CHAPTER

Case studies

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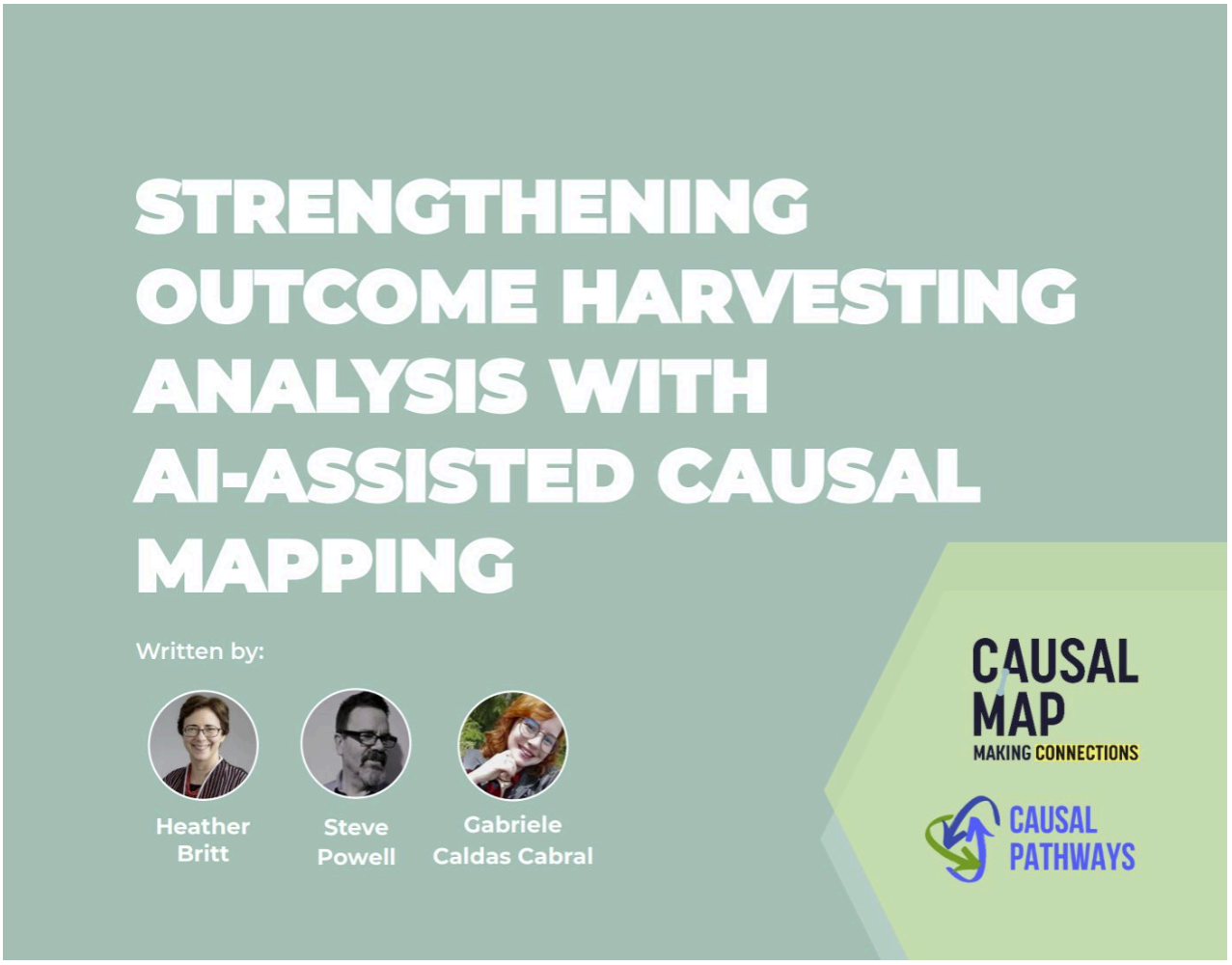
Intro

Here are some examples of work with `Causal Map` and causal mapping, and also with Qualia interviews.

Strengthening OH with causal mapping



Here is version of the final text.

Strengthening Outcome Harvesting Analysis with AI-Assisted Causal Mapping - shortened full version

Written by: Heather Britt, Steve Powell, Gabriele Caldas Cabral

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Summary

This case study explores how AI-assisted causal mapping can enhance Outcome Harvesting (OH) analysis by revealing interrelationships between outcomes and identifying new actors contributing to change. The pilot demonstrates how this approach provides actionable insights

and strengthens causal relationship analysis in OH. It emphasizes the importance of a principle-led analysis plan and human expertise in guiding the AI process.

Introduction

Outcome Harvesting is a powerful approach for discovering emergent changes—whether predicted or unpredicted, positive or negative—and documenting how those changes occurred. While many methods capture changes in those directly involved with a project, OH captures changes farther down the causal pathway.

However, evaluators often struggle to explore interrelationships between multiple outcomes. This case study describes how an OH practitioner (Heather Britt) collaborated with causal mapping practitioners (Steve Powell and Gabriele Caldas) to expand causal contribution analysis in OH using an AI-assisted causal mapping app. They analyzed OH data from a completed education project.

Outcome Harvesting: Analysis Limitations

While OH documents causal pathways contributing to individual outcomes well, evaluators find it difficult to make sense of interrelationships between multiple outcomes and their causal pathways. This limits their ability to answer questions about causal contribution.

Current OH practice often uses descriptive statistics to summarize data by outcome components (e.g., types of change agents or social actors) and reports findings in charts. Another approach arranges outcomes on a timeline to determine logical relationships.

Our pilot explores whether AI-assisted causal mapping can address these limitations by analyzing causal relationships between outcomes.

The Pilot

Core Question

Can AI-assisted causal mapping address the limitations of OH analysis?

Heather Britt reached out to Steve Powell and Gabriele Caldas to explore whether causal mapping with the Causal Map app could enhance OH analysis.

Causal mapping techniques, developed over 50 years ago, have been used across disciplines to identify and visually represent causal relationships in qualitative data. The Causal Map app computerizes this technique, allowing efficient coding, analysis, and visualization of information from multiple sources (interviews, reports, surveys, narratives), either manually or with AI assistance.

The AI-assisted capacities of the app were critical for revealing interrelationships between multiple outcomes.

Pilot Data Set

The pilot used data from the final evaluation of an education project (Girls Education project, 2016–2021) disrupted by political turmoil and COVID-19. The project adapted activities during lockdown, and OH was used to capture outcomes in five domains where the theory of change was no longer valid.

The evaluation team interviewed 49 change agents and drafted 103 outcome descriptions across five domains. The pilot data included both interview transcripts and outcome descriptions.

For the pilot, the domain **Increased community support for education** was selected, with 13 outcome descriptions analyzed.

Analysis Process

Step 1: Draft a Principle-Led Analysis Plan

Three guiding principles steered analysis decisions:

1. **Prioritize local leadership:** Use AI while keeping sensemaking and learning in the hands of local evaluators.
2. **Protect OH integrity:** Adapt methods as needed while staying true to OH principles, including “Less is more” (avoid collecting more data than can be analyzed).
3. **Produce accurate, actionable maps:** Human judgment is required to error-check data and interpret maps.

Step 2: Segment Data by Outcome Domain

Segmenting data by domain increases the likelihood of finding coherent causal pathways and facilitates error-checking. The pilot focused on one domain to analyze causal relationships between outcomes.

Step 3: Decide When to Apply AI-Assisted Causal Mapping

The pilot compared applying causal mapping to interview transcripts versus outcome descriptions. Outcome descriptions, crafted by local evaluators, were more accurate and required less error-checking than transcripts. Thus, mapping outcome descriptions was preferred to preserve local leadership and OH integrity.

Findings from Causal Maps

Relationships Between Outcomes

The AI identified causal links between the 13 outcome descriptions, revealing that outcomes influenced one another. For example, parents actively supporting home learning and leaders convincing parents to participate were central factors.

Factors Contributing to Domain-Level Outcome

Mapping revealed additional actors influencing the domain-level outcome “Community supports learning,” including unexpected contributors like Ministry officials.

Conclusion

AI-assisted causal mapping advanced OH analysis beyond descriptive statistics by:

- Analyzing multiple outcomes to determine causal contributions.
- Revealing interrelationships between causal pathways.
- Confirming known change agents and identifying unexpected influences.
- Showing how domain-level changes contribute to broader changes.

Causal mapping offers rich, flexible analysis that can be explored in multiple ways to answer diverse evaluation questions.

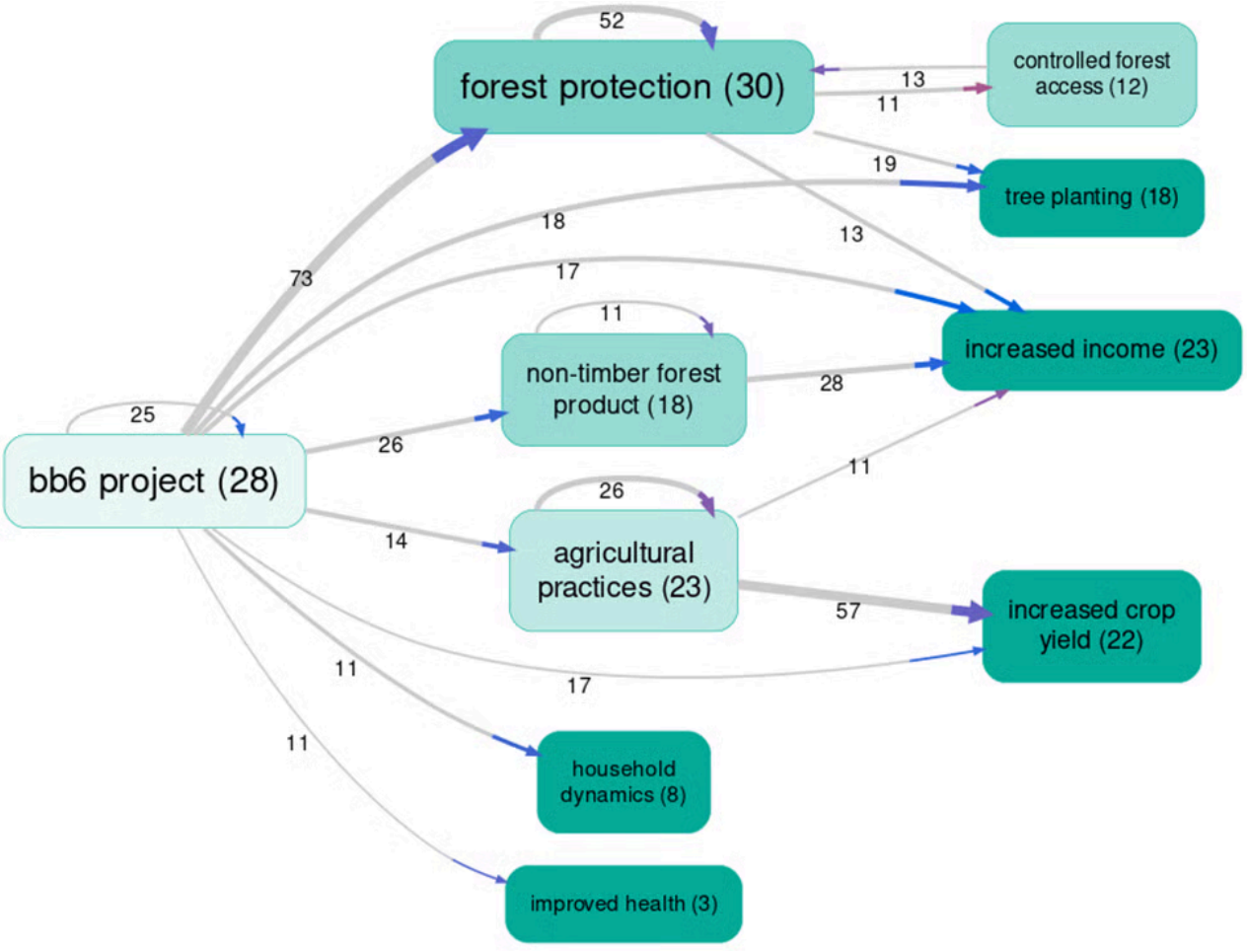
Tree Aid - Empowering Communities Through Forest Management in Burkina Faso

11/12/2025

Summary

Background: Causal Map partnered with Tree Aid to evaluate their Local Governance of Forest Resources (WEOOG PAANI) project in Burkina Faso. We used QuIP to collect the data and AI-assisted causal mapping to assess the project's impact on forest governance, household and food consumption amongst project beneficiaries in two communes.

Findings: The study revealed how integrating forest management with economic empowerment and sustainable agricultural practices, has contributed to community-driven environmental conservation. And it also demonstrated how combining qualitative research with analysis tools (Causal Map app) can provide insights into community development projects.



The partner

Between February and August 2024, Causal Map has worked with Tree Aid to conduct a comprehensive evaluation of their BB6 project in Burkina Faso, focusing on 2 communes (Toécé and Gomponsom). Tree Aid is an international NGO dedicated to protecting dryland forests and supporting communities in the African drylands.

The challenge

The WEOOG PAANI project (known as BB6) aimed to improve forest governance, household incomes, and food consumption across two communes, Toécé and Gomponsom. Tree Aid needed to understand the project's complex impact pathways, specifically, how integrating forest management with economic empowerment influenced community-driven conservation.

They faced the challenge of synthesising diverse qualitative narratives to answer specific research questions, such as:

- How do impact pathways differ between the two communes?
- What is the specific impact of the intervention on women's lives?
- Why is the project directly related to increased crop yield?
- Are there unexpected outcomes?

The Causal Map solution

Causal Map provided extensive support throughout the evaluation process:

Our approach

Training

To be able to conduct quality Qualitative Impact Protocol (QuIP) interviews, training sessions were held with the evaluation team:

1. **QuIP Lead Evaluator:** the main researchers participated in the training held by Bath SDR to learn how to design and manage a QuIP study.
2. **Causal Mapping training:** A 2-day immersive training in Bristol focused on understanding causal mapping, developing interviewing skills, and preparing research deliverables.
3. **Field researchers training:** Causal Map prepared the training script. Tree Aid staff who completed the first two trainings then trained the field research team in Burkina Faso, applying concepts and techniques from the previous sessions.
4. **Causal Map app training:** After data analysis, Causal Map introduced Tree Aid analysts to use the Causal Map app, enabling deeper dives into the data.

Research Design and Data collection

We helped the Tree Aid team to develop the research design, including the research questions and the interview guides.

During the data collection phase, we provided ongoing support and feedback to the Field Researchers team. This ensured:

- Consistency in interview techniques
- Adherence to QuIP methodology
- Quality and depth of collected data
- Timely addressing of any challenges encountered in the field

Analysis

The evaluation employed the QuIP methodology, which involved:

- 31 interviews, including household interviews, focus group discussions, and key informant interviews;
- Causal mapping analysis using AI-assisted coding in the Causal Map App;
- Examination of outcomes across four domains: food consumption, income, forest management, and household dynamics.

Results

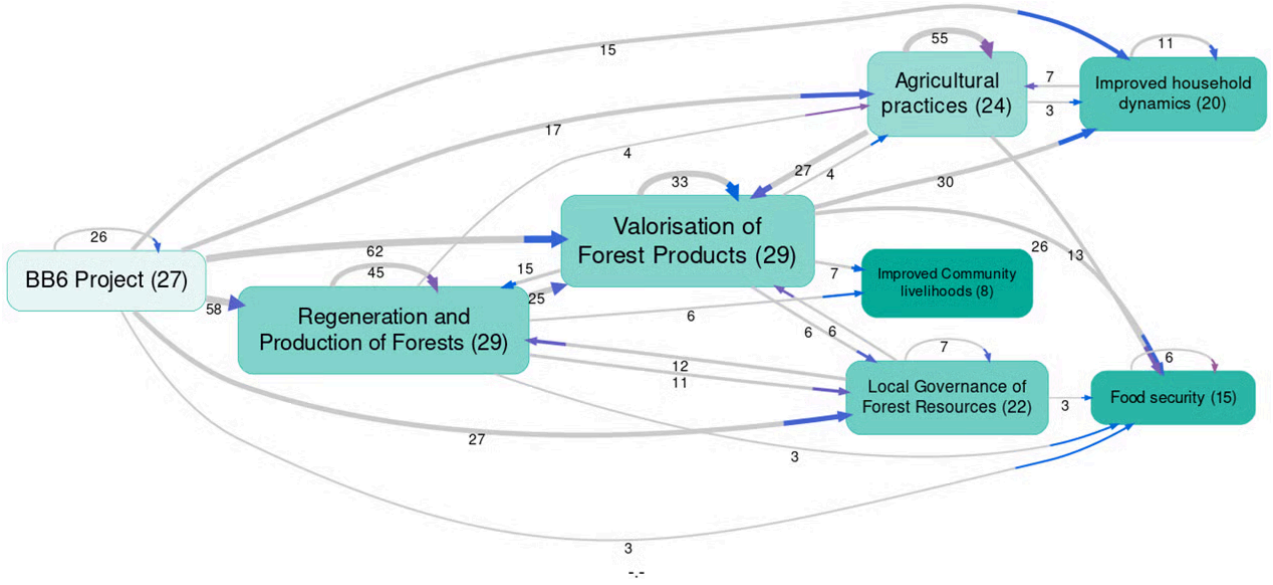
Using the Causal Map app we were able to find 1288 causal claims (links) made by the respondents and we also autocoded the sentiment of each link in order to show which contributions were "positive" (blue lines) and which were "negative" (red lines).

Through the different filters in the app, many maps and tables were created to support the quantitative data collected by Tree Aid, including:

- **Comparing** maps by commune
- **Splitting** and comparing data by type of interview and domain
- **Focusing** on specific themes, such as ‘Impact on women’s lives’
- **Unpacking** unexpected outcomes and **answering** research questions, i.e. ‘Why BB6 project is directly related to increased crop yield?’

The evidence strongly suggests that Tree Aid BB6 project has demonstrated significant **positive impacts** on the communities in Toécé and Gomponsom. By integrating forest management with economic empowerment and sustainable agricultural practices, the project has created a model for community-driven environmental conservation. The strengthened local governance structures and improved household dynamics suggest that these positive changes may be sustainable in the long term.

Using the [“soft recoding”] feature in the Causal Map app allowed us to create maps showing different perspectives of stakeholders' stories. This innovative approach enabled us to compare narratives against the project’s Theory of Change and verify the project's impacts across various domains.



Using AI to facilitate feedback on the learning experiences of doctoral students

Gabriele Cabral, Causal Map Ltd James Copestake, University of Bath Steve Powell, Causal Map Ltd

Summary

The Causal Map team has conducted a trial of an innovative approach to securing feedback from students using online open-ended interviews conducted by the app QualiaInterviews, which uses generative AI (gen-AI), followed by a second use of gen-AI within the app **Causal Map** to semi-automate causal coding of the narrative transcripts thereby generated. The trial was conducted with students registered on the doctorate in policy research and practice (DPRP) at the **University of Bath.**

The pilot

We report on the trial of an innovative approach to securing feedback from students using online open-ended interviews conducted by the app Qualia, which uses generative AI (gen-AI), followed by a second use of gen-AI within the app Causal Map to semi-automate causal coding of the narrative transcripts thereby generated. The trial was conducted with students registered on the doctorate in policy research and practice (DPRP) at the University of Bath, a part-time programme for mid-career policy professionals. This generated credible evidence of diverse positive and negative drivers of learning from eleven students. The trial suggests that incorporation of gen-AI into causal mapping of narrative data about students' study experiences enhances the potential to use the method cost-effectively on a larger scale, whether alongside or instead of more traditional approaches to eliciting student feedback on teaching and learning.

Key words: *AI; Causal mapping; Doctoral studies; Generative AI; Qualitative data analysis, Student evaluation*

See a summarised report in this presentation

See our findings in this paper

