

From a clean slate to multiple options – eliciting user needs for climate information in Malawi

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Introduction

Identifying user needs is a prerequisite to be able to produce timely, tailored and targeted climate information. However, so far little attention has been paid to the process of how best to elicit and define those needs. We reflect on the evolution of approach taken in Malawi within the UMFULA project, where the aim is to generate climate information to inform medium-term (5-40 year) planning and decision-making around the water-energy-food nexus.

Method 1: Clean slate approach

Rationale: To avoid science/availability of information-bias.

Approach: User interviews to determine decision-making contexts, followed by workshop role playing of a parallel case study example with a selection of planning decisions across different timescales.

Finding: When applied to their own contexts, the resolution of potential needs was too general.

Challenge of the clean slate approach

Poor resolution of needs: for example the clean slate approach identified interest in the increased occurrence of extreme events – but would not define the critical threshold for such events.



Turning the clean slate approach on its head – multiple options

The climate metrics survey contains 31 potential options (plus space for additions) and requests priorities. It is being conducted

| Factor |
|--|
| Probability of the rainy season being shorter in duration (and total rainfall declining) |
| Probability (and timing?) of dry spells within the rainy season – duration, severity, frequency of x threshold |
| Monthly rainfall totals |
| Number of days with heavy rainfall (over x mm per day) |
| Annual maximum rainfall amounts for various durations (1, 6, 12, 24, 48, 72 hours) |
| Maximum average intensities of extreme rainfall |
| Maximum consecutive dry days per season |
| Probability of temperatures exceeding x degrees – overall (in a season?) |
| Probability of daytime temperatures exceeding x degrees |
| Probability of daytime temperatures exceeding x degrees for y days in a row |
| Probability of night-time temperatures exceeding x |

with decision-makers in the agriculture and water sectors.

Method 2: Multiple options

Rationale: To increase resolution of information needs.

Approach: Multiple options informed by priorities and critical thresholds in the water and agriculture sectors. Metric options include those that currently exist, are possible to develop, or are impossible/may never exist (but could inform proxies).

Finding: Investigating perceived utility and priorities is providing insights into specific parameters of useful climate information to inform planning.

Conclusion

Our experiences of eliciting user needs highlight the importance of providing a meaningful context. This allows users to express their requirements and gauge the relevance of potential climate information. In turn this can inform development of effective climate services for planning.

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