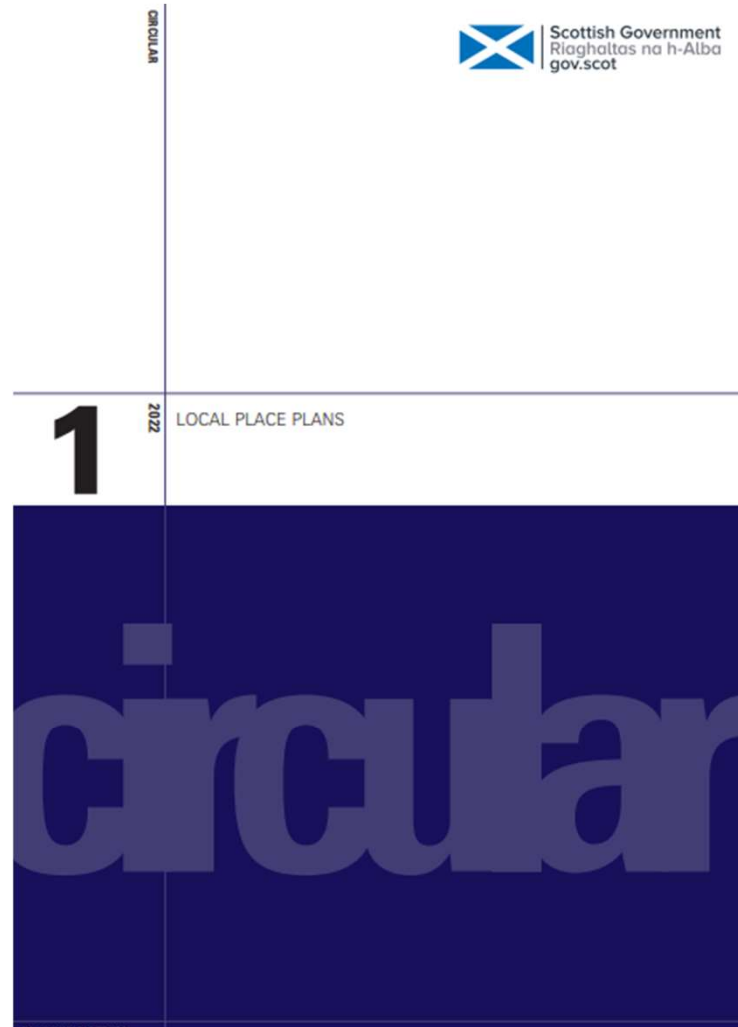
- [Coastal Change Adaptation Guidance](#)

Data sets / spatial data resources

- [Dynamic Coast](#)
- [Scottish Coastal Observatory Data](#)
- [SEPA coastal flood maps](#)



Local Place Plans



Improving Scotland's coastal monitoring

Dr Alistair Rennie, Nature Scot / Dynamic Coast



Scottish Government
Riaghaltas na h-Alba
gov.scot



Dynamic Coast
DynamicCoast.com @DynamicCoasts



What is going to be covered next?

- Why improve coastal monitoring?
- What data do we have, what and where are the gaps?
- Approaches to monitoring
- What is eligible in next year's CCAF?



Why improve coastal monitoring?

- We have statutory duties that require the coastal erosion risks to be identified and informed (LDP, NPF4, FRM & CC Adaptation duties, LA risk registers).
- Substantial public & local authority assets are exposed, as asset owners we have responsibilities.
- More of our coasts are expected to experience erosion and more rapidly under all emissions scenarios. At least £1.2Bn assets at risk by 2050 unless we act.
- If we work together this needn't be expensive or disruptive, the spin-off benefits are substantial.



Anticipated erosion in Orkney



“we have found out is that the high-resolution photography is almost as useful as the LiDAR data itself.”

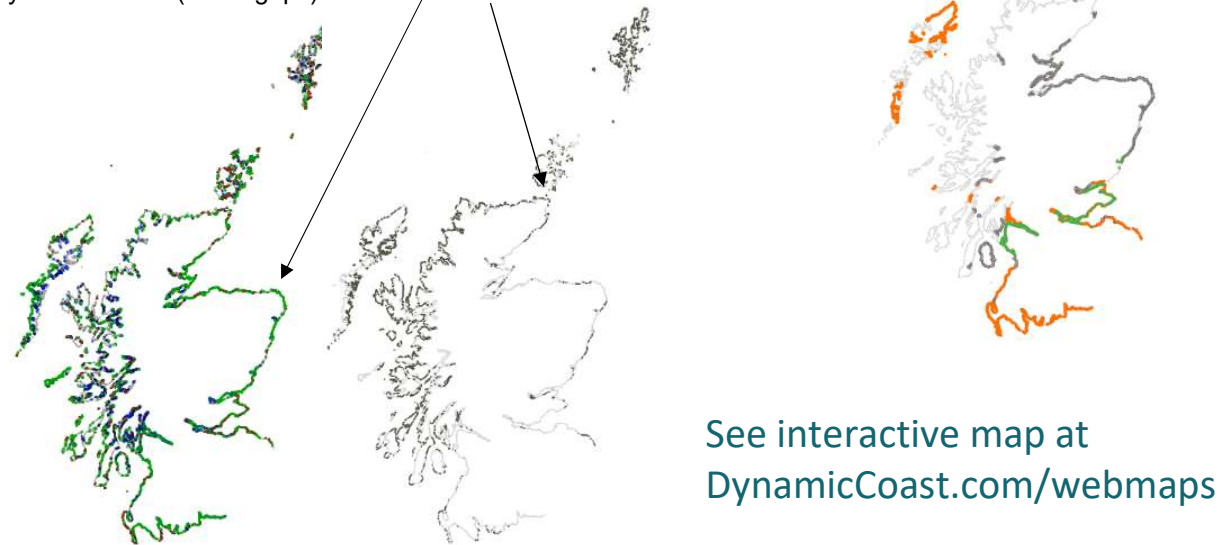
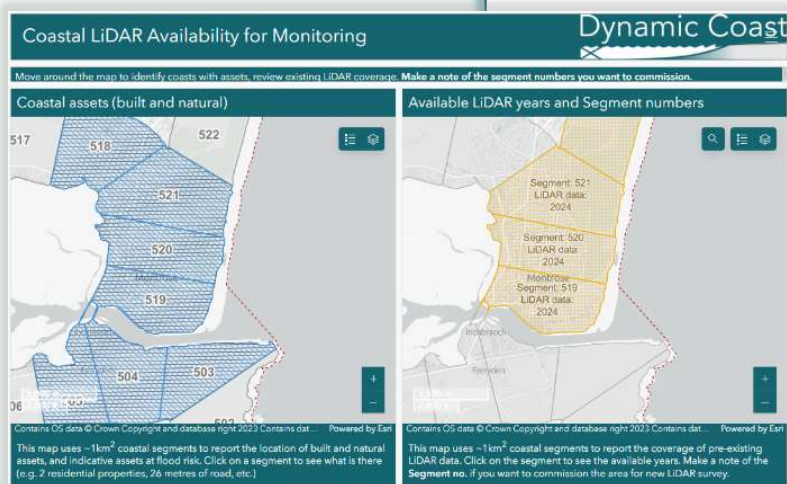
Current LiDAR provision

Two questions...

- What part of the coast has assets of interest?
- Is there LiDAR there (inc foreshore) & how current is it?

Coastal Assets	% coastal segments	LiDAR Coverage	% coastal segments
Built assets within 50m of Mean High Water Springs	33%	Any LiDAR	37%
Built assets at risk of Erosion	6%	LiDAR (2014-2024)	24%
Built assets at risk from flooding (indicative)	31%	LiDAR (2020-2024)	10%
Key natural habitats (Sand dunes, salt marshes & shingle)	30%		
Green Space (incl golf courses)	20%		
Cultural Heritage Assets	11%		
Any of the above	60%		
Segments that don't include any of the above (ie the gaps)	40%		

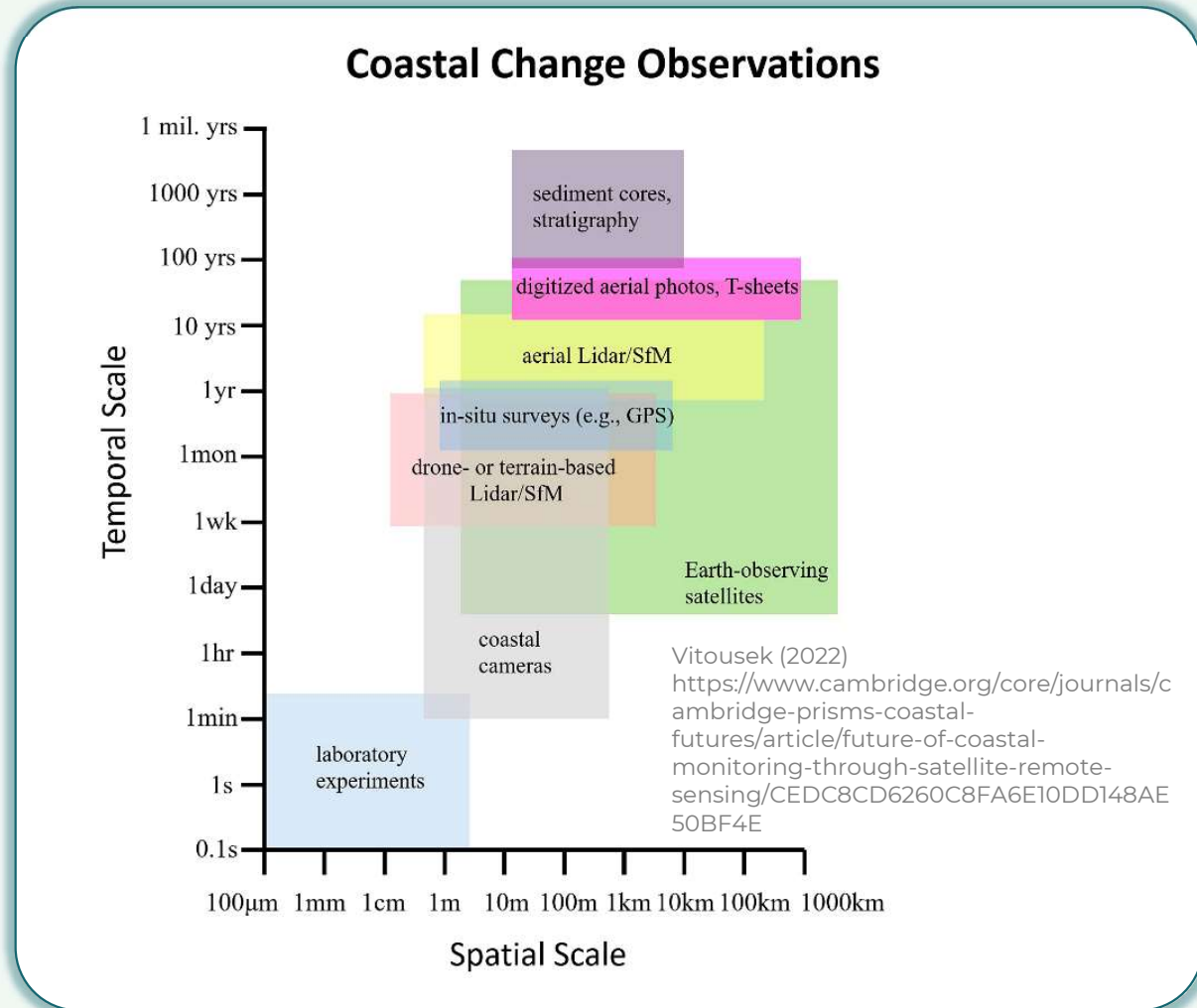
- LiDAR (2020+) [861]
- LiDAR (2014+) [1990]
- LiDAR (any) [3107]



See interactive map at DynamicCoast.com/webmaps

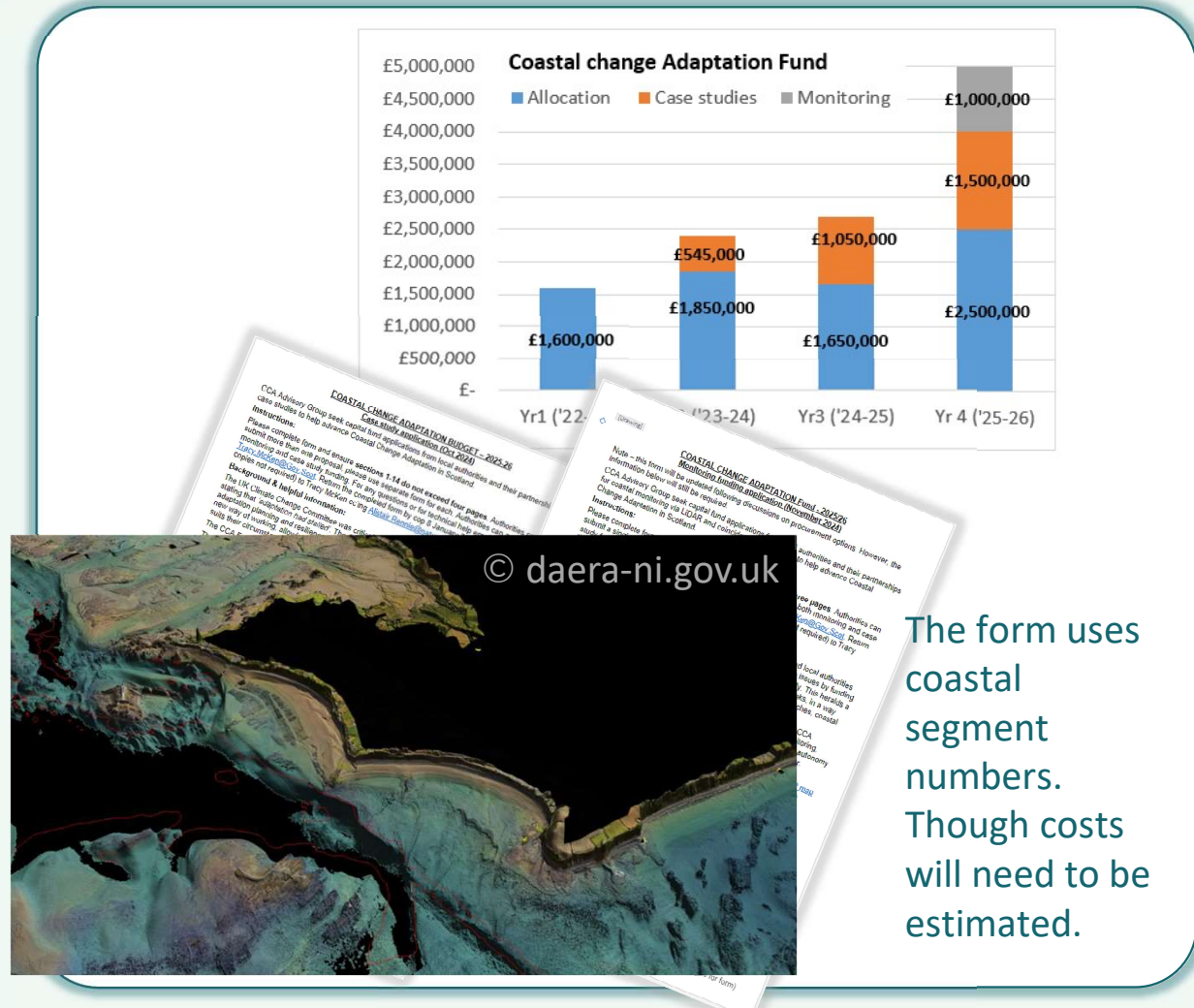
Approaches to monitoring

- There are a range of options to inform coastal change, including:
 - Satellite imagery interpretation
 - SAR interferometry
 - Aerial (plane-based) photogrammetry
 - Aerial LiDAR
 - Drone-based photogrammetry
 - Drone-based LiDAR
 - Ground-based topographic survey
 - Ground-based LiDAR (TLS)
 - etc
- Aerial LiDAR is being supported by the CCA fund, given our scale of inquiry and requirements, and wider re-use benefits.



What is eligible for the CCAF?

- The 2025-26 CCA Fund is divided in three parts: £2.5m for Direct Allocation, £1.5m* for Case Studies and £1m* for coastal monitoring via LiDAR. (*nominal figure)
- LA officers are allowed to submit both Case Study application forms and (a single) Monitoring form.
- What is eligible?
 - Funding for aerial LiDAR survey & coincident aerial imagery for your coastal area. Suggested this is 1km inland of MHWS to MLWS.
 - Strongly encourage collaboration to minimise procurement costs.
 - Staff costs for commissioning LiDAR (subject to LA Finance approval)
 - Marine LiDAR (uncertain at this stage)



Next steps?

- Procurement guidance and LiDAR specification will be made available to LAs.
- Advice is available from SG-GISAT and fellow LA officers.
- Collaboration between LAs is ***strongly recommended***. Liaison and coordination within SCOTS may be worthwhile.
- There is an expectation the data will be stored on SG remote sensing portal, and publicly available under an Open Government License.

<https://remotesensingdata.gov.scot>

- Further updates are likely.

The screenshot displays the 'Scottish Remote Sensing Portal' website. The page features a navigation menu with 'Home', 'About', 'Datasets', 'Map', 'Download', 'Case studies', and 'Contribute'. The 'Map' tab is active, showing a map of Scotland with various LiDAR data overlays in different colors (green, blue, purple). A sidebar on the left lists 'Matching datasets' with 18 results. The datasets are categorized by phase and format:

Category	Format	Count
lidar/phase-1	dsm	28
	dtm	28
	laz	924
lidar/phase-2	dsm	10
	dtm	10
	laz	22
lidar/phase-4	dsm	18
	dtm	18
	laz	273
lidar/phase-5	dsm	18

On the right side, a panel titled 'LiDAR for Scotland Phase 1 DSM' lists 11 datasets, including 'Scotland Lidar Phase 1 DSM NN90' through 'Scotland Lidar Phase 1 DSM NO03'. Below the list are navigation buttons for 'Prev', 'Next', and 'Download', along with a shopping cart icon showing 0 items. The map at the bottom includes a 'Visualise' toggle and a 'Reset' button. The footer text reads: 'Base mapping from viaEuropa. © Crown copyright and database right (2021). Ordnance Survey (OS Licence number 100024655) Norwich'.

Q&A (until 14.27)



Scottish Government
Riaghaltas na h-Alba
gov.scot



Scottish Environment
Protection Agency



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knowledge brokers
for a resilient Scotland

Questions?

- Please raise your hand
- Or type your question in the chat
- Let us know your name and organisation
- The Q&A session is not being recorded

Thanks for your time

- You'll be sent the slides and application form/s after the webinar.
- The form is also on Knowledge hub: <https://khub.net/group/scotland-coastal-change-adaptation-scots>
- If you have any questions about applying, please contact: Tracy.McKen@Gov.Scot
- Return the completed form/s by **08 January 2025** via email (hard copies not required) to **Tracy McKen** cc'ing Alistair.Rennie@nature.scot.