

Integrating Social Science for Adaptive Management in CBP

Lisa Wainger, Daniel Read & Erika Blair

University of Maryland
Center for Environmental Science
Chesapeake Biological Laboratory

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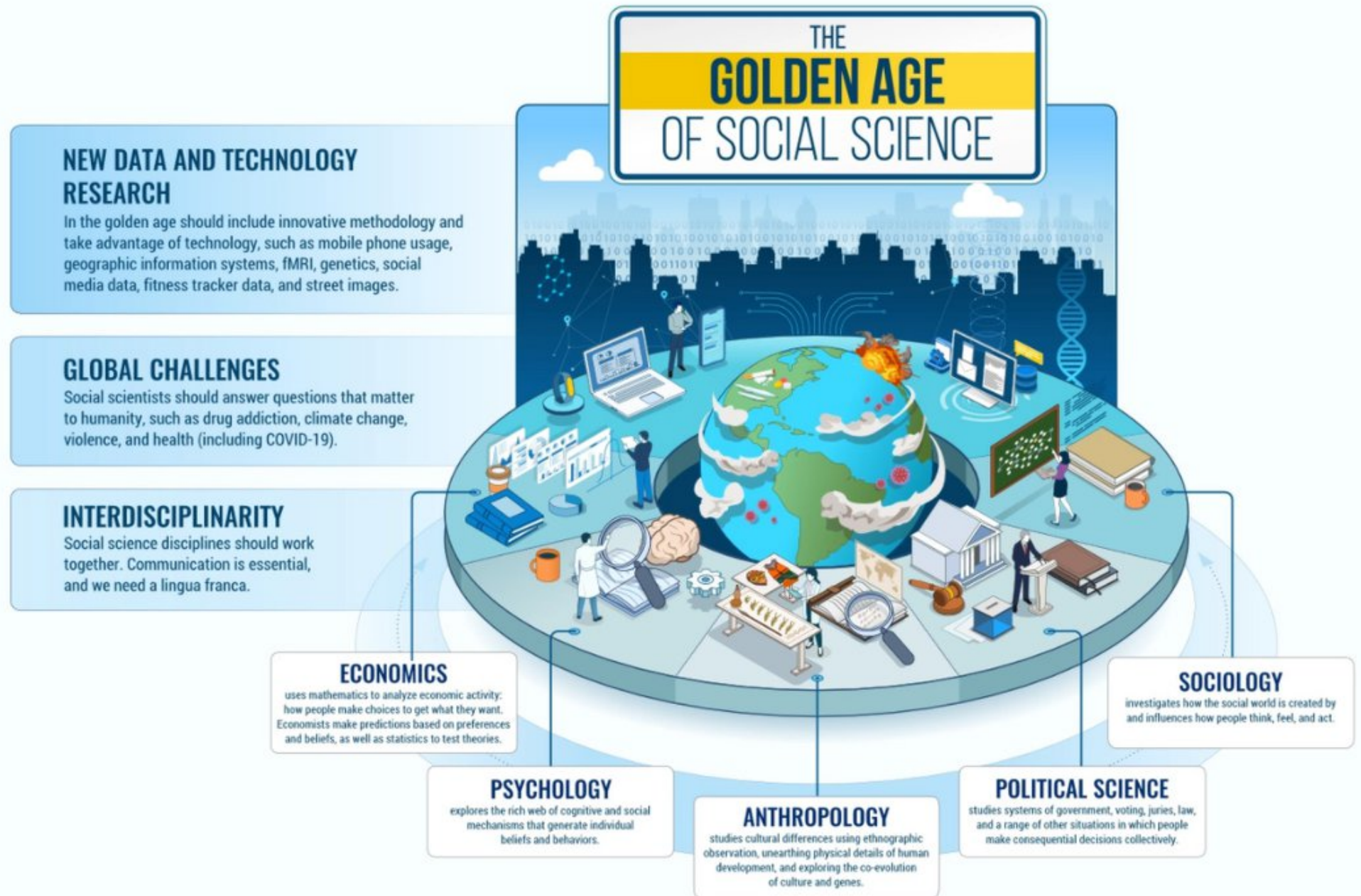
Project Managers: Amy Handen
Kacey Wetzel



Credit: Camerer Group/99designs (Manuel Noriega)



Why integrate social science?



Credit: Camerer Group/99designs (Manuel Noriega) & CalTech

Project Goals

Evaluate use of and attitudes towards social science application in CBP

Increase understanding of social science theories, applications, and the evidence of effectiveness

Advance a dialogue about strategies to enhance social science capacity for adaptive management

Project Timeline & Methods

- Literature reviews
- Questionnaire design

June-Nov '21

Dec '21 – Feb '22

- Questionnaire
- Interviews

- Analysis
- Write-up

Mar-July '22

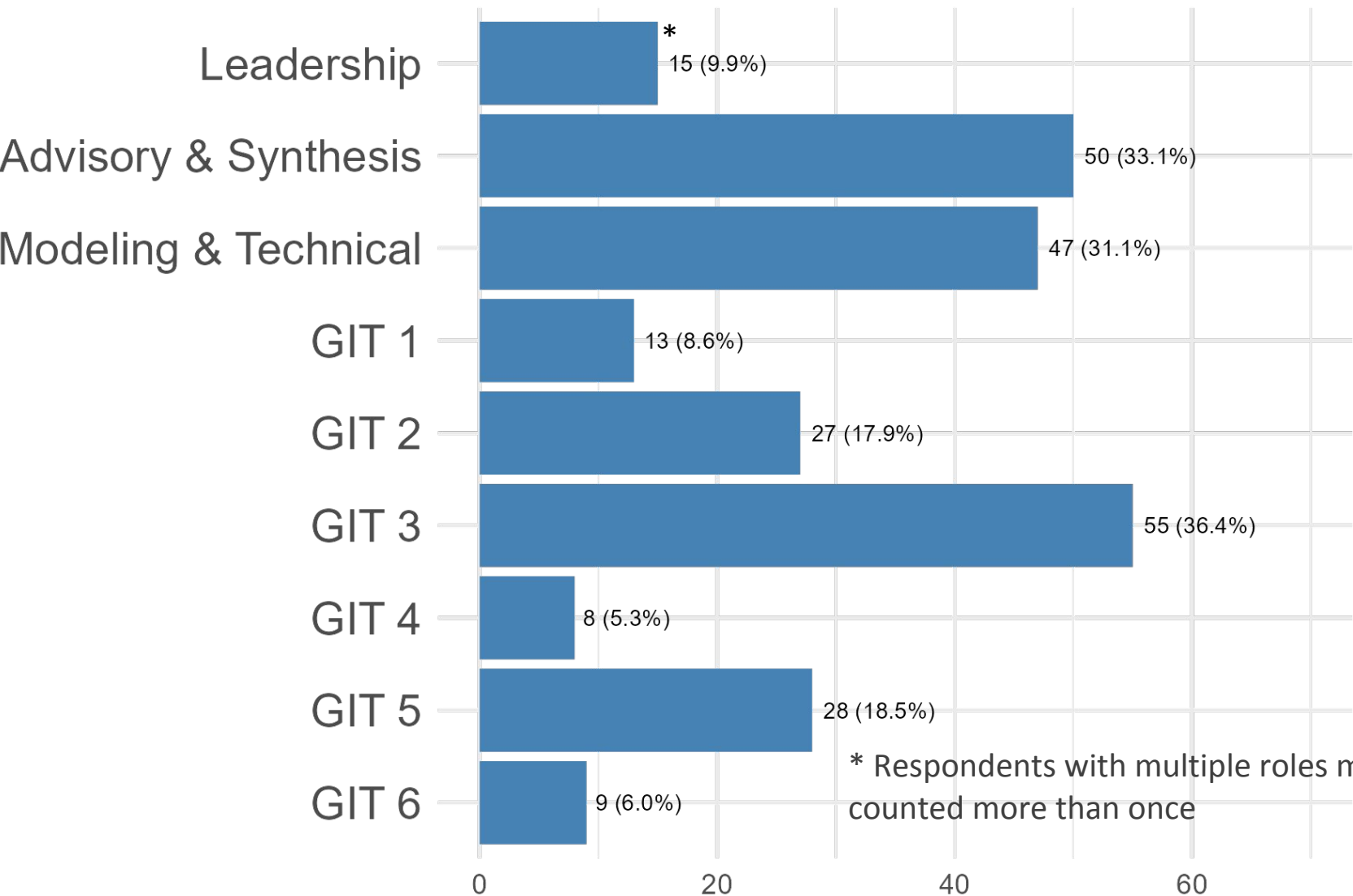
- Presentations
- Finalize

Aug '22-Jan '23

Questionnaire and Interview Representation

151 respondents (10% response rate)

30 interviews



- 20 self-selected
- 10 key informants identified by project managers

* Respondents with multiple roles may be counted more than once

Key strengths of existing social science application

Governance structure embeds some recommended practices

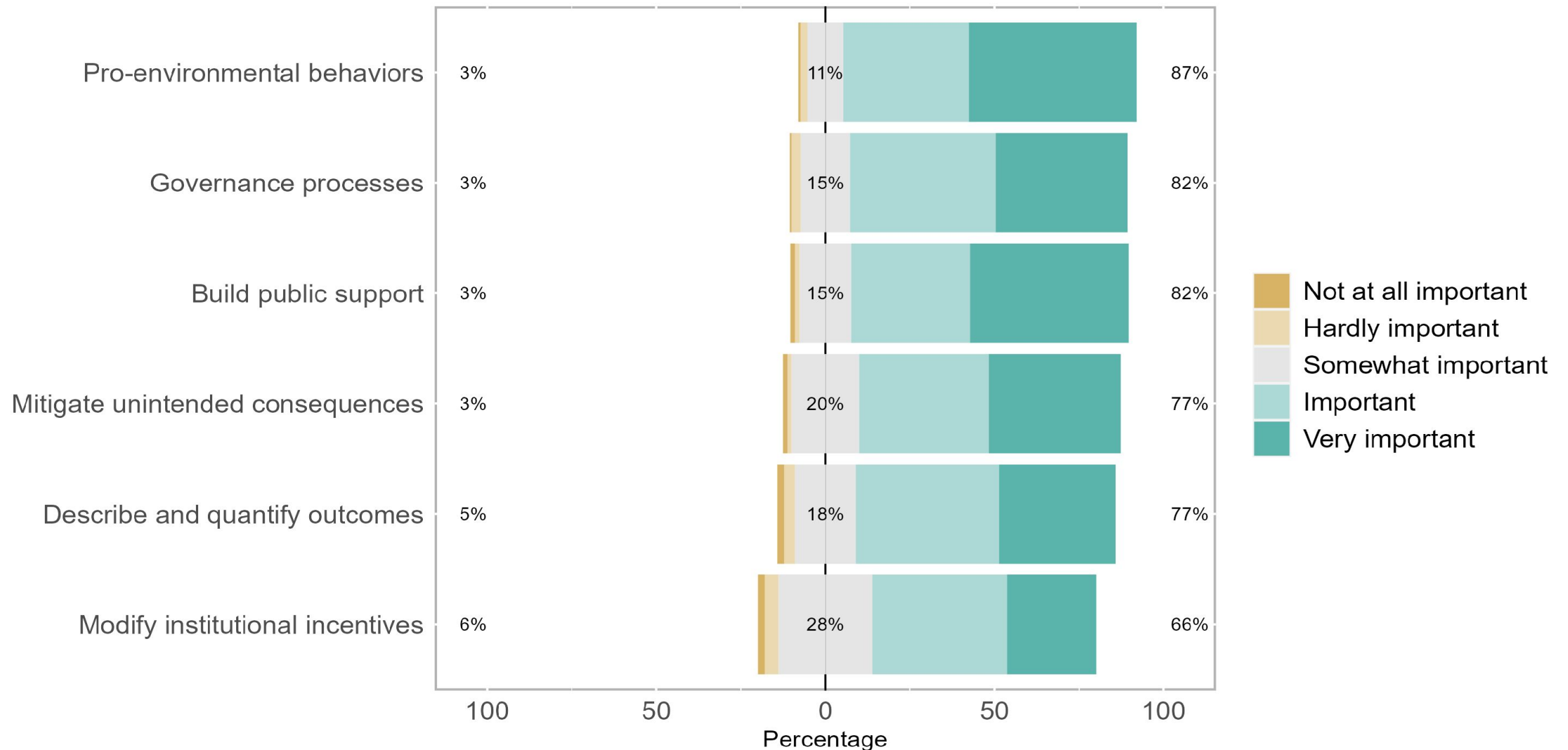
Strategy Review System (SRS) reported to be effective in focusing effort in some groups

Behavioral practitioners frequently using groundwork and adaptive management (best practices)

1. Build social science literacy
and capacity

Finding: Broad support for social science

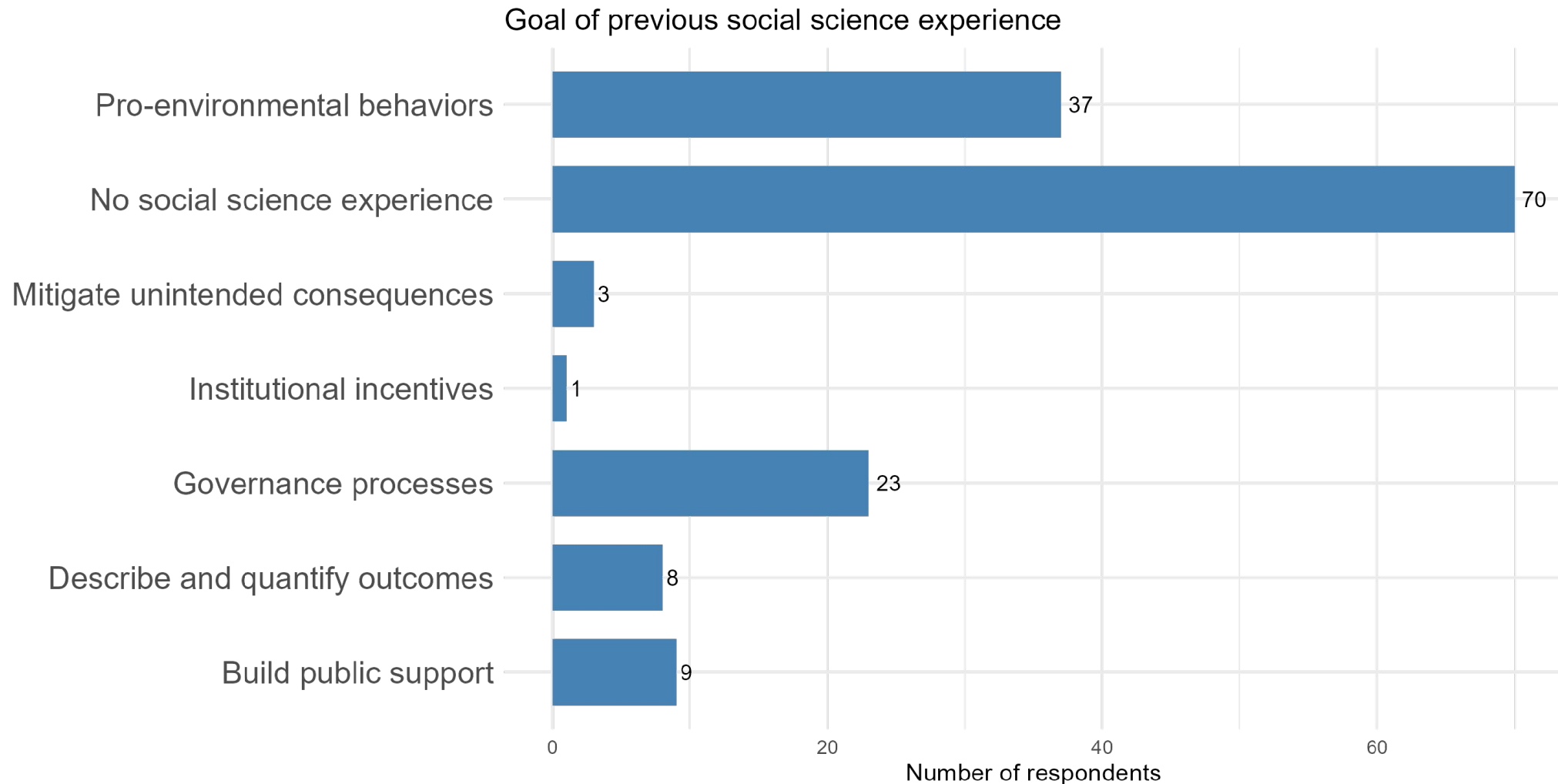
How important is ... to achieving Bay agreement goals



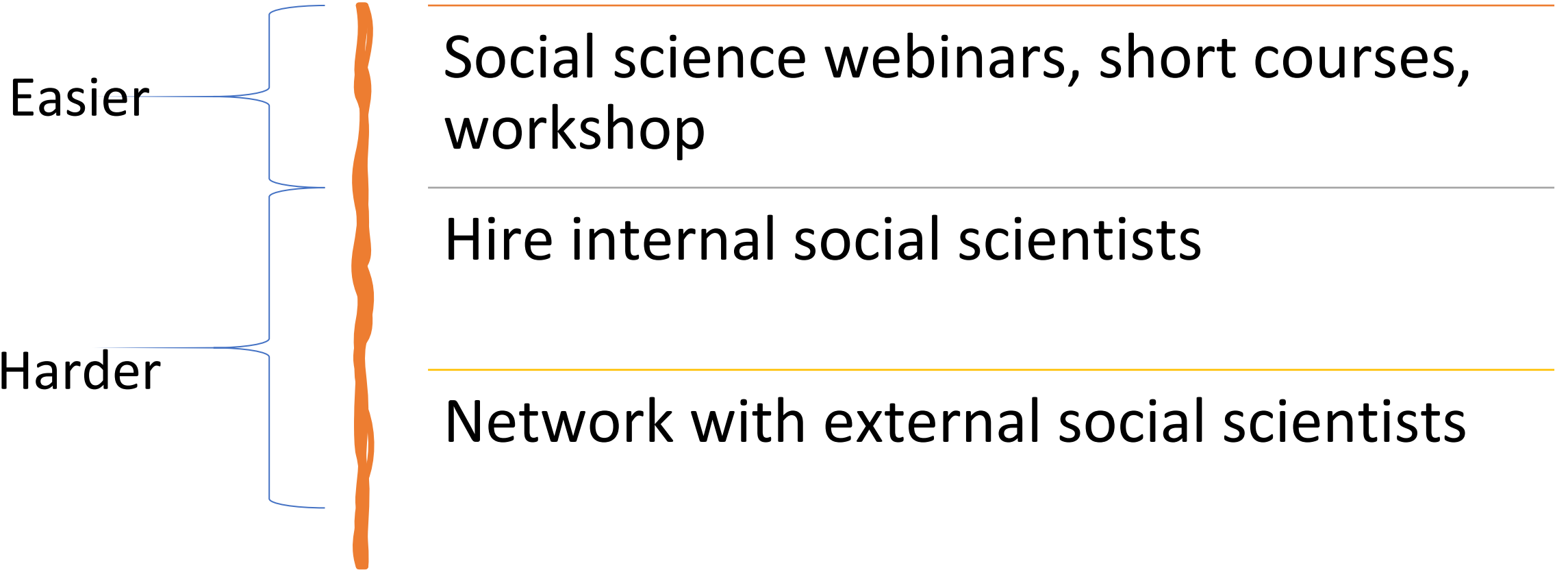
Finding: Past efforts

Pro-environmental behaviors – most common

Changing institutional incentives – least common



1. Build social science literacy and capacity

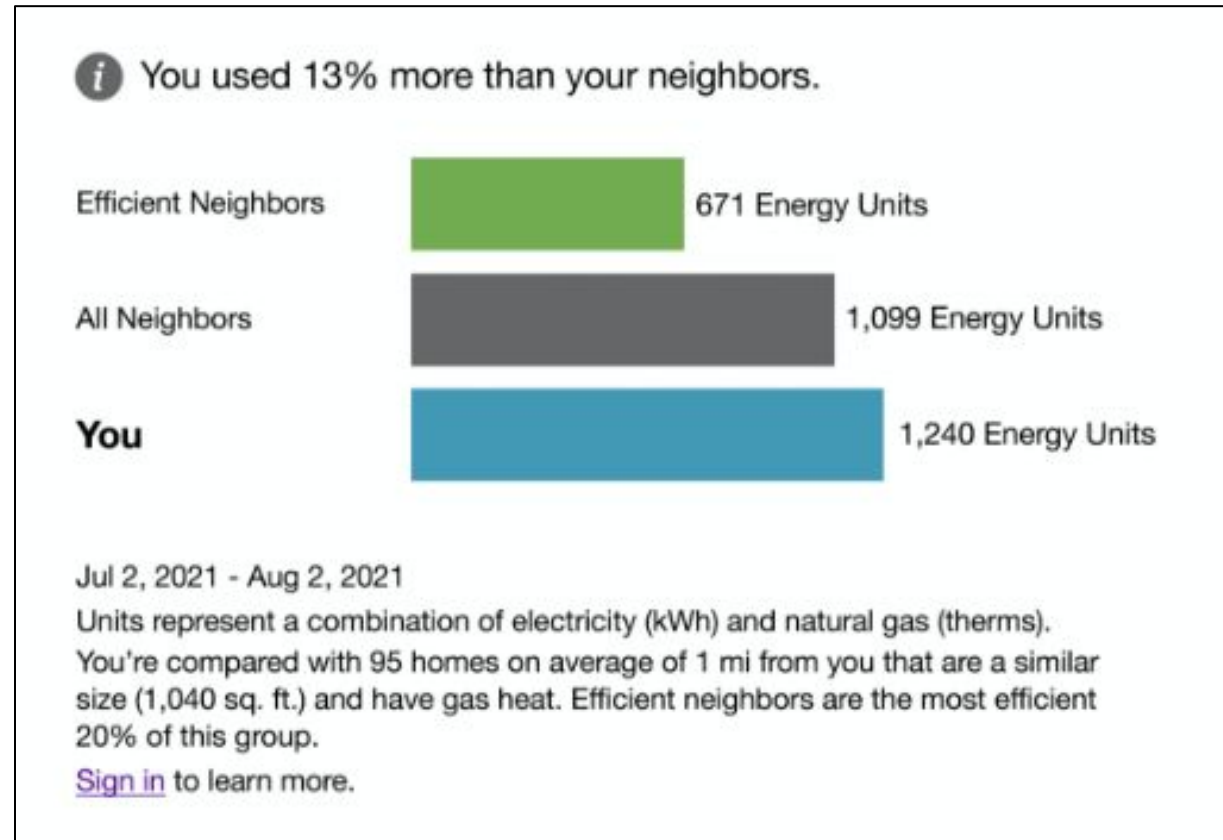


2. Enhance the practice of
behavioral social science

What is a behavioral intervention?

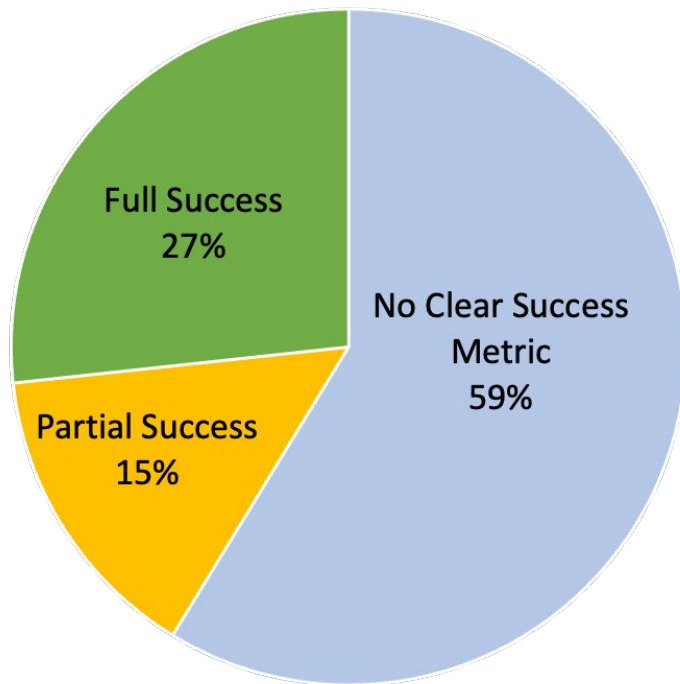
- Approaches used to encourage a beneficial behavior change in a particular community or organization
- Approaches are constructed to anticipate and counteract known decision making biases

Example – Descriptive social norm nudge



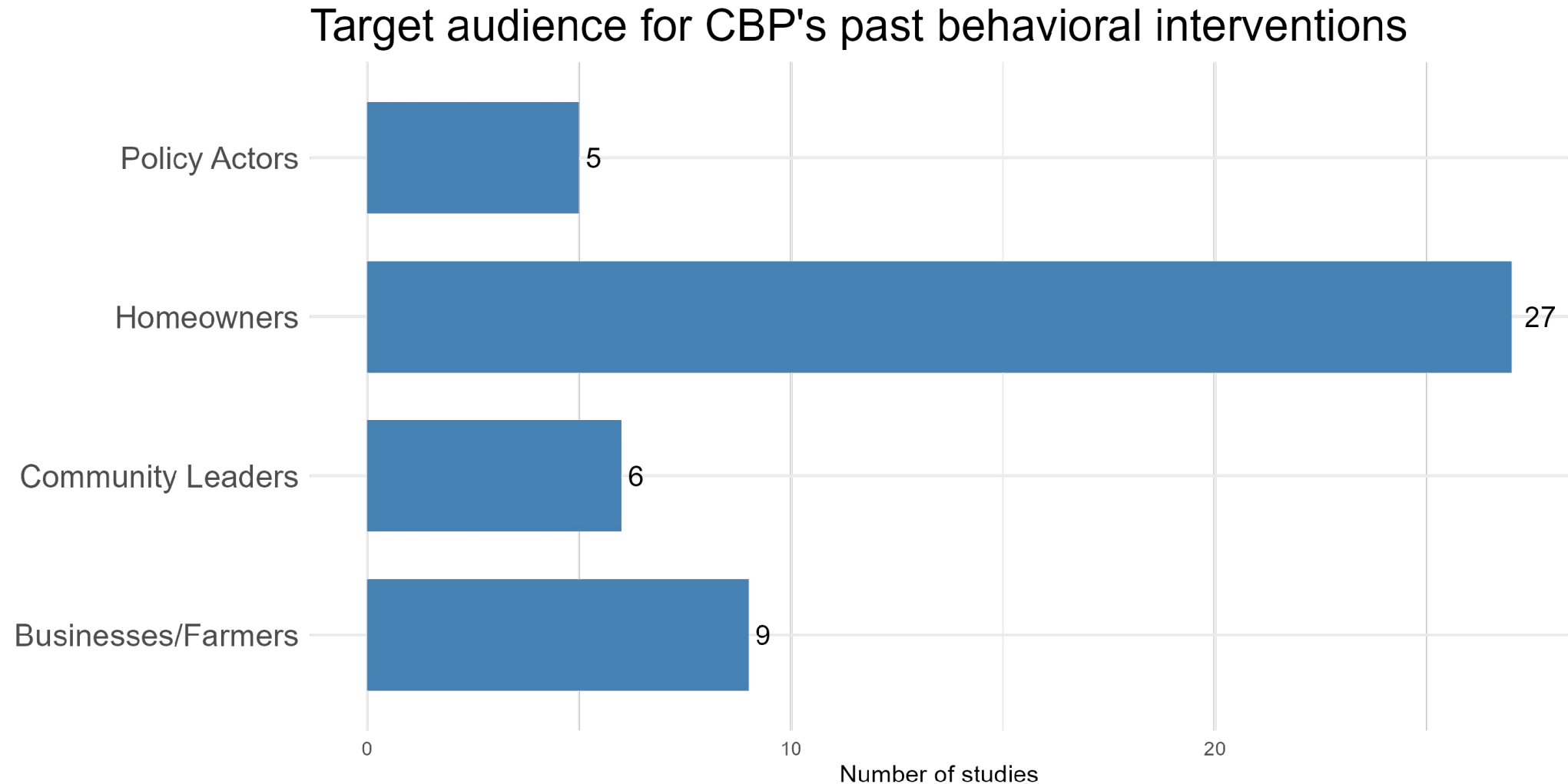
Finding: Not developing evidence of what works in most behavioral interventions

Results of past CBP social science efforts



- Most interventions did not:
 - Measure outcomes
 - Identify behavioral theory

Finding: Homeowners most commonly engaged



2. Enhance the practice of behavioral social science

Easier

Fund projects that use evidence & test theory

Design projects as experiments

Harder

Develop new funding to support this work

Effective Theory-Informed Social Science Engaging Plain Sect Farmers

Who: Lancaster Farmland Trust

Goal: Agricultural BMP adoption among Mennonite farmers

Theory: Diffusion of Innovations (adopter characteristics, peer networks, demonstrating advantage and compatibility of new practice)

Novel insight: 'Mennonite hotline' – a dial-in phone service was a pre-existing, effective way to reach out to farmers

Outcome: 32 BMPs on 4 farms, and 1,675 linear feet of stream restoration designed



3. Use social science in adaptive management

Finding: Underuse of social science knowledge in adaptive management

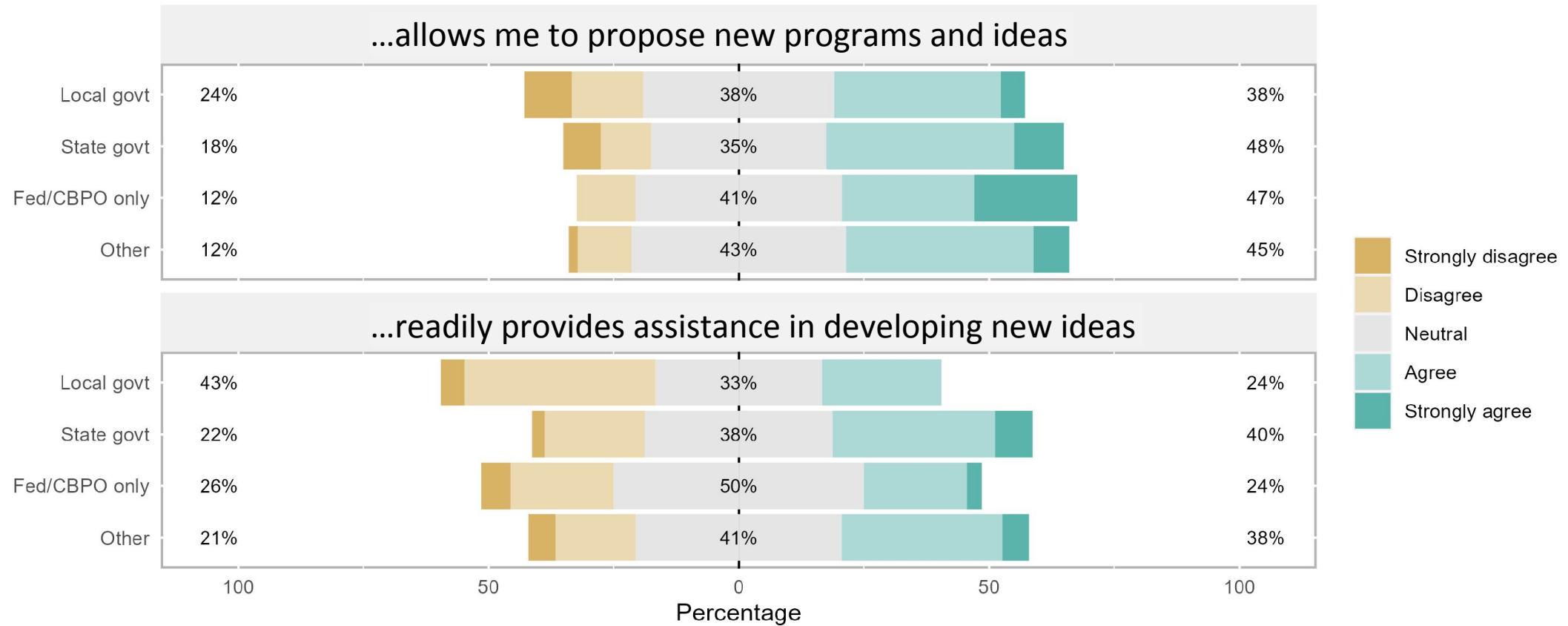
Programmatic

“Social science can help to understand why certain practices did not yield desired results and distill lessons that can be applied to adaptively manage our efforts.”
(QR)

Institutional

“...The WIPs and the TMDL just take up so much energy that it's really hard to get the Management Board to care or do something about all the other outcomes.” (I)

Finding: Local governments feel the least empowered to adapt and innovate within CBP



3. Use social science in adaptive management

Easier

Co-design projects with communities

Remove institutional barriers

Harder

Improve partnership functioning with institutional science

Improve incentives for goals other than water quality

4. Support strategic social science application

Finding: Lack of strategic planning

“People have their favorite ‘tool’ - and are reticent to put time/energy into doing it differently - despite the evidence of the same outcomes in response to the same types of outreach.”
(agriculture example) (QR)

"I feel we get random acts of restoration, as opposed to taking a step back and seeing where our effort would have the greatest impact."
(I)

Institutional science can inform strategies

Example: Regional Integrated Sciences and Assessments (NOAA)

Problems:

- Did not serve many potential users;
focused on the technically sophisticated minority
- Did not adapt to exponential growth of usable climate science

Recommendation:

- Increase effectiveness by networking existing bridging organizations rather than acting as a centralized hub



Brugger and Crimmins (2015)
<http://doi.org/10.1175/WCAS-D-13-00036.1>

4. Support strategic social science application

Easier

Develop strategic plan for social science funding and integration

Create organizational structure to effectively implement strategic plan

Harder

Create process to update plan regularly

Some potential priorities

1. Initial steps towards social science integration
 - Learning opportunities
 - Strategic planning

2. Increase social science effectiveness
 - Specific and evidence-based advice for program design
 - Design interventions to generate evidence

3. Social science contributes to adaptive management
 - Co-develop objectives and methods with communities
 - Leverage networks & trusted partners