

Resilience Web Tool: Engaging Community Partners to Humanize Data for Use in Local Resilience Planning in Idaho

The poster showcases a resilience building project in Idaho, funded by FEMA Risk MAP Program. We co-developed a web tool with Valley County (Idaho) community partners to foster more informed resilience planning. This study is as an example of how to effectively engage community partners in co-developing user centered tools for resiliency planning in rural communities.

MOTIVATION

Advancements in technology and software have made hazard data increasingly available. However, officials in rural communities with limited resources often face challenges in interpreting and applying this information to assess vulnerabilities and plan future development, especially when the data is not paired with social and infrastructure data. Even though many counties and states have web tools to help with their risk management, resilience planning and decision making, they lack a proper framework regarding how to effectively involve the community partners in developing these tools.



GOALS

- Create a user-centered web tool consolidating hazard, social vulnerability, and critical infrastructure data for local officials' decision-making and resilience planning.
- Evaluate the community partners engagement process in co-developing the web tool.

RESEARCH QUESTION

- RQ 1. To what extent does our engagement process align with and support the five feature framework for stakeholder engagement? (Talley et al. 2016)
- RQ 2. To what extent are the community partners satisfied with their experience participating in the co development of the web tool?

STUDY AREA

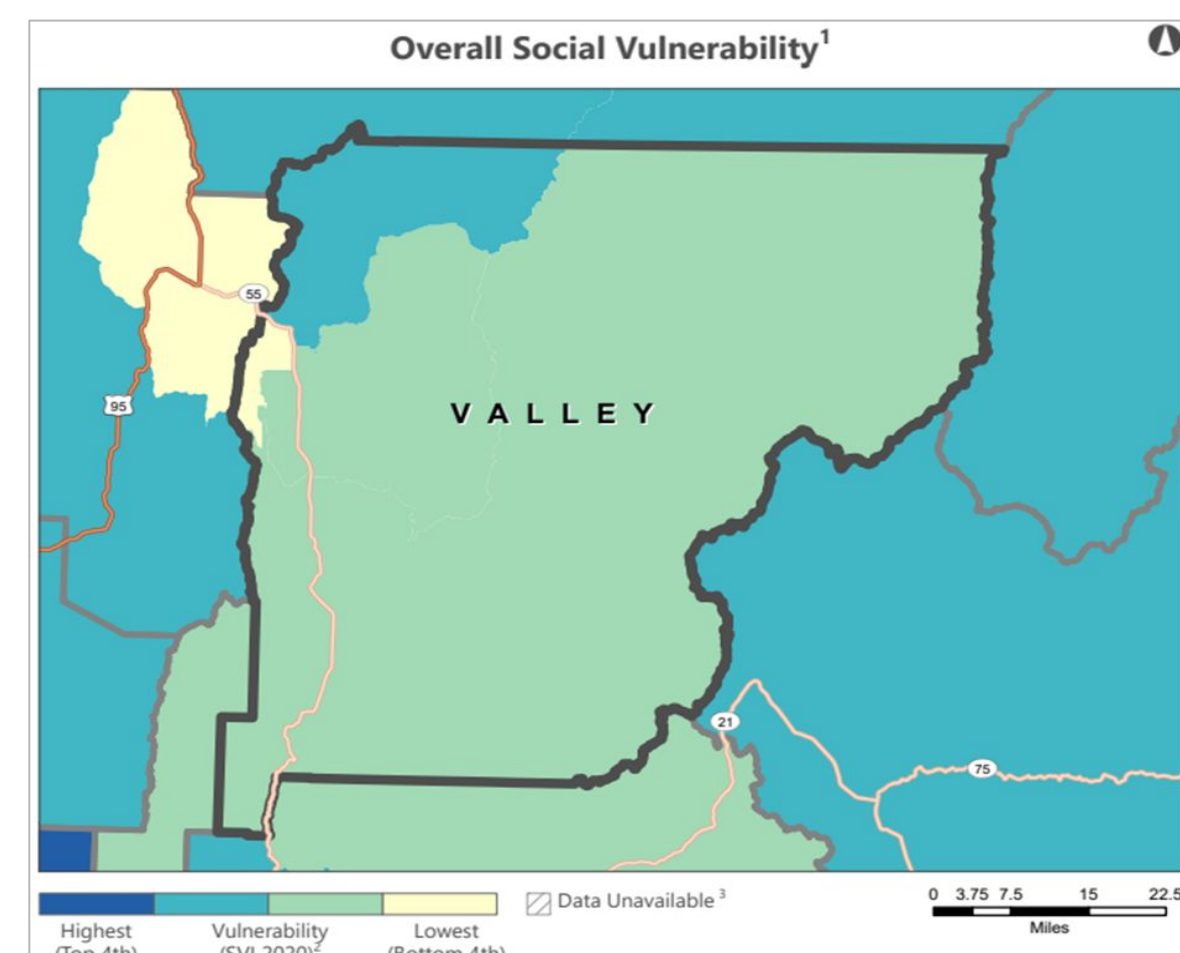


Fig 1. Social Vulnerability of Valley County, Idaho (CDC Social Vulnerability Index)

Why Valley County?

- Multiple hazards
- Fast changing land use
- Limited technological resources for planning for these quickly changing circumstances
- Increasing social vulnerability

Who are our community partners?

- Valley County Office of Emergency Management
- Cascade City Government
- Valley County Local Emergency Planning Committee
- City of McCall Planning and Zoning
- Central District Health
- County Commissioners



METHODS FOR RQ 1

Developing the tool

Needs assessment and relationship development with the community partners: Through online listening sessions

Introducing the project to community partners: Through in person focus group discussion

User-design testing:

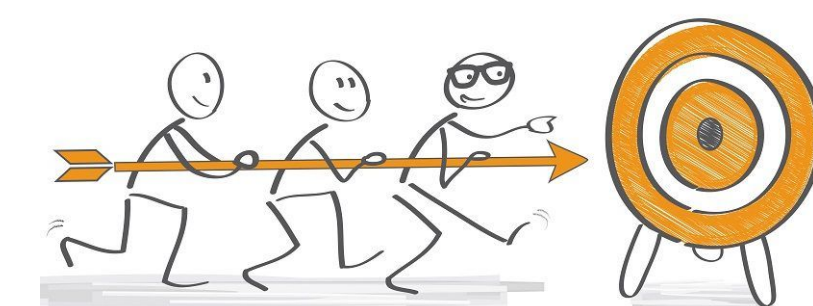
- Selection of Web Tool features: Through focus group discussion with community partners
- Selection of Datasets: Through one on one meeting with community partners

Web tool development (In progress):

- Platform: ArcGIS Experience Builder
- Current Status: Beta Version testing, Workshop organized to test the tool with Community partners

How does the engagement process of this study align with the Five Feature Framework

Feature 1: Set clear objectives



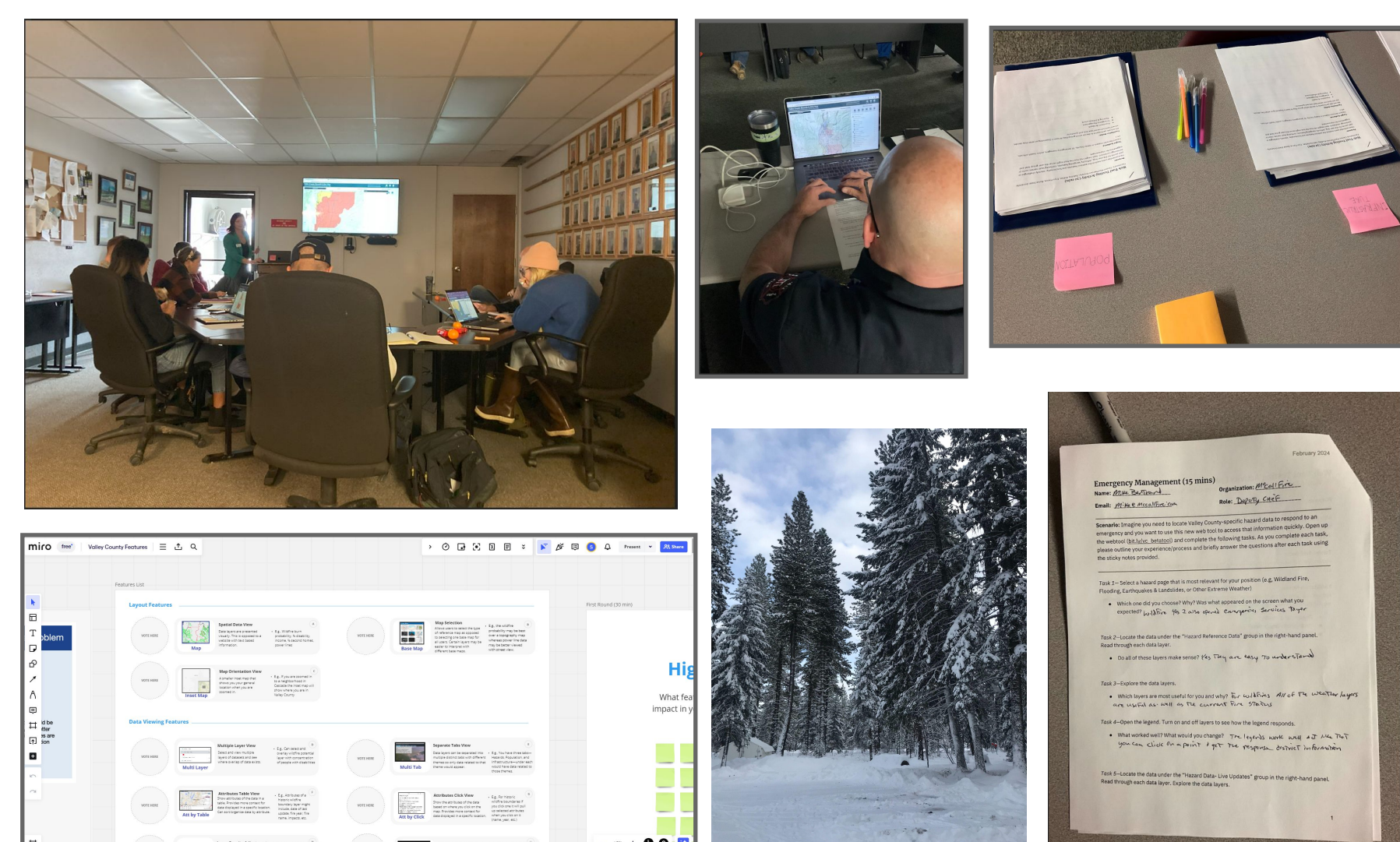
Objective of Engaging community partners

- To integrate their knowledge
- To involve them in decision making

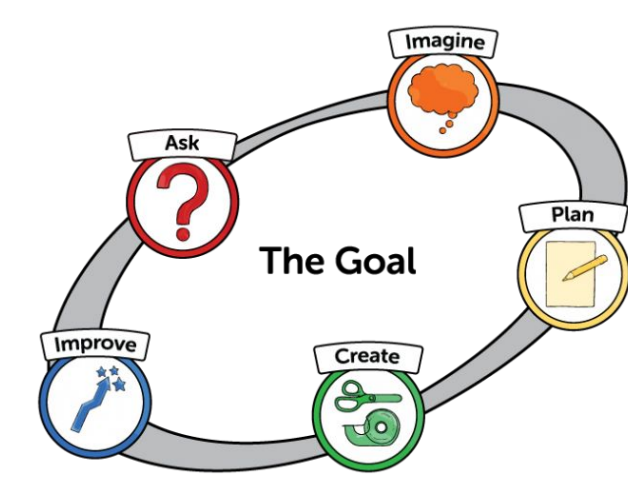
Objective of the project

- To create a user centered web tool for community resilience planning using existing data sets to help emergency managers in planning and decision making

Feature 3: Use relevant methodologies



Feature 5: Reflect on processes and outcomes



Based on the team's observation and self reflection, some changes were made in the engagement process.

What is the Five Feature Framework (5FF) for Stakeholder Engagement?

- Based on Reed's theoretical framework, provides a decisive guide for how best to effectively engage stakeholders in natural resource management (Reed 2008)
- A simplified Stakeholder Engagement framework with five main principles for planning stakeholder engagement (Talley et al. 2016)



Feature 2: Systematically represent stakeholders

- Selecting community partners based on their expertise in Valley County as decision makers and risk managers
- Developing relationships
- Forming themed groups based on suggestions from key community partners



Feature 4: Create opportunities for co-ownership



- Organizing focus groups to prioritize the web tool features
- Reviewing list of datasets with community partners
- Organizing workshop to get feedback on the Beta version of the tool
- Preparing a long term update plan for the tool

Feature	Experience Builder Weight	Description	Priority	Implemented/Feasibility (Y/N/No)
Multiple Layer View	Feature 3/30%	Select and view multiple layers of datasets and use when needed for data sets.	1	Yes
Download Key Area	Dist. 2/10%	Are there specific areas you want to look at? This feature will allow you to download a single or multiple datasets.	1	Yes
Visual Data View	Map 1/10%	Visualize your data in a map view. This feature will allow you to visualize your data in a map view.	2	Yes

METHODS FOR RQ 2

Evaluating the satisfaction of the Community partners with the engagement process

- The extent to which we addressed the community needs
- How well participants perceive that we facilitated meetings
- The time participants spent on this project
- The extent to which participants feel we incorporated their feedback

METHODS FOR RQ 2



Interviewing the community partners using a structured questionnaire, based on:

- Demographic questions
- Question related to the 5FF

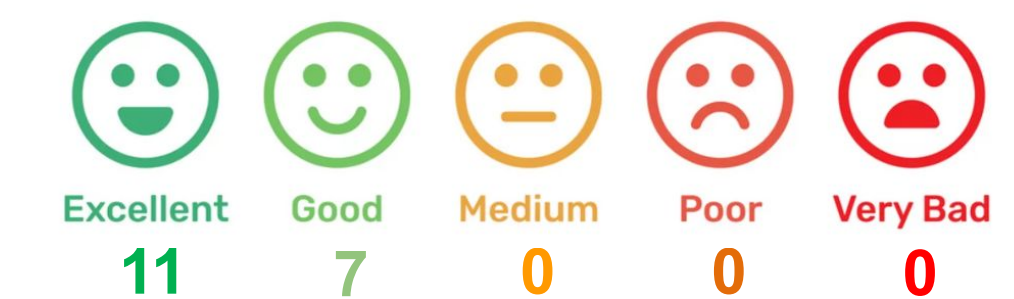


RESULTS

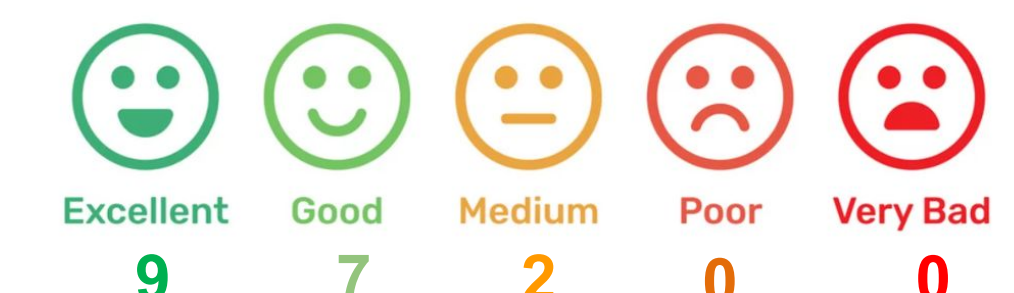
Preliminary Results

Feedback from the community partners on the beta version of the web tool (Total 18 community partners attended the workshop)

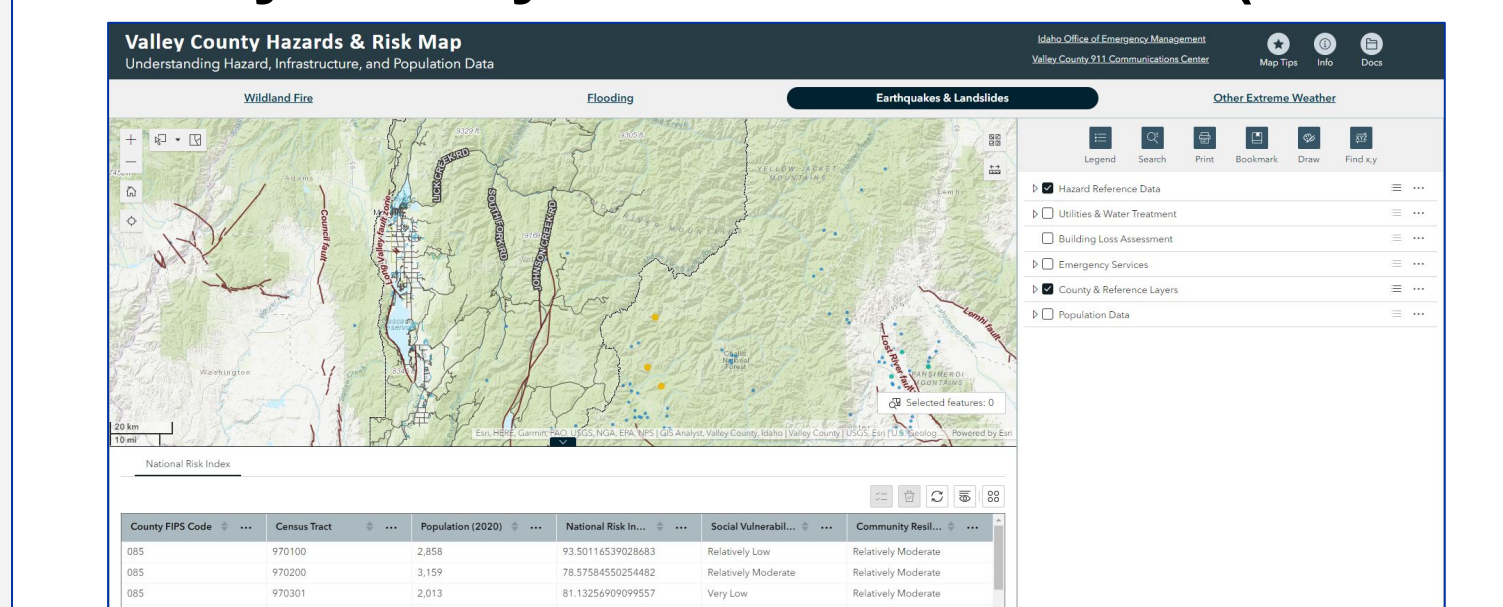
Community Overall Rating of the Tool



Community Ratings of Tool Usability



Valley County Risk MAP Web Tool (Beta Version)



Scan for Web Tool Beta version

Fig 2. Screen Capture of the Valley County Risk MAP Webtool Beta Version

More feedback on the beta version of the tool

- Create a short demo video on how to use the tool
 - Make a list of the acronyms and their definition
 - Make a list of the data inventory for the tool
 - Create a private version of the tool
- ### NEXT STEPS
- Finalize the web tool based on the feedback
 - Promote the tool with the community
 - Collect data from community partners to evaluate their satisfaction with the engagement process

References

Reed, M. S. (2008). Stakeholder participation for environmental management: a literature review. *Biological conservation*, 141(10), 2417-2431.

Talley, J. L., Schneider, J., & Lindquist, E. (2016). A simplified approach to stakeholder engagement in natural resource management: the Five-Feature Framework. *Ecology and Society*, 21(4)

Valley County GIS Portal

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