



*Reflections on the Glasgow COP26
Conference and Negotiations*
European Agricultural Research Initiative
EURAGRI Webinar, 3rd December 2021



EURAGRI SRUC

Nature Based Solutions

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COP26 Scorecard

Wins



Document has breakthrough agreement on fossil fuels



Agreement says emissions have to fall 45% by 2030



Negotiations reach deal on global carbon trading



Need to tackle methane mentioned for first time



China and the U.S. strike a rare climate deal

Losses



Rich countries don't make clear pledges for finance



Experts warn carbon trading deal has weaknesses



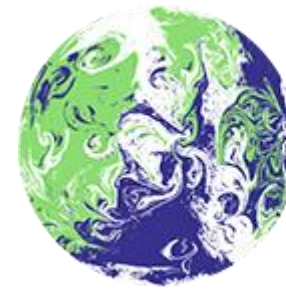
Most vulnerable countries don't get funds to cope



Current national pledges put world on track for 2.4C



Language on reducing coal use watered down

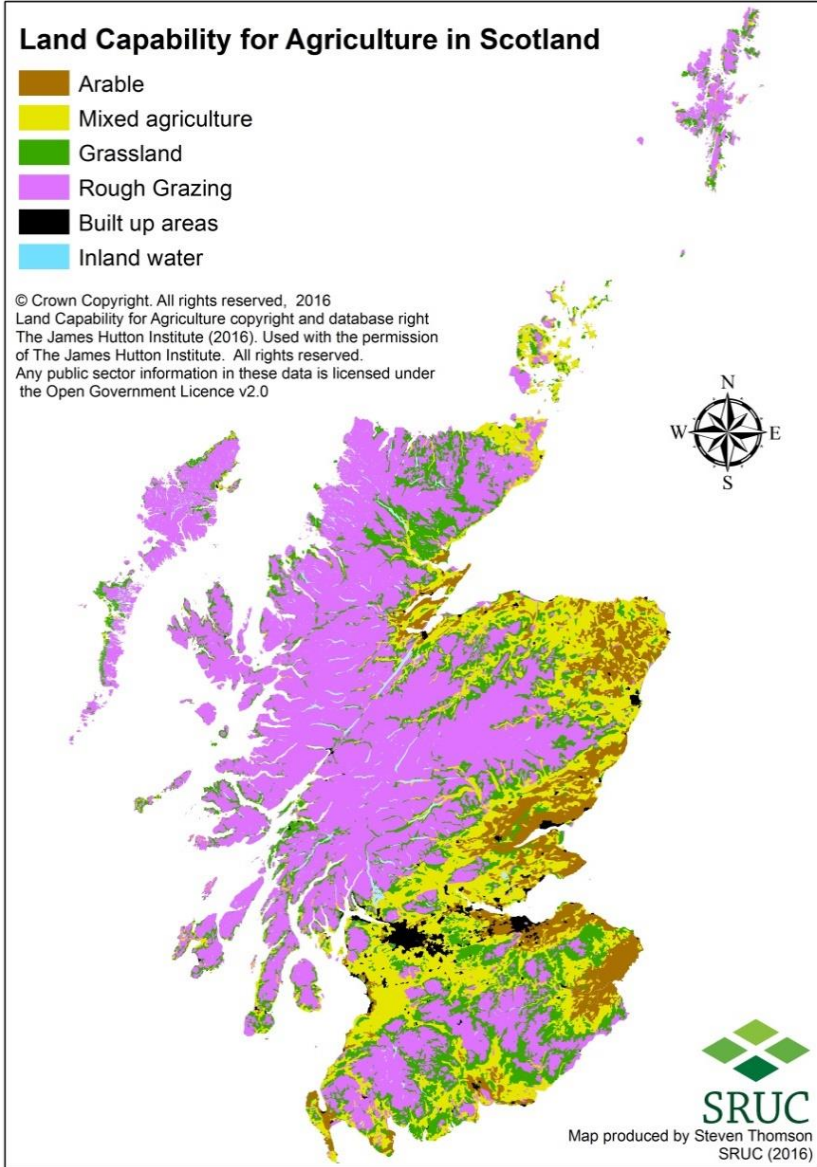


UN CLIMATE
CHANGE
CONFERENCE
UK 2021

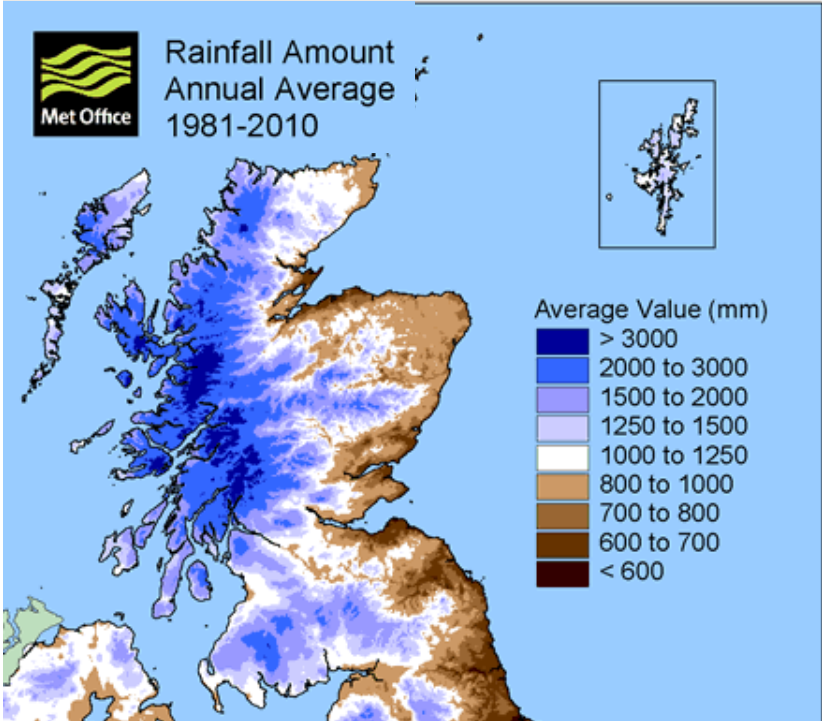
IN PARTNERSHIP WITH ITALY



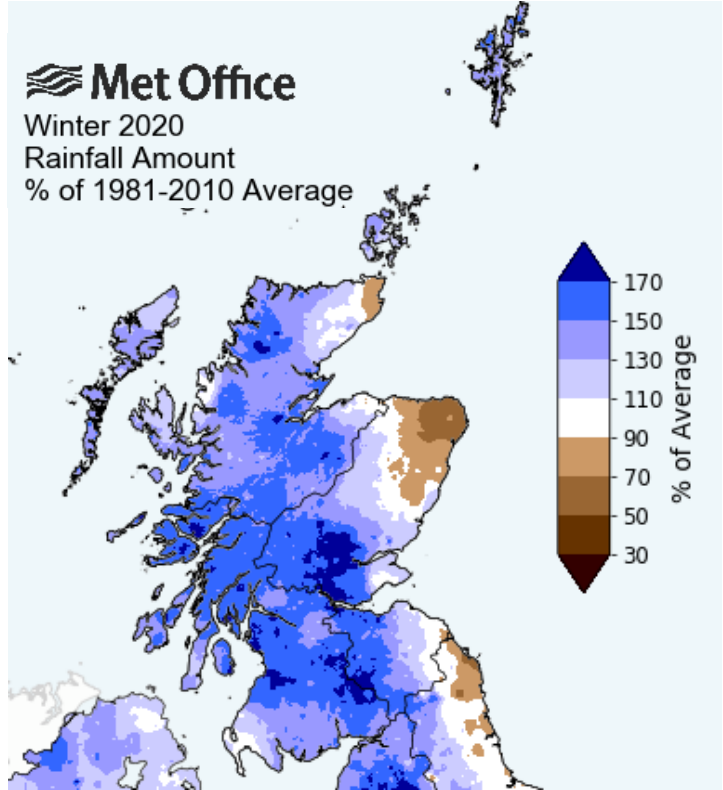
Scottish uplands



Very wet



And getting wetter





PEATLAND PAVILION AT COP26

The Peatland Pavilion at UNFCCC COP26 will highlight the importance of global peatlands for the climate, people, and the planet as a key nature-based solution to climate change.

[Events](#) [Past Events](#) [Peatland Pavilion at COP26](#) [Conference Series](#) [Conference 2021](#)



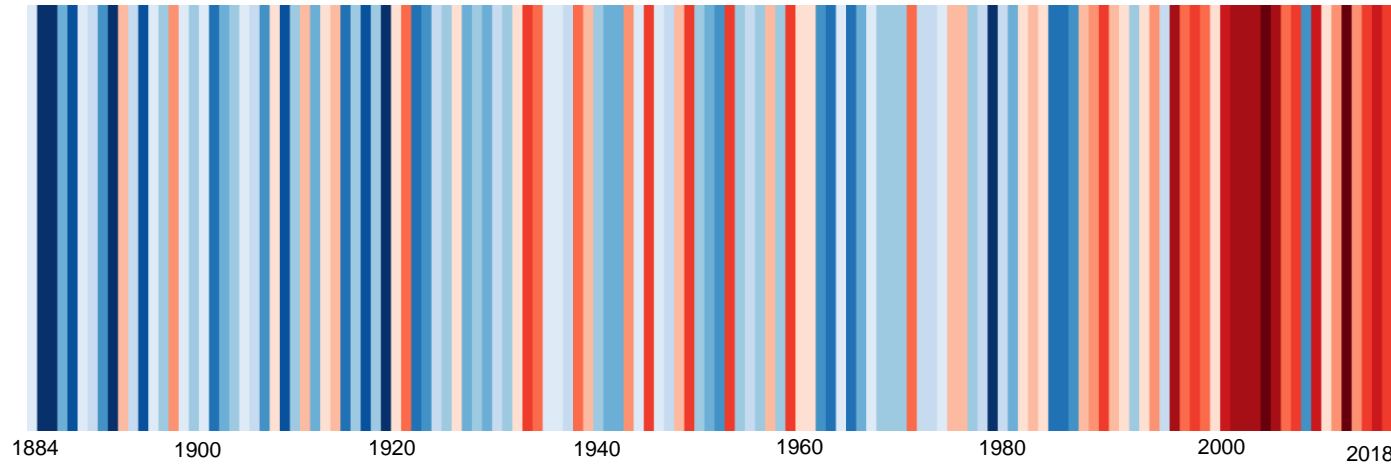
The Peatland Pavilion is a global collaboration between the UN, Member States, NGO's, academia, practitioners, business communities and people. It has been created and coordinated by:



Warming stripes for Scotland: 1884–2018



Average annual temperatures: <https://showyourstripes.info/>



[Who we are](#) [Where we work](#) [What we do](#) [Science & Data](#)

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23 DEC 2019 | STORY | ECOSYSTEMS AND BIODIVERSITY

2020: a crunch year for the biodiversity and climate emergencies



©IUCN

Challenges and Opportunities?

Scale of change needed

Net Zero by 2045

- *Biodiversity management*
- *Pollution mitigation*
- *Flood mitigation*
- *Peatland Restoration*
- *Woodland creation*

Innovation = Doing Things Differently

Inbye grasslands

- Soil pH and nutrients
- GHG emissions
- Grassland management
- Forage & fodder improvements

Hill grazing

- Bracken control
- Improving hill parks

Sheep Performance

- Genetic selections
- Blackface and Lleyn

Flock Performance

- EID associated kit
- TST worming of lambs
- Comparison of system trade-offs

Auchtertyre flock

- Restocking
- Blackloss
- Yellowfles/Ploch each

Technology

- Virtual fencing
- Drones for assessments

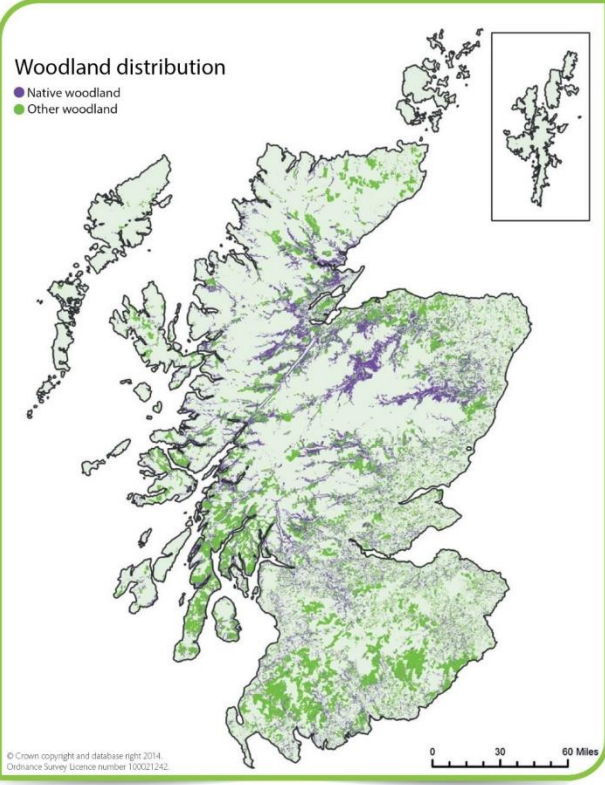
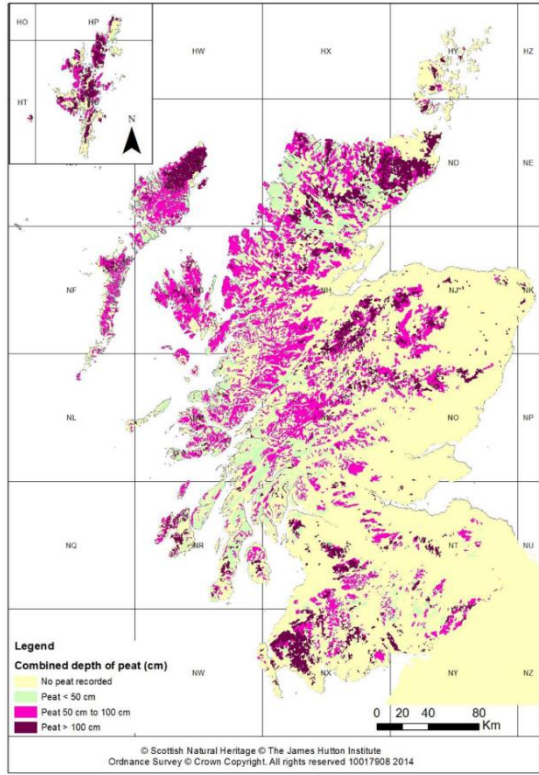
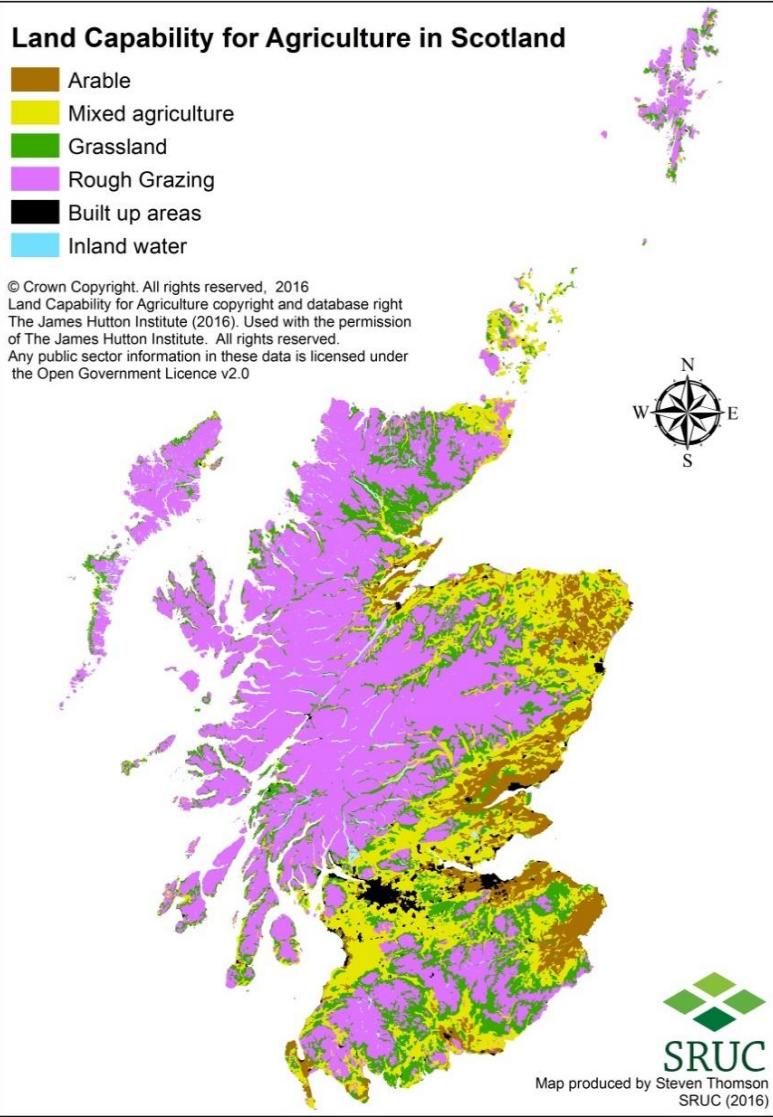
LoRa network

- Tracking livestock
- Sensors

Systems approach to Precision Livestock Farming



Natural Capital: the Sources and their State



Opportunities: Biodiversity management



Black 'Highland' Water Vole in water margin at Kirkton (Gareth Kett, 2014)

28/08/2014 20:22:03



Opportunities: Biodiversity management



Wader Scrapes & Wetland



Golden-ringed Dragonfly



Black Darter (immature male)



Four-spotted Chaser



Common Hawker



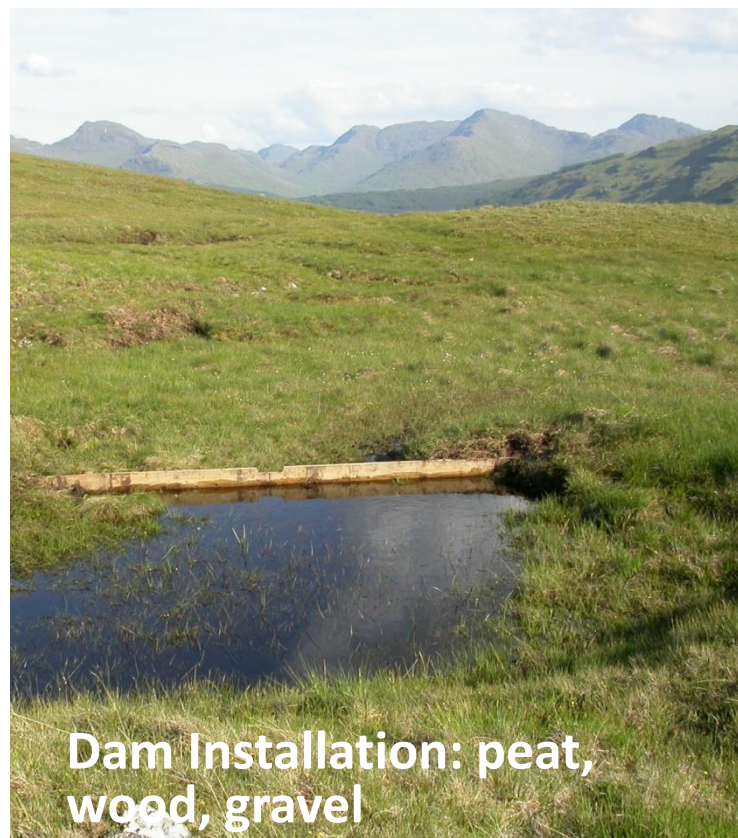
Management at Kirkton



Opportunities: Peatland restoration



Hag Re-profiling



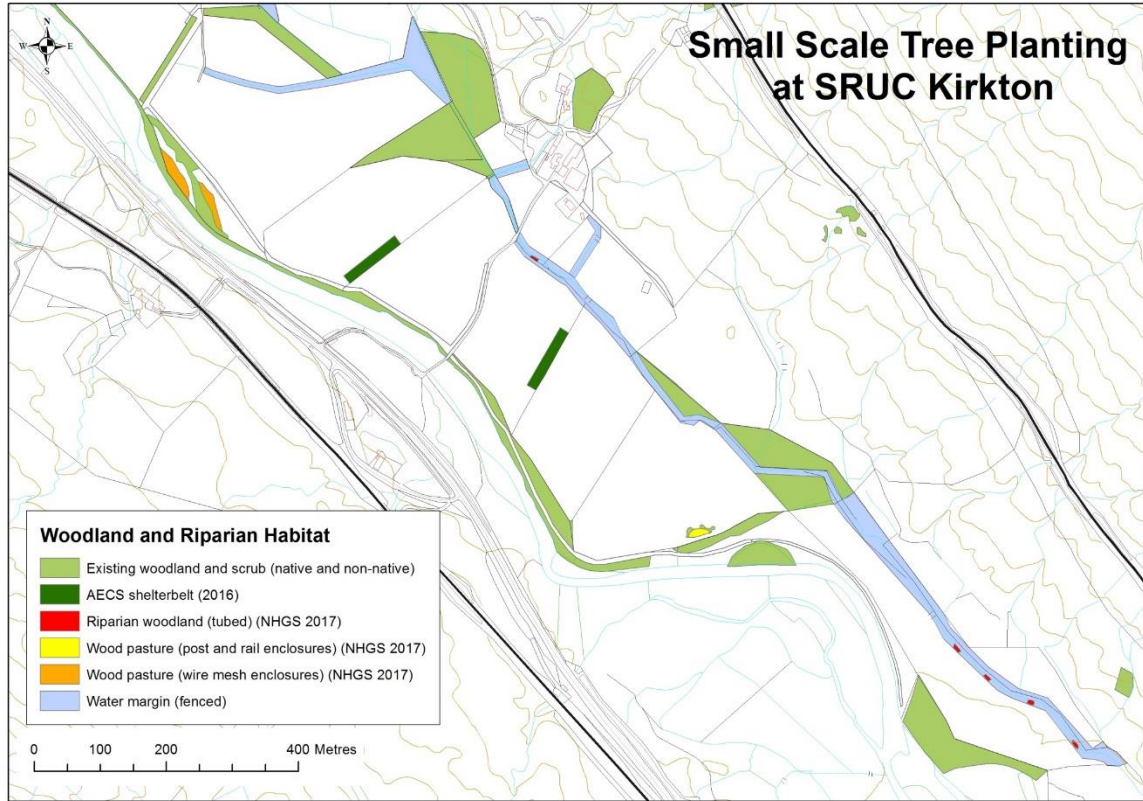
Dam Installation: peat, wood, gravel



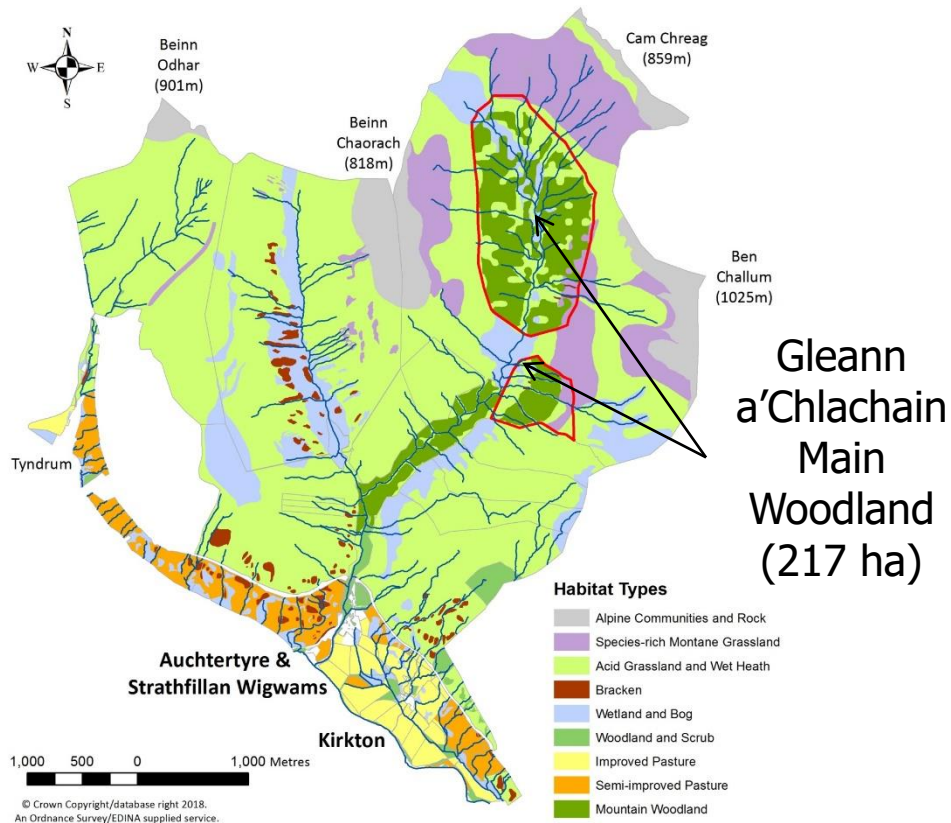
Re-wetting of Bare Peat



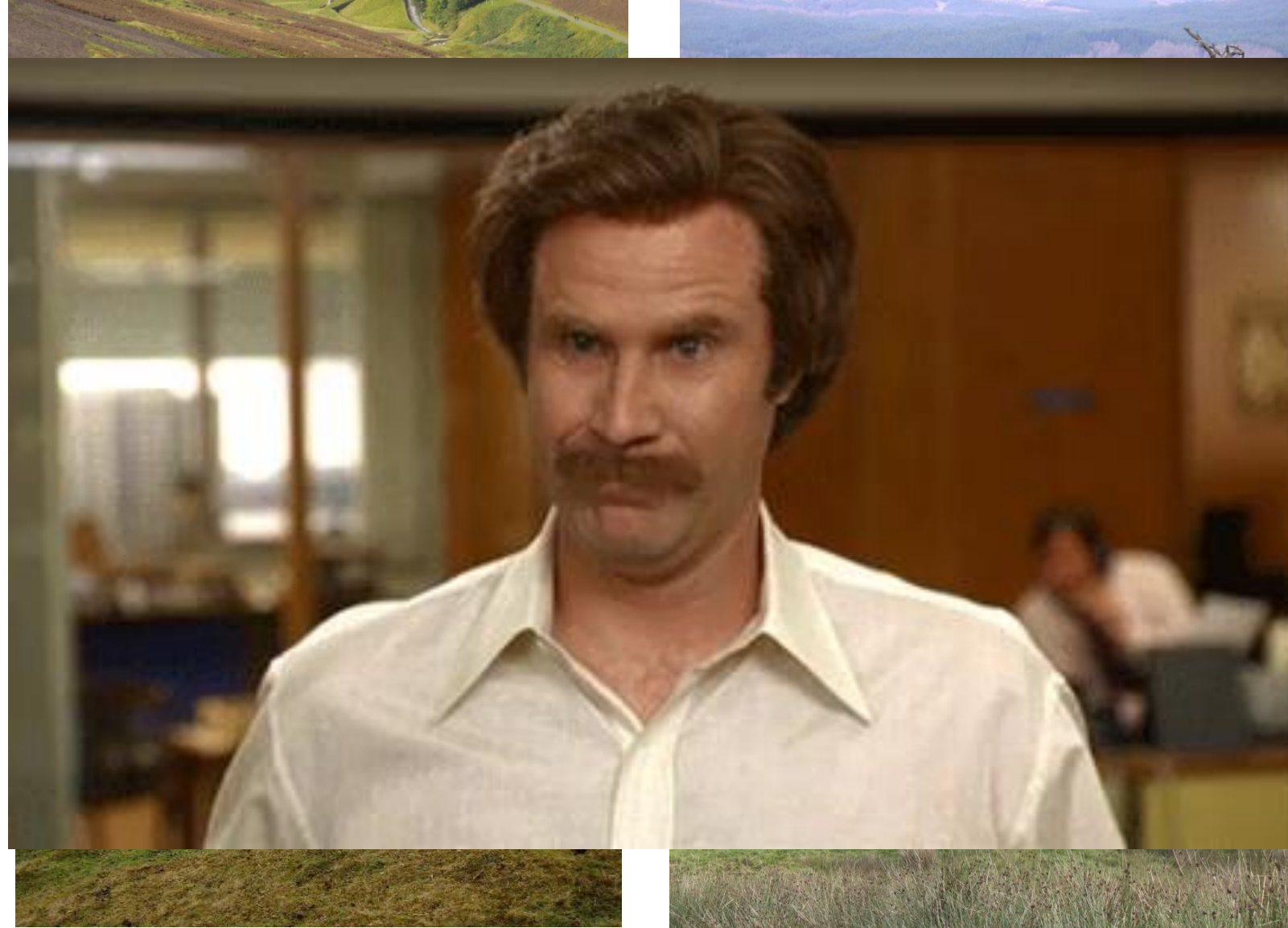
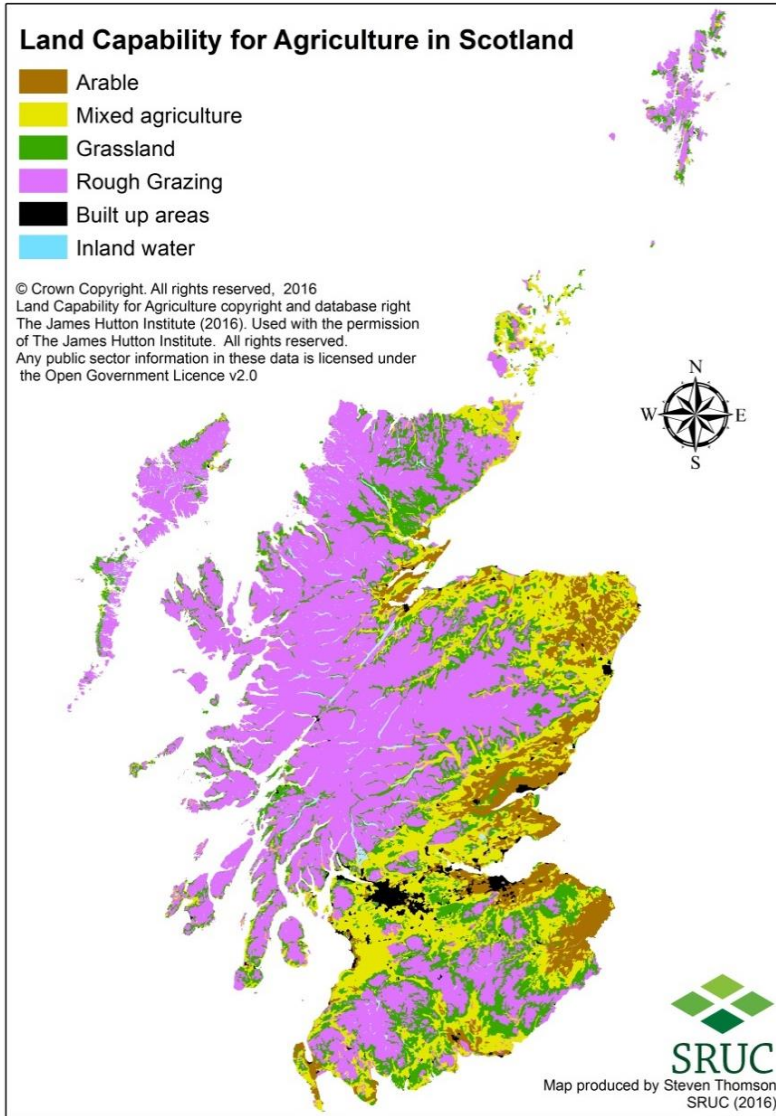
Opportunities: Woodland creation



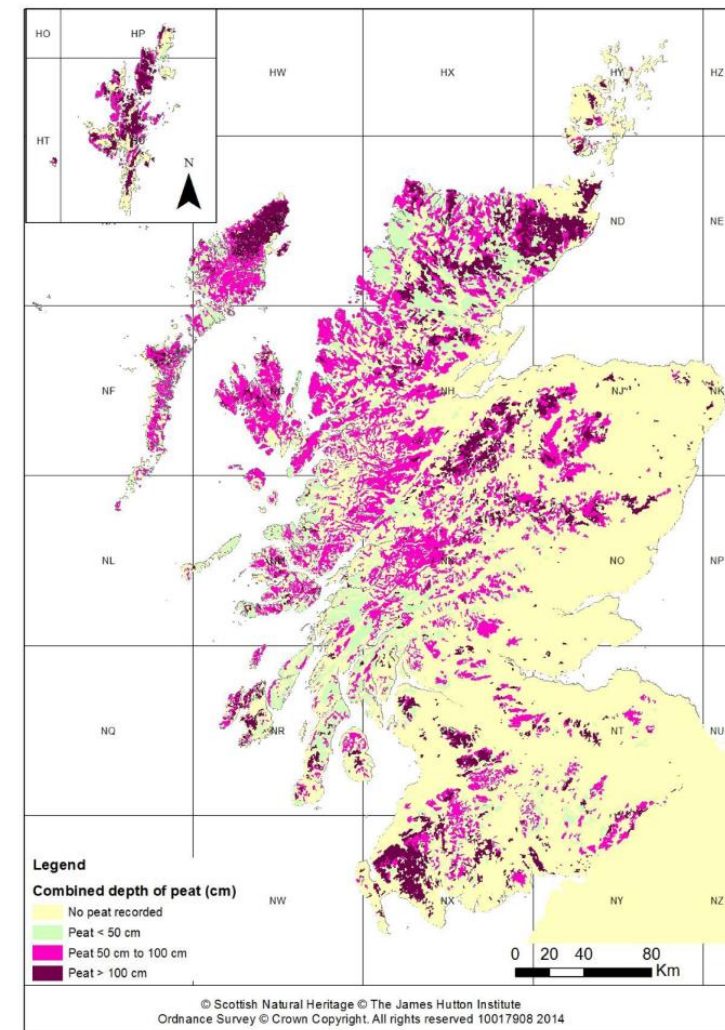
Opportunities: Woodland creation



That's all there is to it then?



Peatland Restoration and Woodland Creation



2 million ha in Scotland
70%–80% degraded

Targets:

- Restore 250,000 ha by 2030
- Restore 600,000 ha by 2045

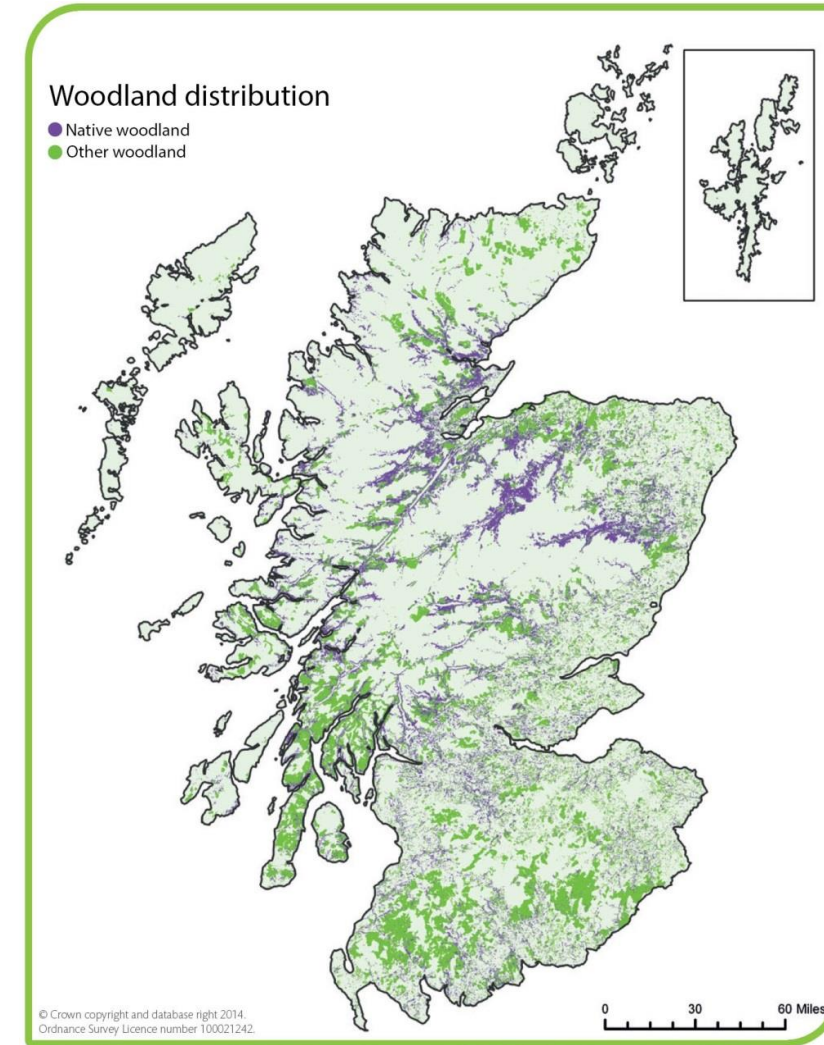
COP26:

- Nature-based solutions more in focus
- But **targets** are one thing it is the **outcome that is key**

Currently 18% of land

Targets:

- 21% of land by 2032
- Create 12,000 ha/yr by 2020/21
- Create 18,000 ha/yr by 2024/25



Peatland Restoration and Woodland Creation



Terra Motion

<https://www.terramotion.co.uk/carbonpotentialmapgp3>

NatureScot
NatureScot Research Report 1268 - Using peatland surface motion (dog breathing) to monitor Peatland Action sites
Year of publication: 2021
Authors: Glynis Macgregor, Andrew V. Donohue, Rosanna Anderson, David J. Large

UK Total:
£488,359,571 p.a
9,767,191 tonnes CO₂e p.a

£18,258,461 p.a
365,169 tonnes CO₂e p.a
Northern Ireland

£30,220,226 p.a
604,405 tonnes CO₂e p.a
Wales

£282,072,754 p.a
5,642,455 tonnes CO₂e p.a
Scotland

£157,808,130 p.a
3,156,163 tonnes CO₂ p.a
England

Peatland Areas with High Carbon Potential

0 75 150 km

<https://www.sruc.ac.uk/all-news/branching-out-into-woodland-creation/>

Key drivers for land manager decision making in Loch Lomond and the Trossachs National Park and opportunities for addressing constraints to woodland creation

SEFARI Fellowship with Loch Lomond and the Trossachs National Park Authority

Final Report



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Simon.Franks@lochlomond-trossachs.org

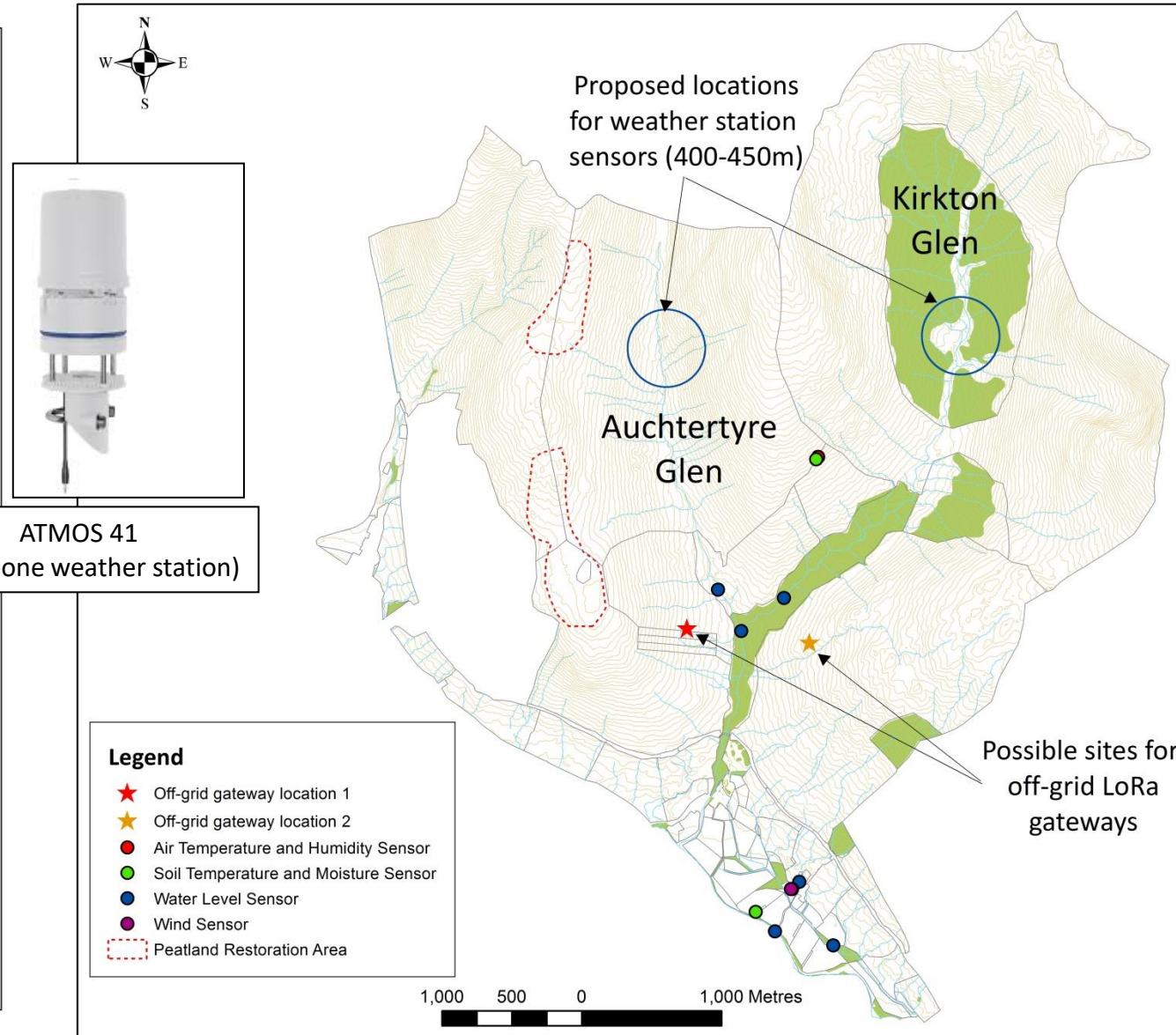
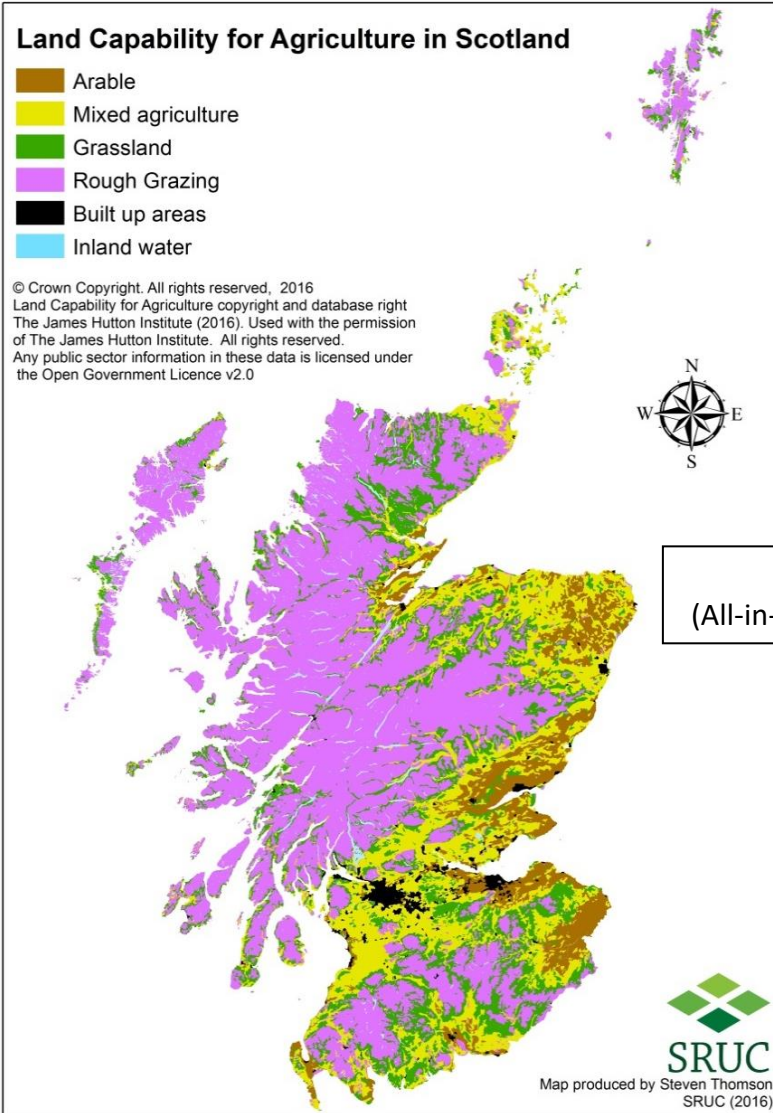


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Leading the way in Agricultural and Rural Research, Education and Consultancy.

Key questions:

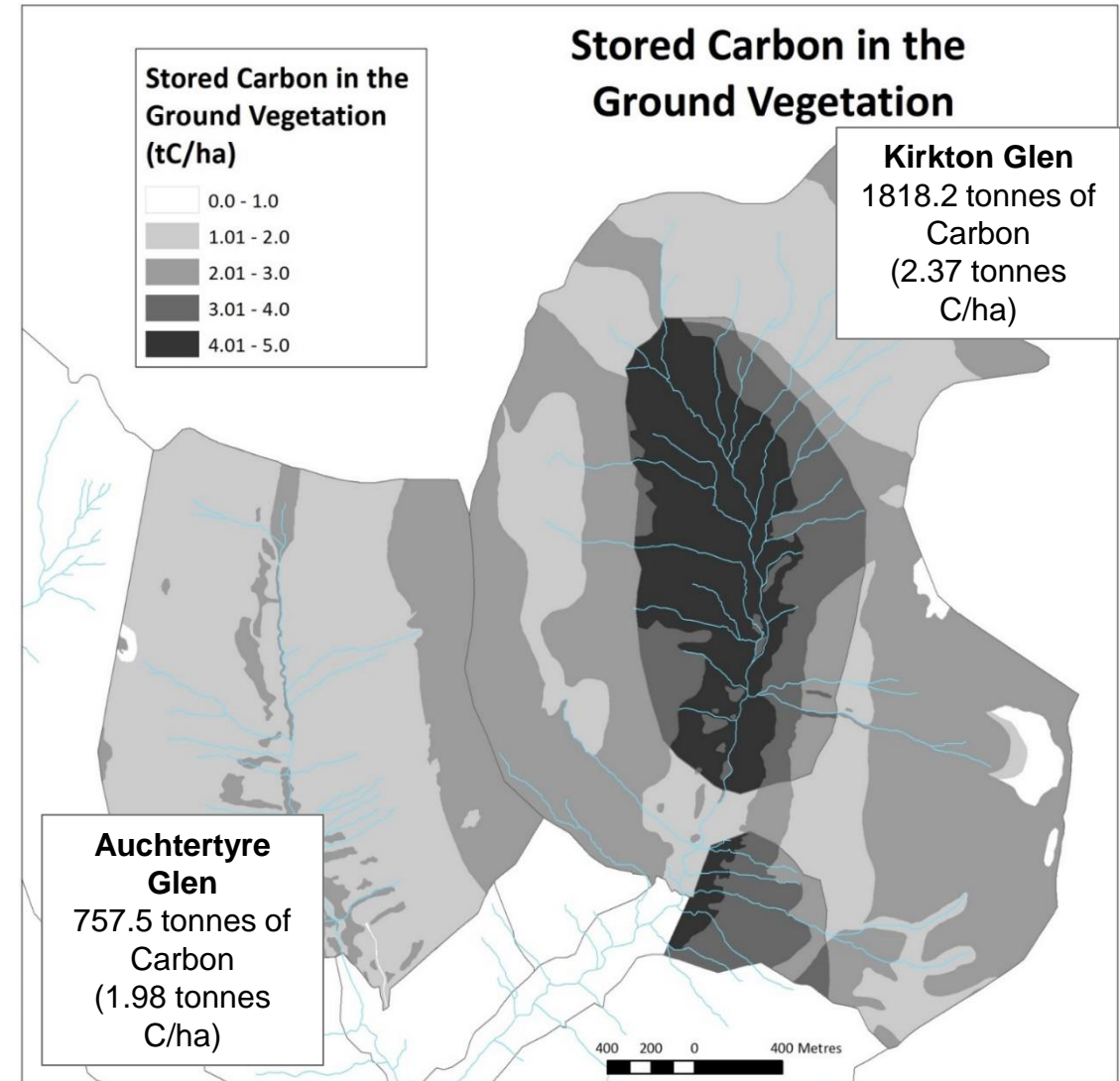
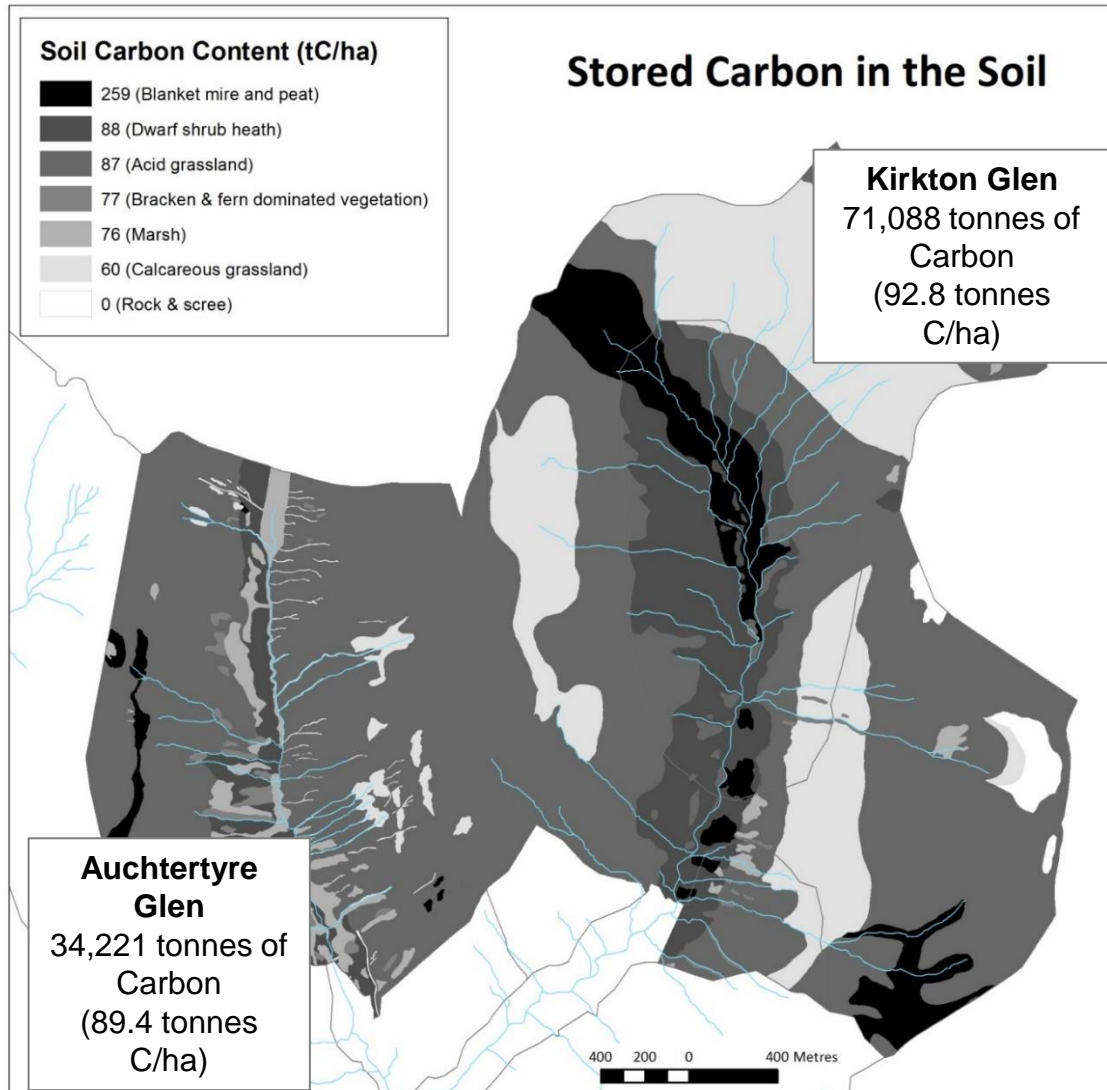
- **Peatland:**
 - Where?
 - How to prioritise?
- **Woodland:**
 - What scale?
 - What purpose?
- **Both:**
 - How to engage?;
 - How to integrate?

The need for metrics

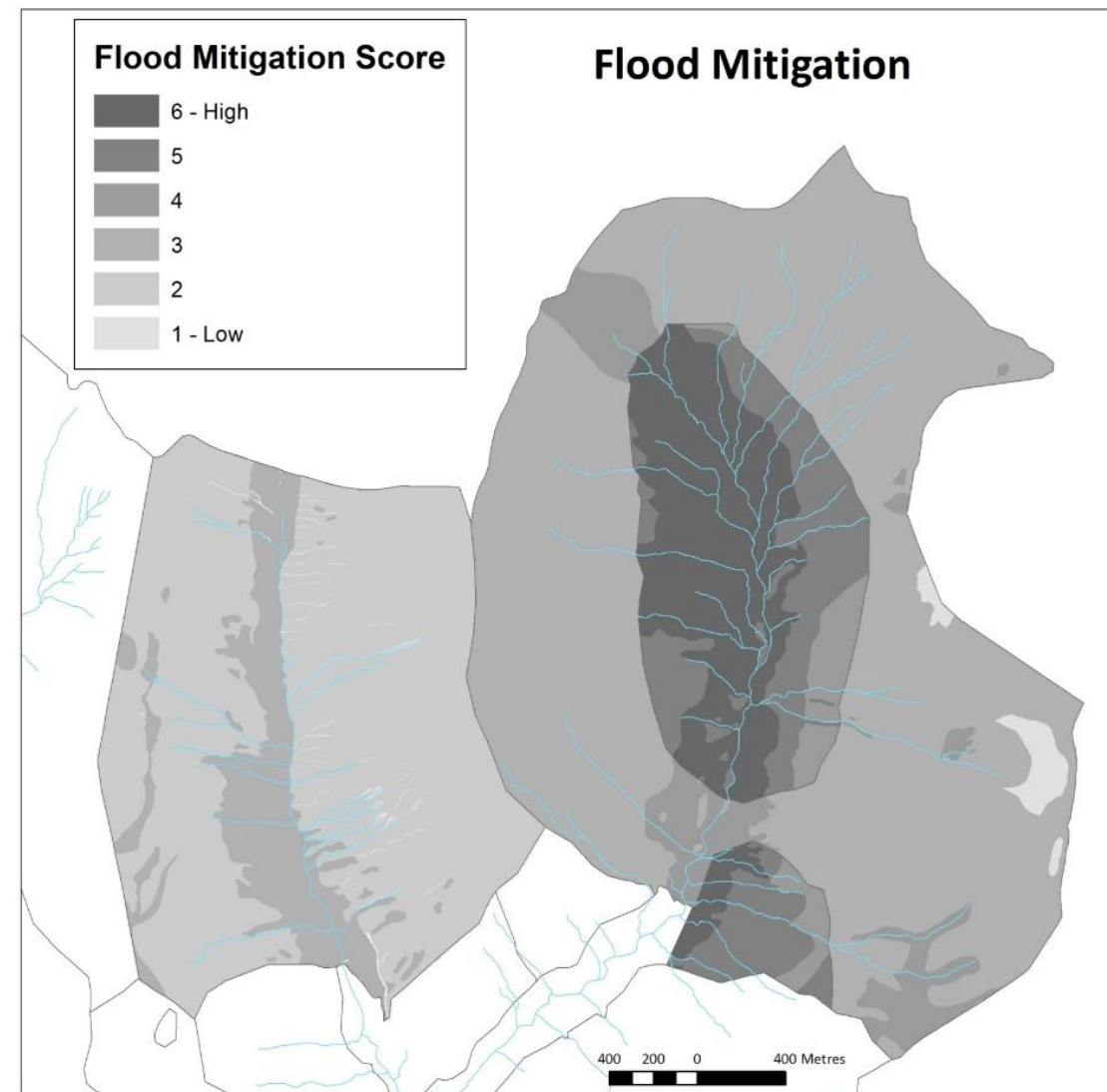
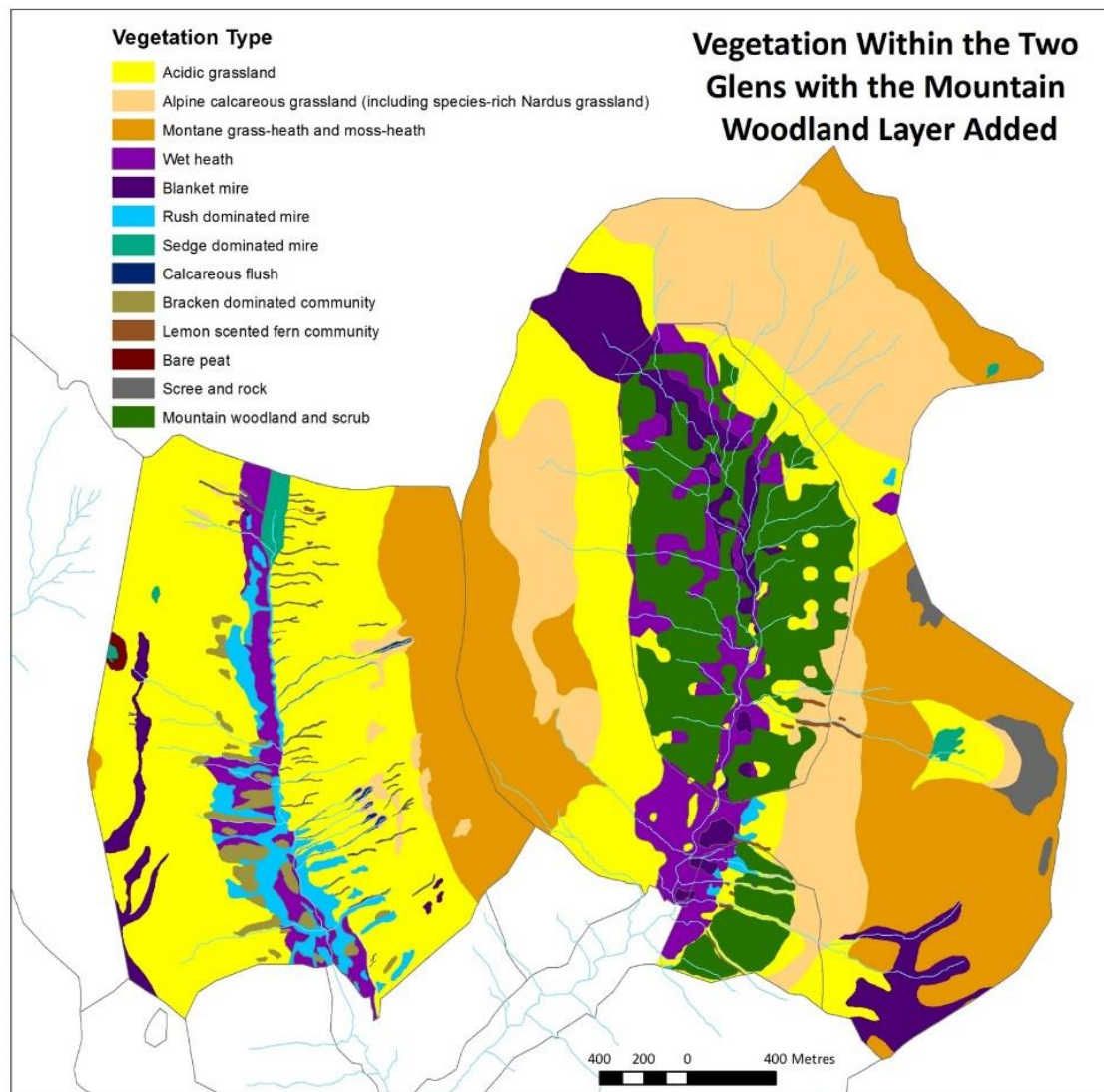


Off-grid LoRa Gateway

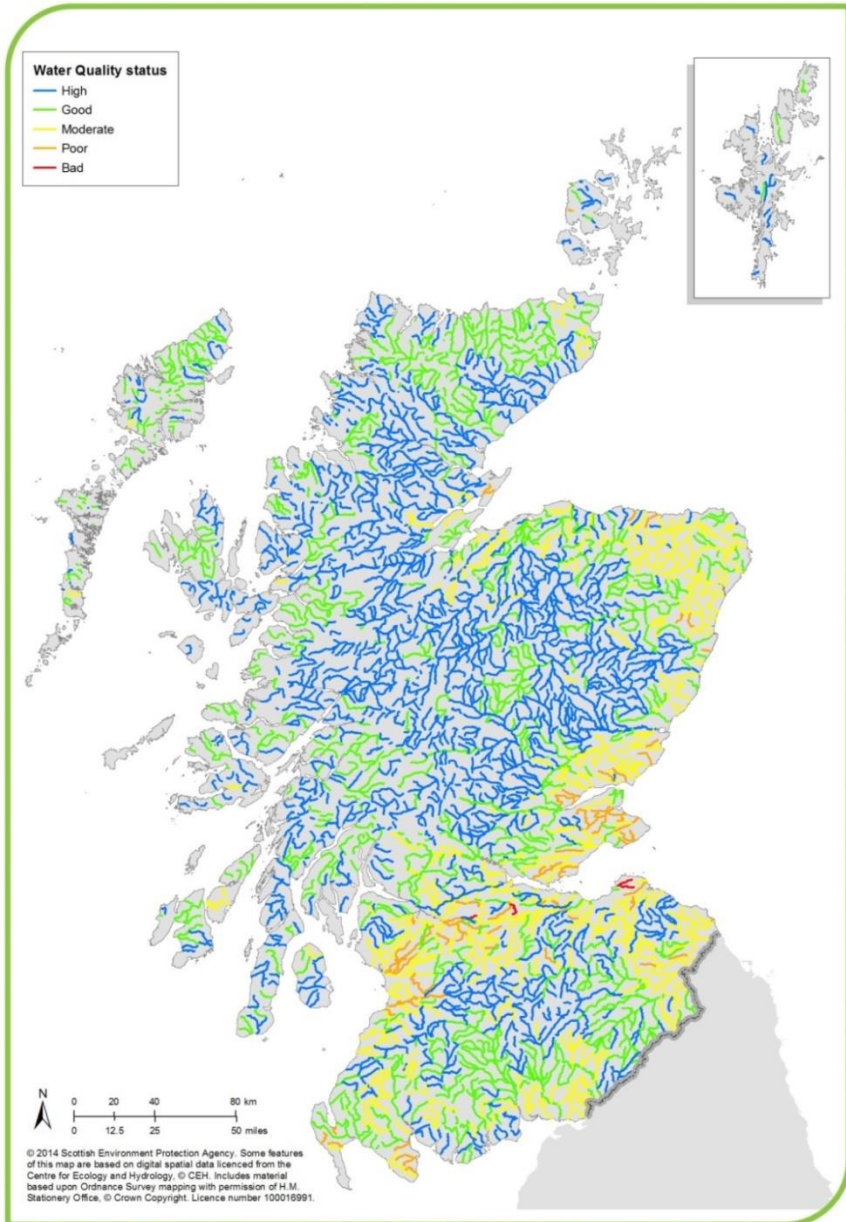
Combined Opportunities: Carbon sequestration



Combined Opportunities: Flood mitigation



Water Quality



Traffic Scotland @trafficscotland

#A9 not looking good!

Please drive slowly and safely twitter.com/whokens/status...

Craig @whokens
@trafficscotland A9 between Perth and Stirling #StormDennis



87 3:57 PM - Feb 15, 2020

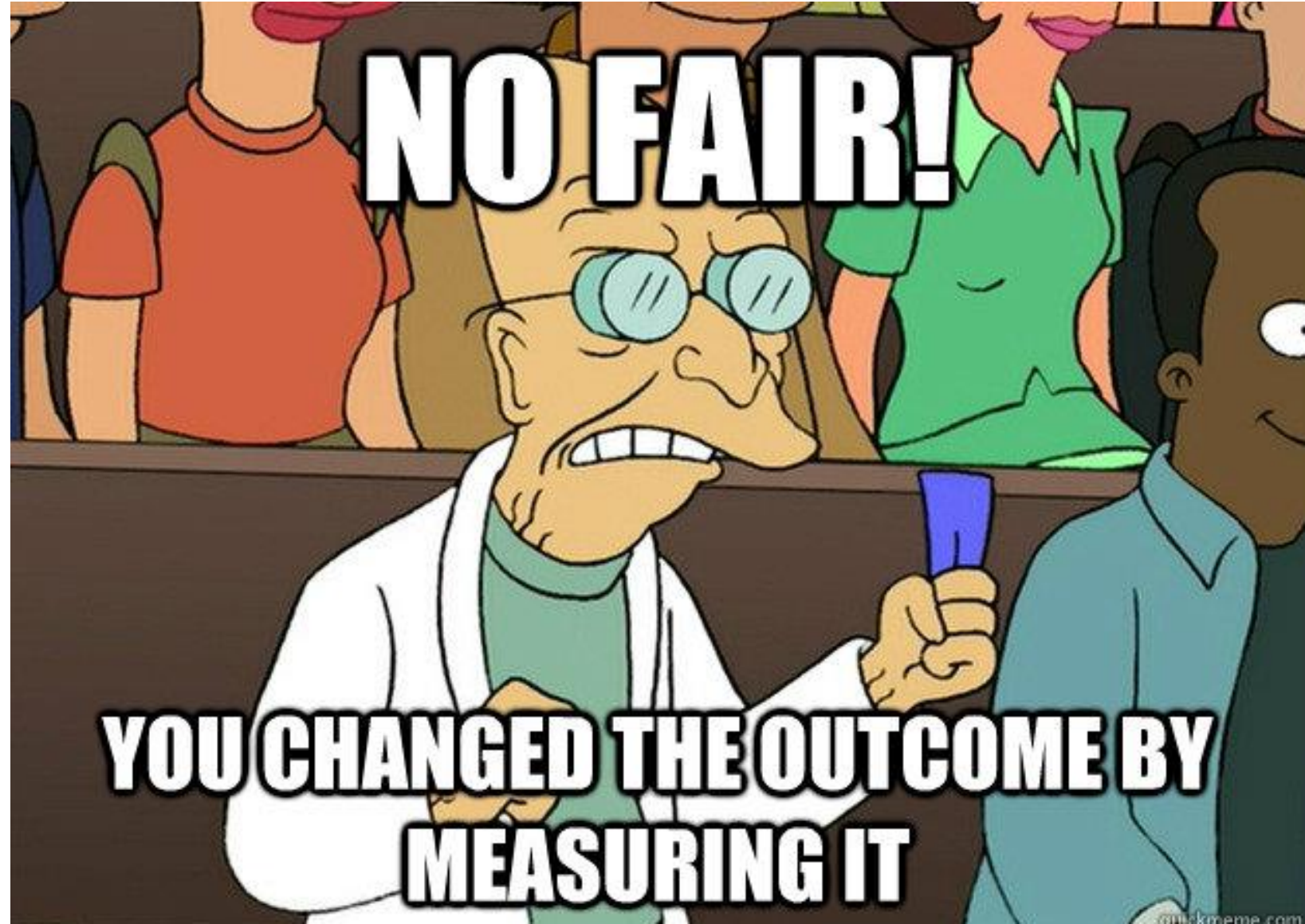
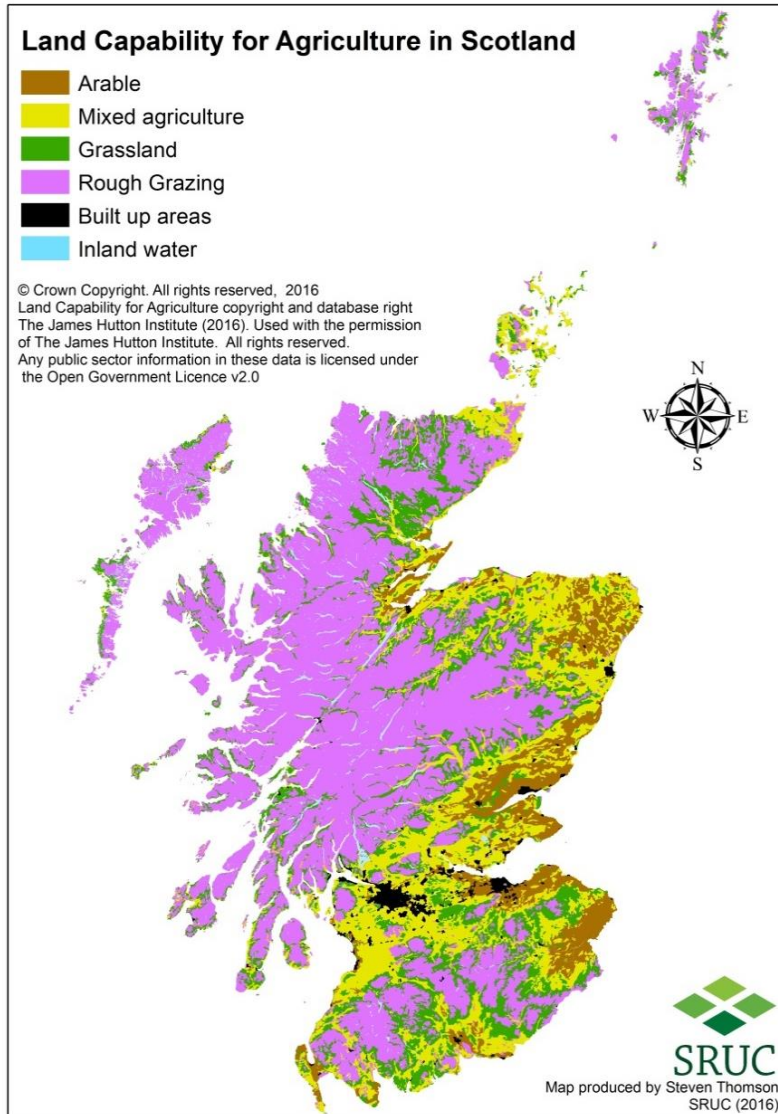
You are here: [Home](#) > [Environment](#) > [Water](#) > Flooding

Flooding



SEPA is Scotland's national flood forecasting, flood warning and strategic flood risk management authority.

The need for metrics



More Information:



Podcast: <https://www.fas.scot/publication/the-benefits-of-agri-environment-management-at-kirkton-auchtertyre-farms/>



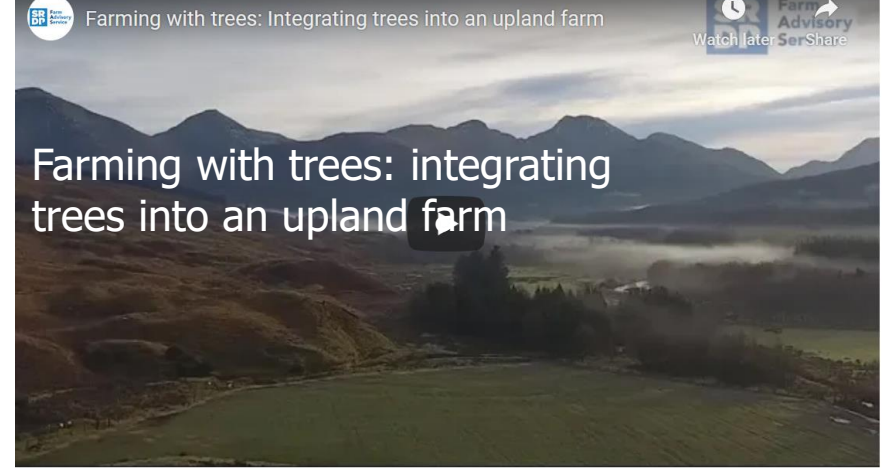
Podcast: <https://audioboom.com/posts/7598101-climate-change-in-agriculture-rewilding>



<https://youtu.be/S65y-u8tpQM>



<https://youtu.be/5LZV5OuUIzU>



<https://youtu.be/eelppIVvQ3c>

Acknowledgements



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- **Defra** under the **ERA–NET SusAn (Sustainable Animal Production) Programme**
- **Global Food Security's 'Resilience of the UK Food System Programme'**, with support from **BBSRC, ESRC, NERC** and **Scottish Government**.



Innovation = Doing Things Differently



Precision Agriculture and the Internet of Things (IoT)



Engineering & Technology



Systems & ecology



Knowledge Transfer



Biological Sciences





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