



Supporting Scotland's Land Use Transformations: Monitoring and Evaluation of QST



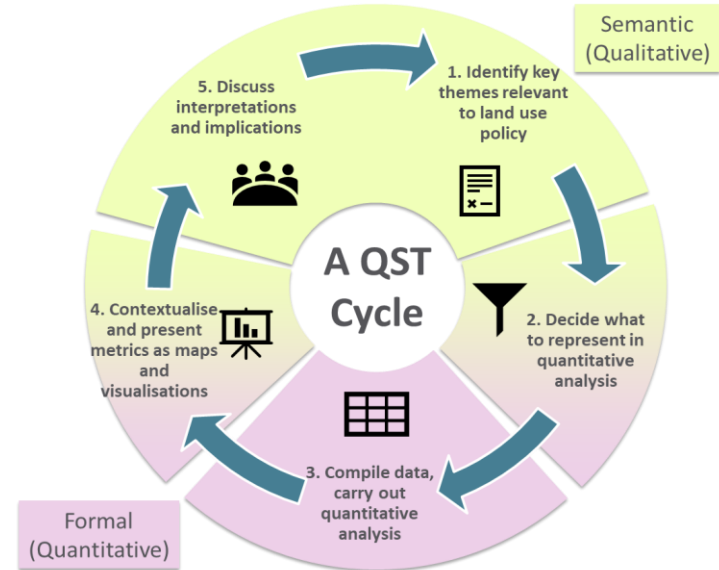
The James
Hutton
Institute

Kirsty Blackstock, Alba Juarez-Bourke, Naomi Beingessner, Hebe Nicholson, Keith Matthews
End of Year 3 meeting with Scottish Government - 25 March 2025.

To be paired with slide deck 7 on QST - regions

What is Quantitative Story Telling (QST?)

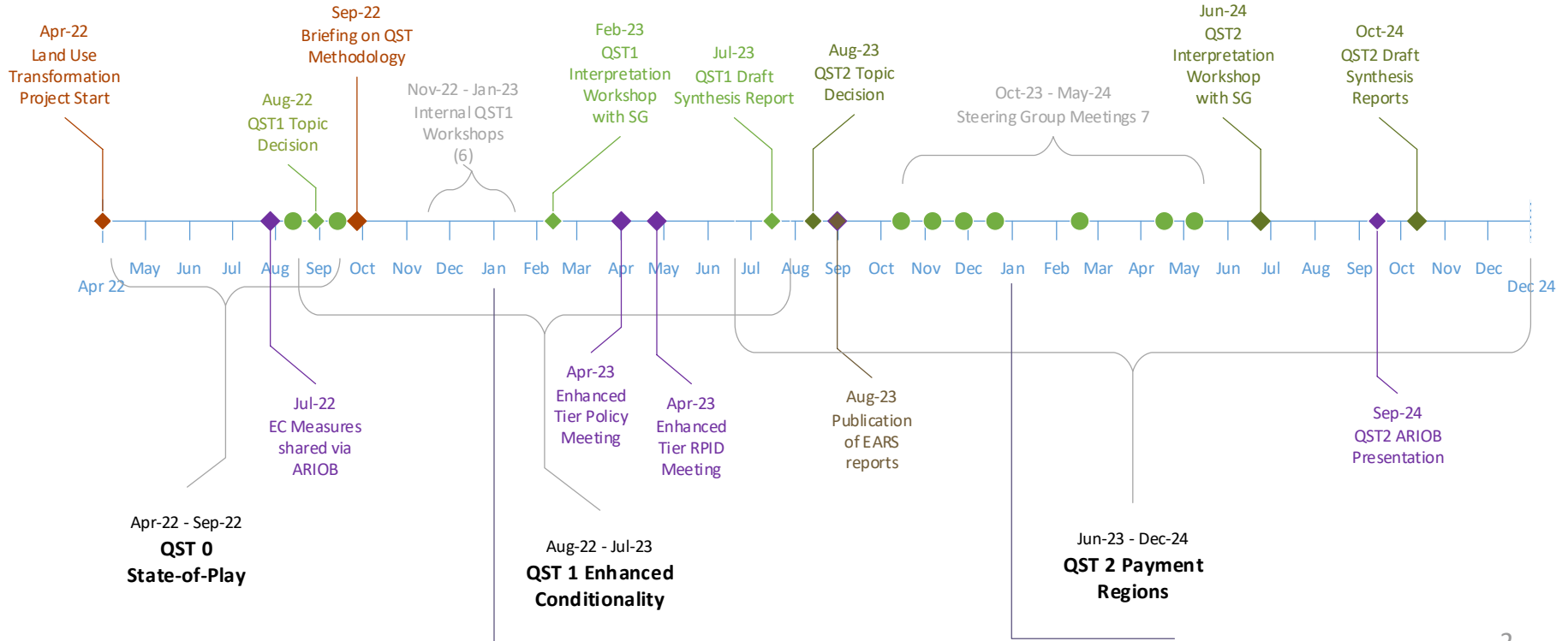
- QST is an approach to **Science-Policy interaction**. QST aims to embed SRP research into policy processes by providing tailored findings at the appropriate time to the relevant people.
- The **idealised cycle of QST** is shown to the right. Stage 1 & 5 of the cycle is about building joint understanding and Stage 3 is about generating spatial or quantitative patterns; with stages 2 & 4 making the transition between qualitative and quantitative analyses.
- To make sure that **we are using QST effectively**, we need to evaluate how it works in practice. Therefore, we monitored and evaluated two cycles of QST between August 2022 and December 2024
 - The cycles are shown in the diagram in the next slide.



[QST Briefing](#)

[Slides from end of year presentation 2024](#)

Legend: QST0 was an internal capacity building process to help the team understand the methodology. QST = Quantitative Story Telling; EC = Enhanced Conditionality; ARIOB = Agriculture Reform Implementation Oversight Board; SG = Scottish Government; RPID = Rural Payments and Inspections Division; EARS = Economic Advice for Rural Scotland



How did we monitor & evaluate QST?



The decision becomes our next baseline

- Establish start of QST (baseline of anticipated impacts and focus)
 - Collate a variety of data
 - Assign people and sites for the interactions
 - Analyse them for themes and patterns
 - Share findings for further feedback and discussion
 - Track decision whether to proceed to next cycle, and if so, to complement preceding work or switch to a new topic?
- 59 people involved in each cycle (total = 116 across both cycles)
 - 82 stakeholders and 34 researchers
 - Some more actively involved than others (e.g. only attended one meeting)
 - 21 interviews
 - 44 documents in QST1
 - 41 documents in QST2
 - Combination of meeting notes, presentation material and final reports
 - Plus 42 'external' documents
 - Documents about research and policy processes that were not strictly QST but set the context

Outcomes of QST1 reported [here](#)

Outcomes of QST2 reported [here](#)

What happened during QST? See [Report](#)

QST 1 – Enhanced Conditionality

- Stage 1: RESAS & Hutton agreed focus (Aug-Nov 22)
- Stage 2: Excel spreadsheet of measures & criteria (e.g. uptake, effectiveness)
- Stage 3: Expert workshops (Dec – Jan)
- Stage 4: slides for workshop with ScotGov policy makers (February 2023)
- Stage 5: Synthesis document & final excel reflecting feedback from ScotGov & researchers (July 2023)
- Feedback workshop to researchers (January 2024)

QST2 – Regional Payments

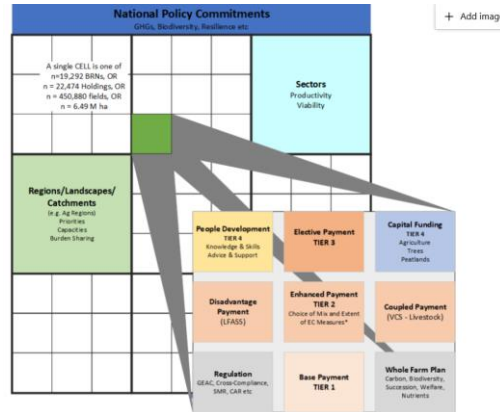
- Stage 1: RPID, RESAS & Hutton agreed specification (Aug – April 2024)
- Stage 2: choice of scenarios set by RPID, additional perspectives by Hutton, transfer and checking data
- Stage 3: built tools (dashboard and scenario generator) available to ScotGov, several iterations
- Stage 4: slides and maps for workshops with ScotGov (July 24) and ARIOB (Sept 24)
- Stage 5: Interpretation throughout, final document and materials available Dec 24

- Overall, QST2 was more responsive due to the iterations, provided more quantitative and spatially explicit information and built tools to explore and visualise complex scenarios, whereas QST1 was broader and synthesised data across more scientific domains. QST1 had more people inputting than than QST2. 4

What were the main impacts? see [Report](#)

QST 1 – Enhanced Conditionality

- Good interdisciplinary learning between researchers
- Illustrated re-use of data and breath of expertise
- Identification of gaps for policy makers to consider
- Highlighted ‘policy sudoku’



QST2 – Regional Payments

- Evidence of potential outcomes provided, for multiple criteria
- Drew attention to existing implications of regional defns
- Flexibility to revise to include adjacent policy instrument decisions (e.g. VCS, LFASS)
- Capacity for ScotGov to run own analyses but concern over mis-use of data or results

- In both cases, it is not possible to deal whether the evidence generated will influence the final decisions being taken about the content and interactions of tier 1 and tier 2 of the ARP. However, the independent evidence base was appreciated. Building and maintaining networks and capacity was also important.

What contributed to the outcomes? Report

QST 1 – Enhanced Conditionality

- Experienced and confident researchers
- Reframing material for specific policy questions - willingness to overcome uncertainty
- Building on complementary research e.g. Economic Analysis Research Support (EARS)
- Large numbers of busy researchers slowed down the synthesis process
- Final product mainly text based

QST2 – Regional Payments

- Independent analysis to complement ScotGov internal research and analysis
- Detailed spatial and quantitative finding based on strong (shared) data sets
- Levels of urgency varied, along with ability of ScotGov team to respond and direct
- Provision of tools – intended to build ScotGov capacity, but helped to ‘industrialise’ research
- Lots of iteration around key messaging

- Both cycles built on prior/complementary research and relationships. The cycles were explicitly designed to provide evidence for policy, which created momentum but also challenges when the wider ARP remains fluid. Tools and workshops helped, but credible, experienced, willing and agile team members were key to delivery.

Insights

QST appears to be a policy-responsive and flexible approach that requires considerable investment but builds networks, capacity and provides evidence.

- For Scottish Government
 - Use internal networks to involve key people at various stages – continuity beyond end of cycle
 - Workshops and policy decision points can drive analysis, but lulls allow for more open and radical ideas
 - You will need to dedicate time, energy and your expertise – you are part of the process not a traditional ‘funder’
- For Researchers
 - Think in terms of policy processes
 - Expect sprints and lulls
 - Team approach building on mix of skills
 - Long term engagement & trusted relationships essential
 - Build capacity in succinct summaries as well as analytical tools
- For evaluators (insights from doing the monitoring)
 - Makes benefits and costs of QST visible
 - Need insiders/outsider viewpoints and mixed methods
 - Takes time and energy to keep up with rapid and often tacit processes

See the [Policy Briefing](#)

Next Steps

- QST3 due to start April 25
- What should we focus upon?
- Possible topics are:
 - Other parts of ARP including other parts of Tier 1; Tier 3 and/or Tier 4
 - Climate Adaptation (slide deck #2)
 - Climate Mitigation (see #3)
 - Peatland restoration (see #4)
 - Non-Agricultural perspectives (#6)
- Paper based on first two cycles due March 26
 - Interest in a RESAS seminar?
- Should we continue to monitor and evaluate QST3?
- If yes, we will start in April
 - Baseline interviews
 - Data collection & analysis
 - Share outcomes

How do we continue to track impact of QST1 & QST2?

Contact – Kirsty Blackstock, The James Hutton Institute, Aberdeen, AB15 8QH,
Tel - +44 (0)1224 395291, Email – kirsty.blackstock@hutton.ac.uk

Staff web pages:

<https://www.hutton.ac.uk/people/kirsty-blackstock/>
<https://www.hutton.ac.uk/people/alba-juarez-bourke/>
<https://www.hutton.ac.uk/people/hebe-nicholson/>
<https://www.hutton.ac.uk/people/keith-matthews/>
<https://www.hutton.ac.uk/people/naomi-beingessner/>

Prior QST resources:

<https://landusetransformations.hutton.ac.uk/outputs/d2-briefing-qst-methodology>

H2020 MAGIC resources:

Policy briefs derived from prior QST research on water-energy-food nexus: <http://magic-nexus.eu/policy-briefs>

Post-normal science in practice: <https://www.sciencedirect.com/science/article/pii/S1462901123000163>

Implementing post-normal science with or for EU policy actors: <https://link.springer.com/article/10.1007/s11625-022-01265-1>

The James Hutton Institute is supported by the Scottish Government's Rural and Environment Science and Analytical Services Division (RESAS)