



# Policy-led Analysis – Quantitative Story Telling Phases 1 & 2 Land Use Transformations

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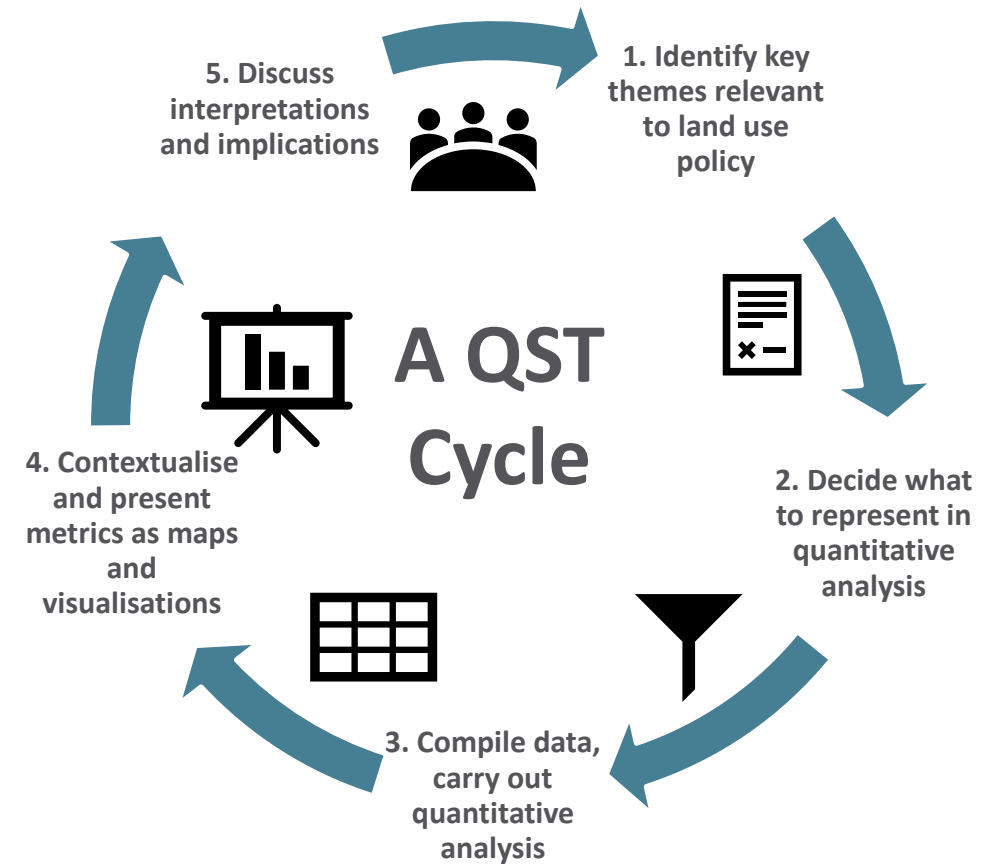
Presentation to Scottish Government, 27 March 2024, Online.



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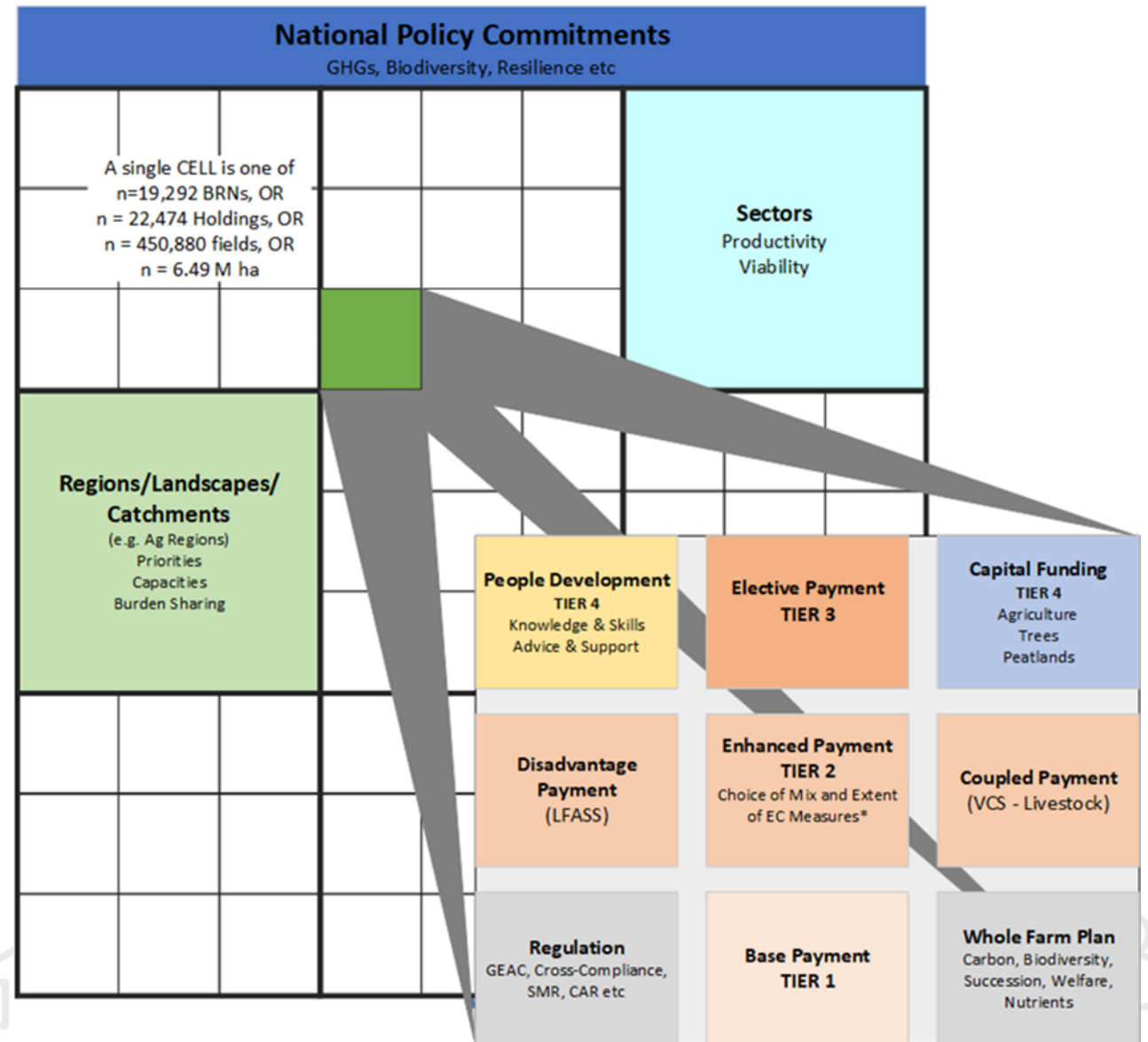
# Quantitative Story Telling

- Process for defining, undertaking and interpreting research for policy.
- Part of SRP agreed to be policy-led
  - Co-construction (Stage 1&2)
  - Co-interpretation (Stage 4&5)
  - Cycles of analysis
- Phase 1 background from last year's [presentation](#) and [paper](#)



# QST Phase 1 - Enhanced Conditionality

- Review of Tier 2 measures
  - Micro – effectiveness and barriers
  - Macro – budgets and schemes
  - Meso – between farm interactions
- Workshops and [Synthesis Report](#)
- Used to inform OBC
  - Measure typology



# Enhanced Conditionality

- Multi-functionality (vs. simplicity)
- Uptake – EFA and AECS etc (ongoing)

Objectives	Outcomes delivered to by measures - from screening						Outcome Count	Outcomes per Objective
	GHG	BioDiv/Conser	Soils	Water	Adaptation	All Objectives		
Livestock Management for GHG Emission Reduction	18				1	18	19	1.06
Manage for Species found on Farmed Land		17	1	4	2	17	24	1.41
Maintain and Enhance Field Margins and other Permanent Habitats		16		7	5	16	28	1.75
Improve Cultivated Soil Health	12	5	6	7	8	12	38	3.17
Create New Nature Rich Habitats		8		7	7	8	22	2.75
Nutrient Management for GHG Emission Reduction	7			1		7	8	1.14
Soil Management for GHG Emission Reduction	6	1	2	4	2	6	15	2.50
Crop Management for GHG Emission Reduction	5	3	4	2	2	5	16	3.20
Woodland Creation and Management	3	3	3	3	3	3	15	5.00
Cattle Feeding	1	1				1	2	2.00
<b>All Objectives</b>	<b>52</b>	<b>54</b>	<b>16</b>	<b>35</b>	<b>30</b>	<b>93</b>	<b>187</b>	<b>2.01</b>

# QST Phase 2 – Payment Regionalisation

- From ARIOB analyses
- Characterisations baseline
  - Field, Holding, Business
  - Administrative (payments) & Research based (biophysical)
- PowerBI summaries
  - Policy options
  - Interaction – filters etc
  - Co-interpretation



# Regionalisation

## Options analysis

- Regions
- Budgets
- Capping (degressivity)
- Others
  - Front loading
  - Small holder
  - Eligibility

## Base (Enhanced), VCS & LFASS schemes together

- Payments per business
- EC requirements

## Analysis tool (in R Shiny)

- 2 Region (1, 2&3), no LFASS (flat R2&3), increase VCS mainland and island, no sheep VCS (flat R2&3), capped (R2, £60k)

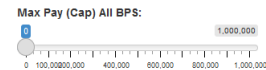
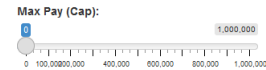
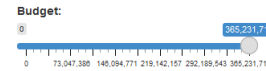
### Scenario Builder

Controls By Pay By Area By Area and Pay

#### R1

- BPS Region(s)
- Region1 - Arable
  - Region1 - Grassland
  - Region 2
  - Region 3

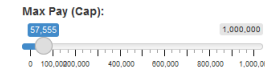
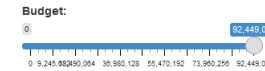
Area:  
1,663,170 ha



#### R2

- BPS Region(s)
- Region1 - Arable
  - Region1 - Grassland
  - Region 2
  - Region 3

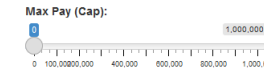
Area:  
2,035,272 ha



#### R3

- BPS Region(s)
- Region1 - Arable
  - Region1 - Grassland
  - Region 2
  - Region 3

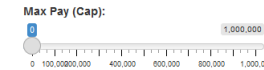
Area:  
0 ha



#### R4

- BPS Region(s)
- Region1 - Arable
  - Region1 - Grassland
  - Region 2
  - Region 3

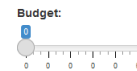
Area:  
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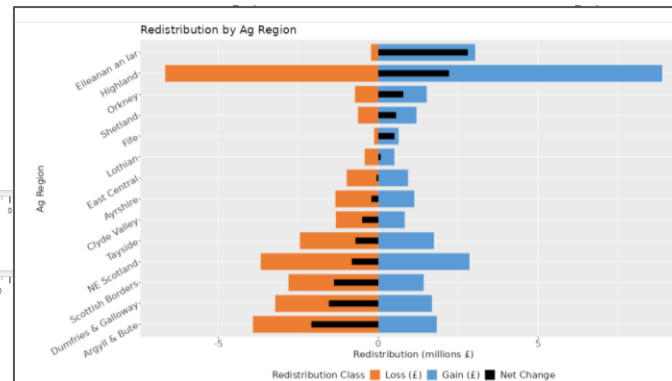
#### LFASS

- Basis:
- Baseline
  - Flatten to LFASS
  - Flatten to BPS 2/3
  - Flatten to all BPS

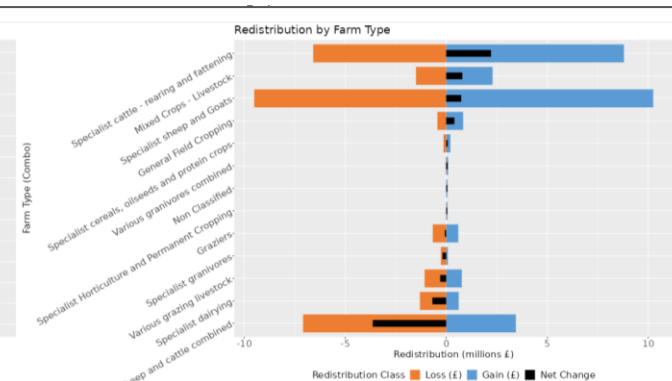
Area:  
2,824,401 ha



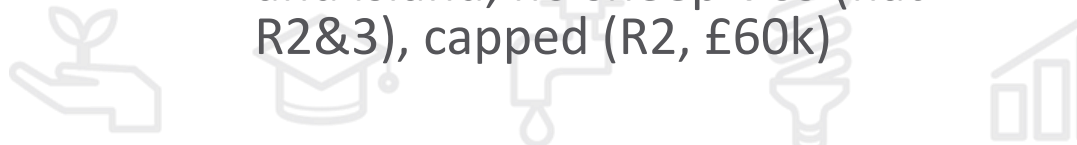
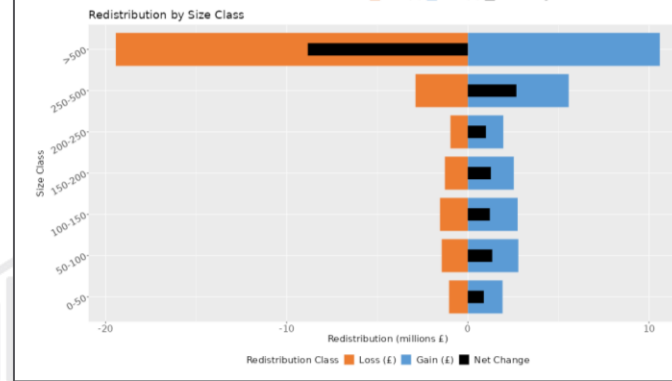
#### Sheep VCS



#### Beef Mainland VCS

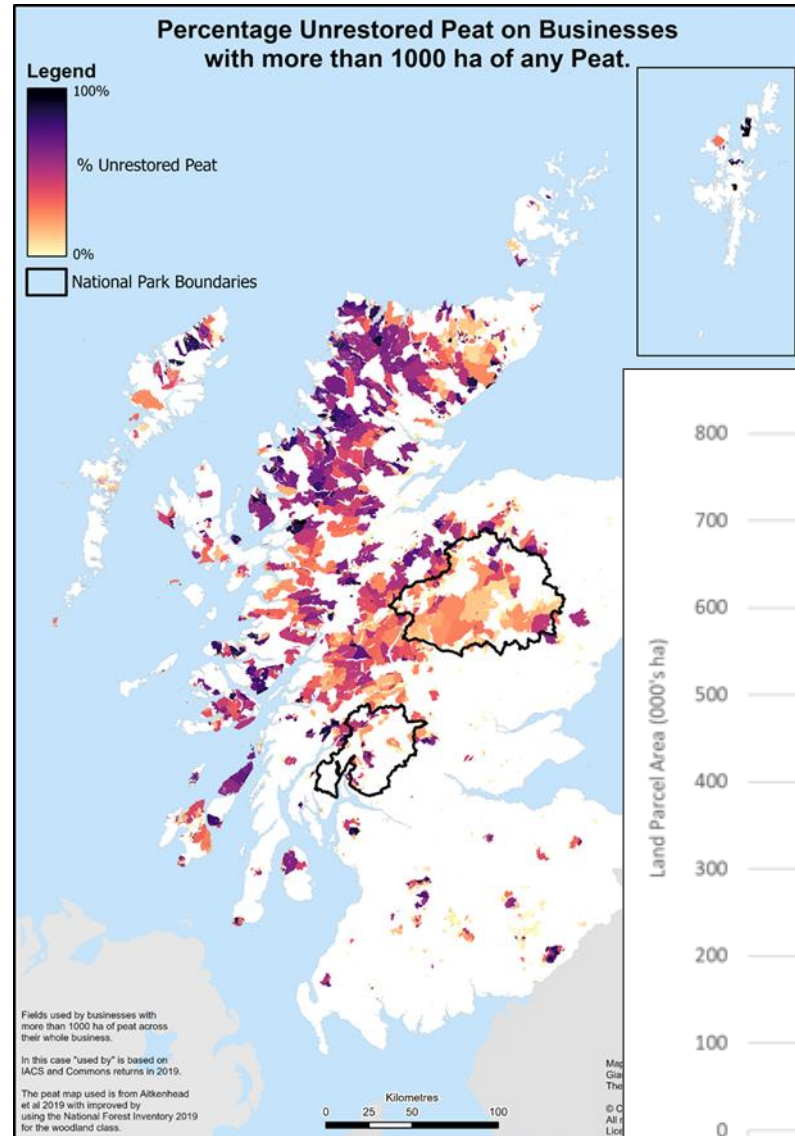


#### Beef Island VCS

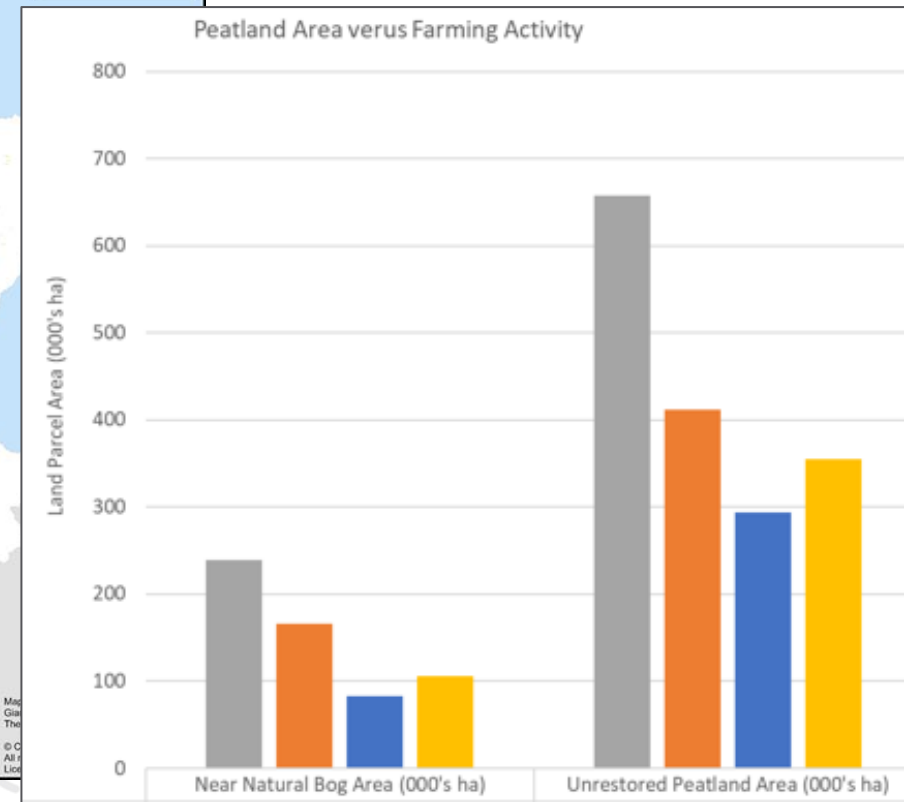


# Peatlands and Payments

- From earlier PAWSA projects
- Revised and updated
- Largest holdings
  - 321 >1,000 ha peat
- Agricultural activity
  - As declared
  - As inferred from stocking rates
- Reports – [Phase 1](#) and [Phase 2](#) and [Story Map](#)

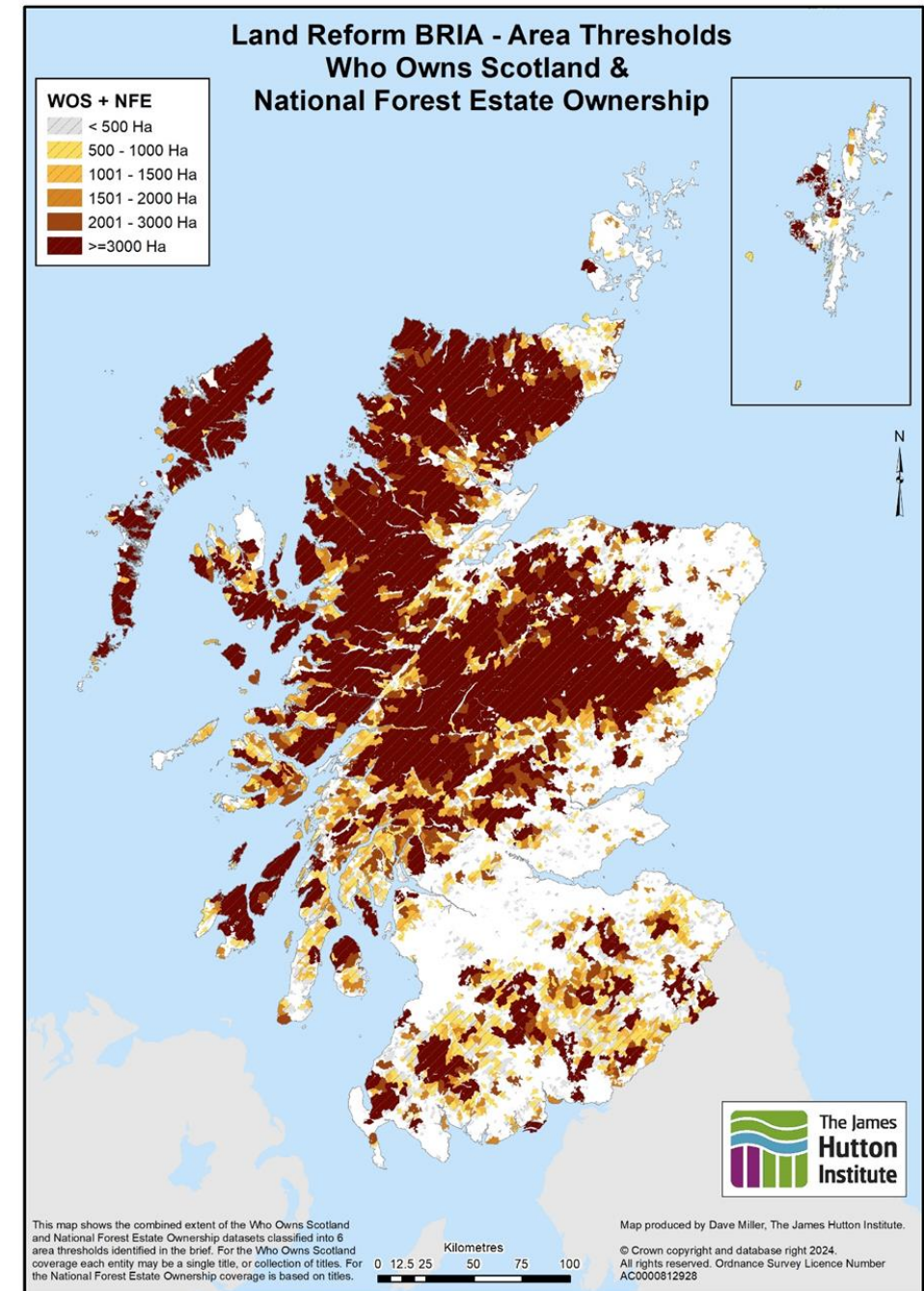


- Full Activity (95-100%)
- Uncertain Activity (5%-95%)
- No Activity (0-5%)
- Beyond SAF/LPIS



# Year 3

- Regionalisation continues
  - Implement more policy options?
  - Base and Enhanced Tiers
  - Perhaps LFASS options?
  - October 2024 – but may be extended?
- Emerging issues?
  - Large scale land holdings?
    - [Review of Land Ownership Data](#)
  - Others?





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Previous related analyses are also available from the Hutton Land Systems Research Team website - <https://ics.hutton.ac.uk/research/land-systems-research-team/>

The sets of slides and maps generated in Agriculture Policy analysis from 2010 onwards are available from - <https://ics.hutton.ac.uk/research/land-systems-research-team/cap-analysis/>

For woodland expansion analysis see - [online mapping](#) and [paper](#).

[Story Map for Land Use Transformations](#) - land use change modelling.

Further research in the RESAS Strategic Research Programme 2022-27, in the [Land Use Transformations](#) (C3-JHI-1) and [Land Reform](#) (E3-JHI-1) projects.

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