

# Policy Briefing on the Evaluation of Quantitative Storytelling - Synthesis of Lessons for the Land Use Transformations Project (JHI-C3-1)

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# 1 Introduction

The document reports on what we learnt from the two cycles of Quantitative Story Telling (QST). The objective of evaluating inter- and transdisciplinary research in WP3.4 *Scientific and Wider Societal Exploitation of Research outputs* is to improve science-for-policy practice. This briefing focuses on the lessons learnt and summarises the main messages from the longer Technical Report on the Evaluation of Quantitative Story-Telling D10.2 (Blackstock, Juarez Bourke, Matthews, Nicholson, & Beingessner, 2025), which explains the methodology and findings in more detail.

## 2 What is Quantitative Story Telling (QST)?

Quantitative Story Telling (QST) is a methodological approach designed to deepen science-policy interactions (Matthews et al., 2022). QST is used to support social learning between researchers and policy actors. It is well suited for governing complex issues, such as those involved in Land Use Transformations (involving multiple land use sectors, multiple



objectives, multiple scales). The QST approach (illustrated in Figure 1) is typically conducted in cycles combining qualitative and quantitative analyses in five stages; stages 1 and 5 qualitatively consider themes, ideas and concepts; and stage 3 addresses what are the quantitative ‘results’. Two transitional steps consider what to quantify (stage 2) and how to summarise and visualise the results (stage 4). The QST cycle recognises that issue framing and the interpretation of outputs can have a

profound influence on what is analysed (or excluded), how the data are analysed and what impact the research can have.

Figure 1: The Quantitative Story Telling Cycle

## 3 How was QST implemented in the Land Use Transformations Project?

There have been two QST cycles during the Land Use Transformation Project to date, as illustrated in Figure 2. The first cycle focussed on the development of ‘Enhanced Conditionality’ (EC) applied to up to 50% of current direct support payments, with farmers

asked to undertake measures that contribute to meeting climate change and environmental objectives. This cycle involved deliberation with a range of researchers with expertise in the proposed EC measures, to screen the measures for their feasibility, potential uptake etc, and produced a detailed technical report and associated screening tool.

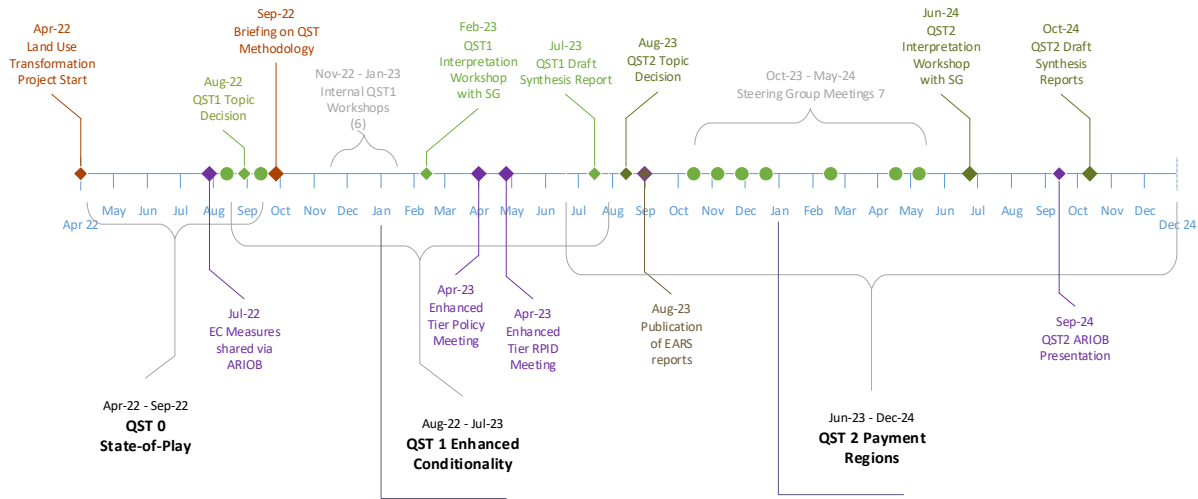


Figure 2: Timeline for the QST cycles

The second cycle undertook a policy options appraisal of the distributional outcomes of alternative payment regions, using geographical criteria to define payment rates per hectare. The cycle involved a very iterative approach working closely with three main contacts in Scottish Government, to present the current baseline situation compared to different scenarios. The cycle produced a technical report, supplementary technical guidance and several slide decks as well as two decision-support tools to allow further analysis by Scottish Government individuals. In both cases, the QST cycle was designed to provide evidence to help with the first two tiers of the Scottish Agricultural Reform Programme (ARP), which between them are likely to account for most of the overall payments.

## 4 What did we find?

The main findings show that both cycles were designed to respond to policy development and to provide evidence for use in designing policy interventions. Therefore, there were specific final or instrumental impacts being sought, but the process was also focussed on other types of impact, such as building capacity, creating or consolidating networks, and changing the way that some policy issues were being conceptualised. In both cycles, evidence was provided as planned, but it proved difficult to know (yet) if the evidence has been used in policy design or if the findings have influenced how the interventions are conceptualised. The final reports point out implications for the wider ARP and associated policy domains, going beyond evidence provision to asking wider questions about pathways for change. The data suggest that both QST cycles built capacity, but QST1 built capacity mainly on the research side, whereas QST2 built capacity for both government and research teams. Likewise QST1 focussed on building connections between a wide group of researchers and agricultural policy professionals, whereas QST2 consolidated relationships

with a few key policy makers, and provided information to a wide group of further stakeholders. Interpretative workshops to discuss draft results with different policy actors were important to maintain momentum and craft the recommendations in both cycles.

## 5 Recommendations and Reflections

### 5.1 Insights for Policy actors<sup>1</sup>

The QST experiences show that QST is most effective when there is a **clear policy development process** to influence. This means having **strong internal government networks** to keep up to date with the changing policy development context and the ability to attract the appropriate people to interpretation workshops. The long tail of QST, whereby insights from QST1 are referenced in policy meetings a year or more later, show that **continuity and institutional memory** is vital to feed results into discussions when they become relevant. Having **decision deadlines** can drive rapid progress but strains the ability to engage non-core participants whose work plans are not aligned around QST. Pauses in policy development can open space for more radical thinking. QST2, being more iterative and agile, was seen as a model for the future, but this requires a lot of **time and energy** from the government participants to review material and guide the communication (visual, written and verbal) of the results. Likewise, building tools to allow Scottish Government to do their own analyses was appreciated, but required time to understand the data and the tools to realise the investment. The QST cycles were only feasible due to **willingness to curate, check and share data** in good time. Trust in researchers to keep sensitive data and results confidential is also important, and this was built through prior and ongoing contracts as well as formal data sharing agreements.

### 5.2 Insights for Researchers

The core team involved in both QST cycles were already experienced in policy responsive research in the agricultural payments domain, yet QST created **new capacity**, particularly in terms of innovation and industrialisation of quantitative analyses in QST2. QST is a **team endeavour**, and the ability to respond with evidence and interpretation required a combination of technical, scientific and topic expertise. **Long term engagement** with the policy domain created existing capacity in terms of technical analyses, and knowledge of the policy domain allowing the PI to anticipate, as well as respond to, policy developments. Long term engagement coupled with **previous provision of useful analysis**, also created trusted relationships. QST required the flexibility to respond to the **punctuated rhythm** of feedback from government including rapid analysis when required. This can be difficult for researchers involved in other projects, with their own deadlines. Doing QST requires the ability to **think in terms of policy processes**, which are often opaque for those who do not regularly work with policy actors. Feedback from both QST1 and QST2 illustrates the importance of reducing pages of technical findings into **succinct policy relevant summaries** and to develop recommendations for both options and their potential outcomes. This challenges

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<sup>1</sup> Policy actors include Agricultural Policy units, Rural Payments and Inspections Directorate and RESAS.

conventional views of neutral scientific evidence provision and places the researchers into an **active role in policy development**.

### 5.3 Insights for Evaluators

Our Technical Report on the Evaluation of Quantitative Story-Telling (D10.2) did not focus on methodological learning; however, it is apparent that our monitoring and evaluation of the QST cycles has helped make the **benefits of QST more explicit**. Sharing the evaluation results helped peripheral participants to 'close the QST cycle' when they were not present in the stage 5 interpretation workshops. It was useful to have evaluation interviews to help interpret the data from the meetings and workshops, which can be hard to understand if one is not working in the policy domain. Therefore, it worked well to have an evaluation team that combined those who were involved in the QST cycle; and those who were not involved and could bring fresh perspectives. The volume of participants and data sources to track, manage, code and analyse showed that monitoring and evaluation is a **non-trivial task and needs resources**.

### 5.4 Take Home Message

QST seems to be a successful way to undertake policy-responsive, flexible and impactful research but it requires considerable effort from researchers, advisers, analysts and policy makers. The ongoing Strategic Research Programme funding has allowed the research team to build expertise, make connections and innovate their tools over time. However, success is also serendipitous, affected by the skills, interests and attitudes of the core participants from research and government, and their willingness to improvise and take risks.

## 6 Next Steps

QST3 is due to start in April 2025. The insights from these two cycles will be used to design and implement this cycle. Depending on interest and perceived utility of the monitoring and evaluation of the QST process, the next phase of data collection for QST3 will start. The research has fed into other aspects of land use transformations research, e.g. on policy cohesion and these will also inform the next QST cycle. The insights will also be shared with RESAS to consider when designing the next Strategic Research Programme. Finally, there is a commitment to an academic output (D12) due March 2026.

## 7 References:

- Blackstock, K., Juarez Bourke, A., Matthews, K. B., Nicholson, H., & Beingessner, N. (2025). *Technical Report on the Evaluation of Quantitative story-telling methods. Synthesis of Lessons for QST Project Deliverable D10.2*. Retrieved from <https://landusetransformations.hutton.ac.uk/outputs/d102-technical-report-evaluation-quantitative-storytelling>
- Matthews, K. B., Waylen, K., Blackstock, K., Aitkenhead, M. J., Castellazzi, M., & Miller, D. (2022). *Briefing on Quantitative Story Telling for the Land Use Transformations Project (JHI-C3-1)*. Retrieved from <https://landusetransformations.hutton.ac.uk/outputs/d2-briefing-qst-methodology>