



Helping the Hellbender

Lessons learned from a community-based social marketing campaign to conserve a non-charismatic endangered salamander

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This is a hellbender

Cryptobranchus alleganiensis alleganiensis



This is a mud devil



This is a snot otter



This is a lasagna lizard



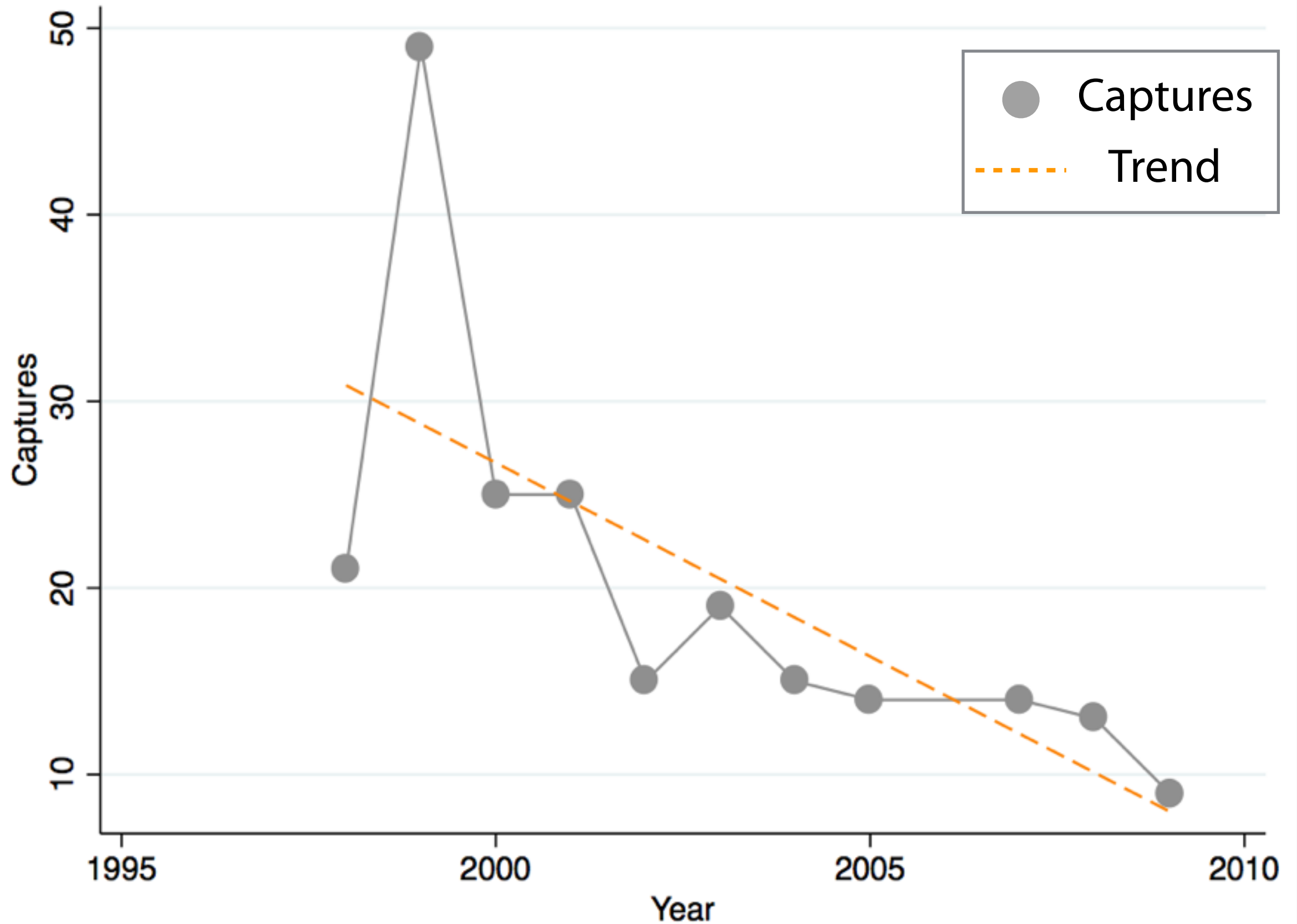


■ Range of hellbender salamander
(*Cryptobranchus alleganiensis*)

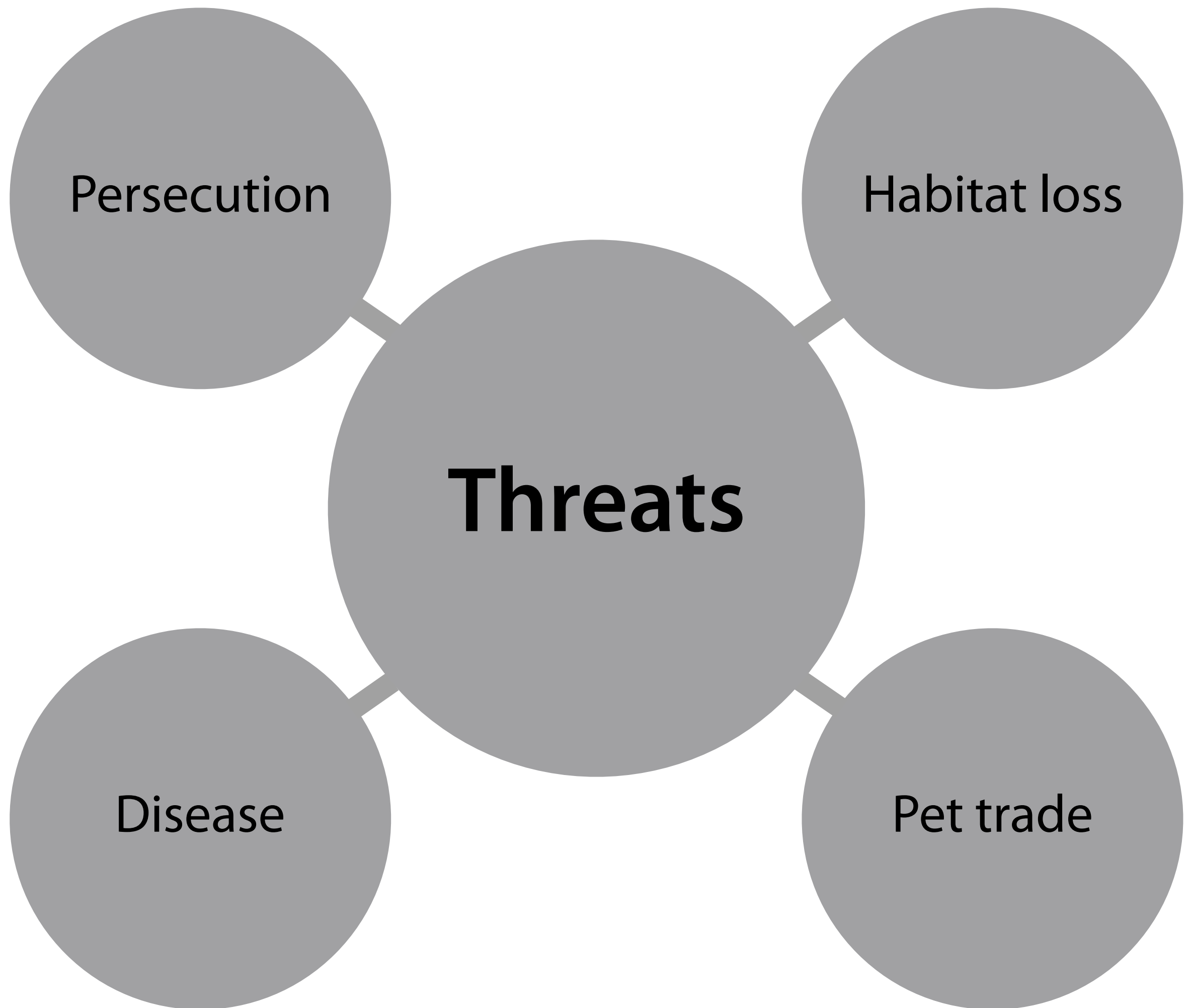


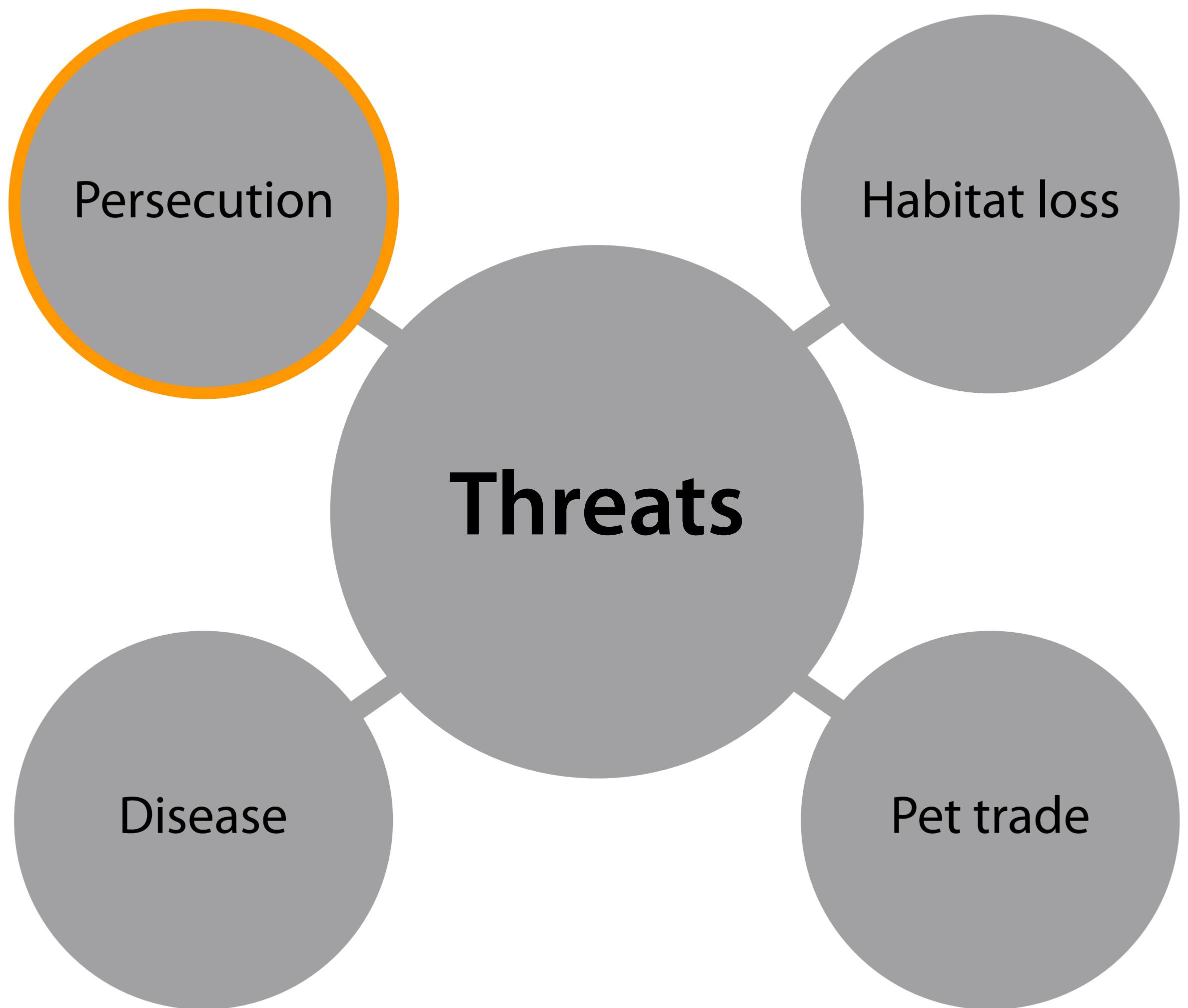


State-endangered



Hellbender population decline, 11-site survey
(Burgmeier et al. 2011)







A multifaceted outreach campaign
targeting landowners, anglers, and the
general public based on the principals of
community-based social marketing.



Community-based social marketing is an outreach/education program designed to change people's behaviors with a variety of tools including prompts, incentives, commitments, social norms, and other communication.



Goals: Raise awareness
Change attitudes
Change behavior

Help the hellbender in 3 steps or less



Pre-survey (2011)



Outreach campaign (2012–13)



Post-survey (2013)



Pre-survey

541 residents & landowners

Measured awareness,
perceptions, and behavioral
intentions





Pre-survey

5% of respondents reported killing/collecting hellbenders.

Very few thought hellbenders eat sport fish.

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Conserving the Eastern Hellbender Salamander

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*Through a mail survey of 541 residents and riparian landowners in the area surrounding the Blue River watershed of southern Indiana, we examined perceptions and intended behaviors toward the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), an aquatic salamander experiencing drastic population declines due to anthropogenic causes. While anecdotal reports attribute hellbender mortality and removal to anglers and pet collectors, only 5% of respondents reported these negative behaviors. Misconceptions among anglers and the general public about the eastern hellbender were less prevalent than anticipated. Anglers, recreational boaters, riparian landowners, and respondents who were previously familiar with the hellbender displayed more positive attitudes toward the animal than other groupings of individuals. Data collected in this article shaped a detailed education and outreach campaign based on the principles of community-based social marketing.*

Keywords nongame wildlife, education, behavior change, threatened species, public support

Introduction

Conservation efforts targeting small, unattractive, or otherwise “uncharismatic” fauna are constrained by a relative lack of research and funding compared to large mammals, birds, and other more charismatic animals (Gratwicke, Lovejoy, & Wildt, 2012; Trimble & Van Aarde, 2010). These imbalances are especially concerning when human–wildlife interactions pose a threat to uncharismatic conservation targets, a common situation that weakens

Mullendore et al. 2014

**Lesson learned 1:
know your audience
and question your
assumptions.**

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assumptions.**

(And pay social scientists to do research)



Outreach campaign

Audiences: general public, anglers, and landowners

Targeted behaviors: (1) cut the line if you catch a hellbender, (2) report sightings to a conservation professional



Angler outreach



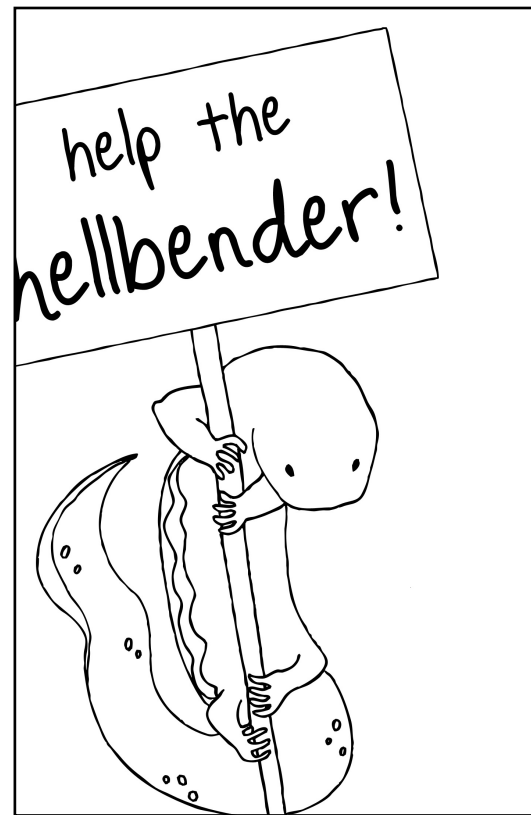


Homeowner outreach





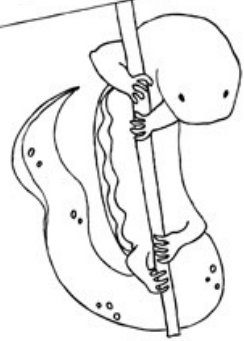
General outreach





General outreach

Don't miss the
feast—buy your
tickets today!



Feast...

Like a hellbender!

Mark your calendars for our *all-you-can eat* Cajun cuisine dinner in support of hellbender conservation in the Blue River! There will be door prizes, games for kids, educational materials for teachers, giveaways for anglers, and more!!

When

April 20th 4:00-6:00pm

Cost

\$8 for adults; \$4 for children 12 & under

Buy tickets at: HelpTheHellbender.org

Where

Harrison County Extension Office

247 Atwood Street

Corydon, IN 47112

Menu Items

Shrimp Creole

Shrimp Étouffée

Crawfish Creole

Boiled Crawfish

Jambalaya

Sponsored by:

PURDUE
UNIVERSITY





General outreach





General outreach





General outreach





General outreach





General outreach





Evaluation



Evaluation: overview

Post-survey: Mail survey, following Dillman (of course)

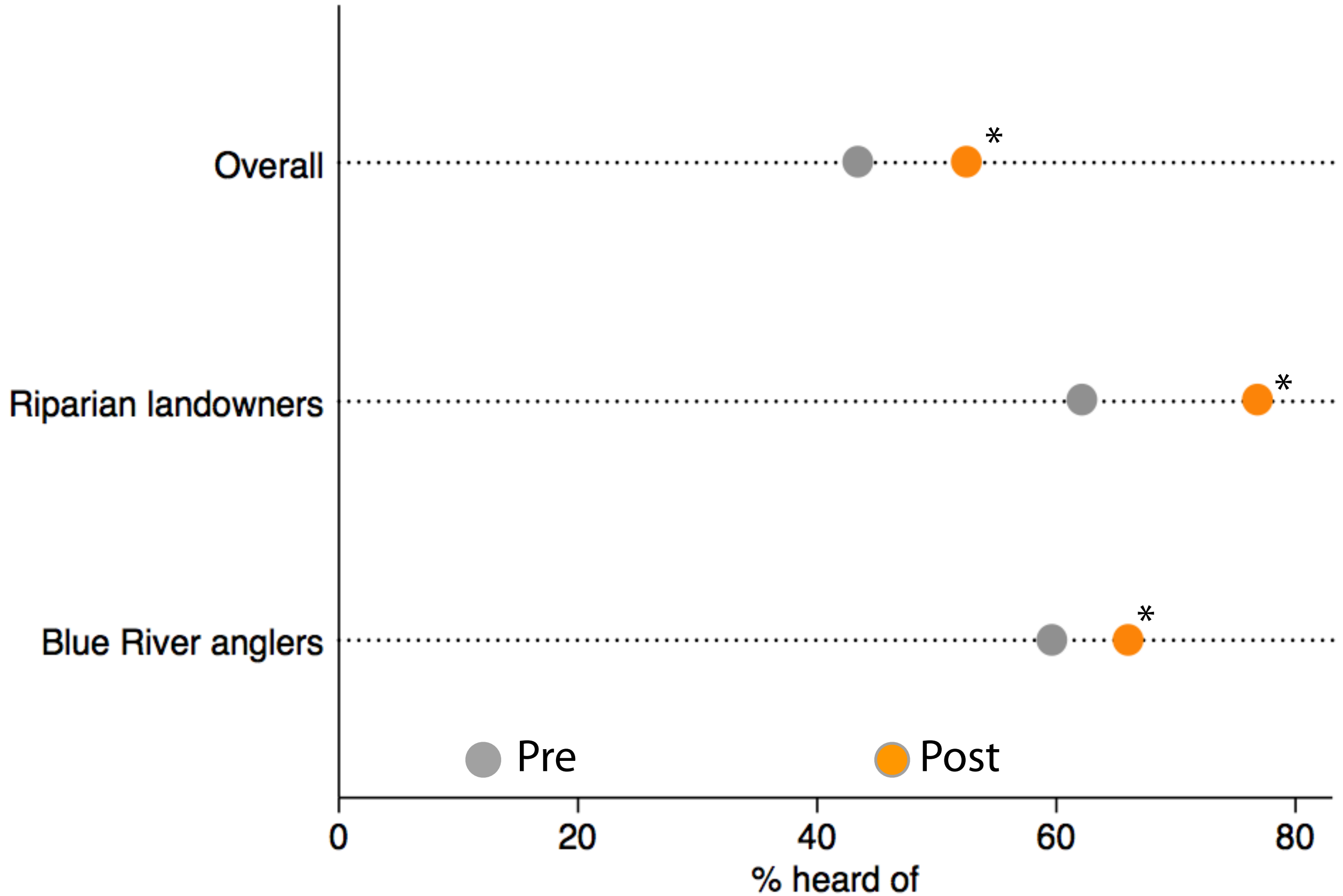
494 responses, 34% response rate. ~140 anglers & landowners

Similar demographics to the pre-survey

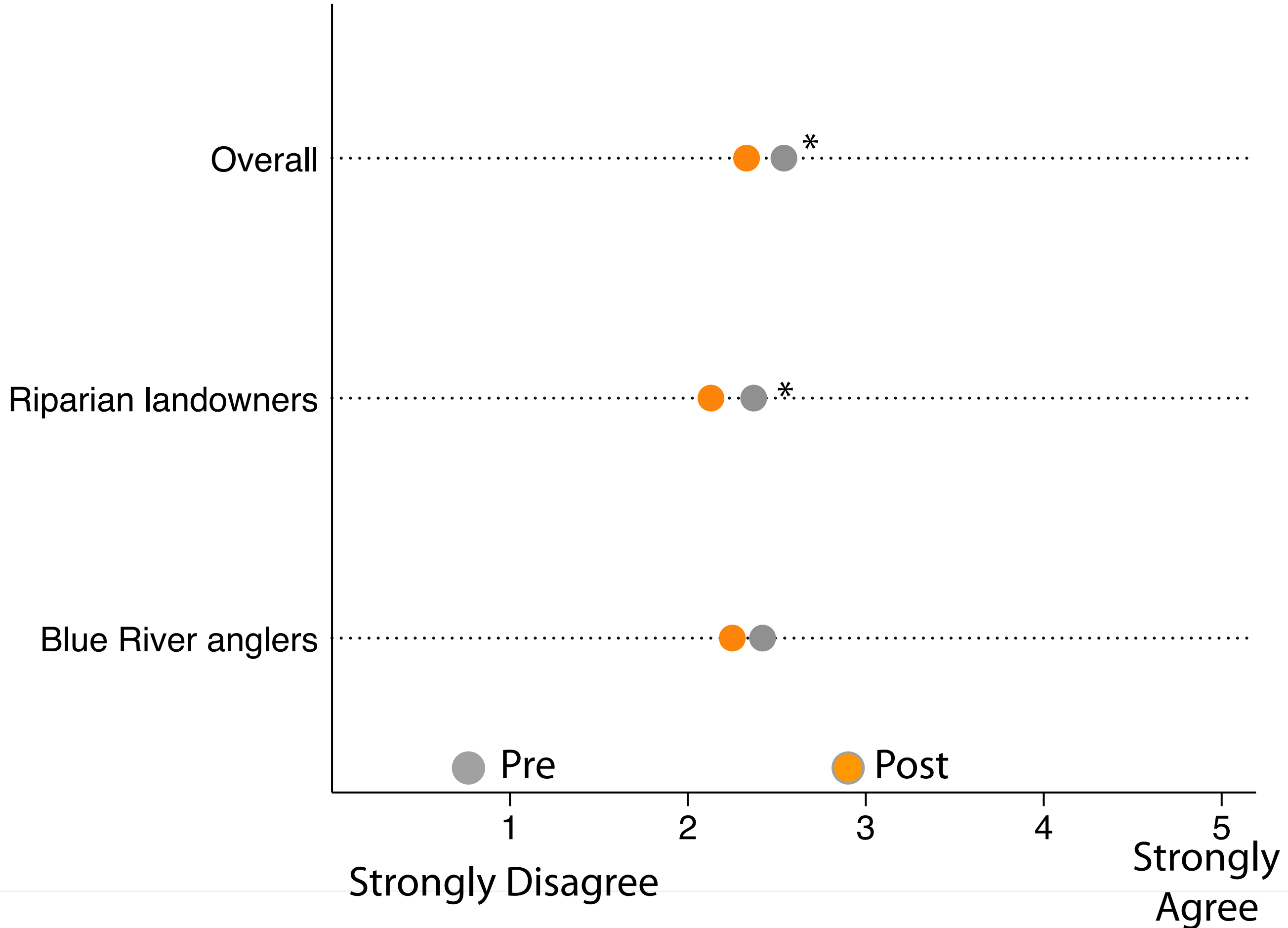


Evaluation: awareness

% heard of hellbenders



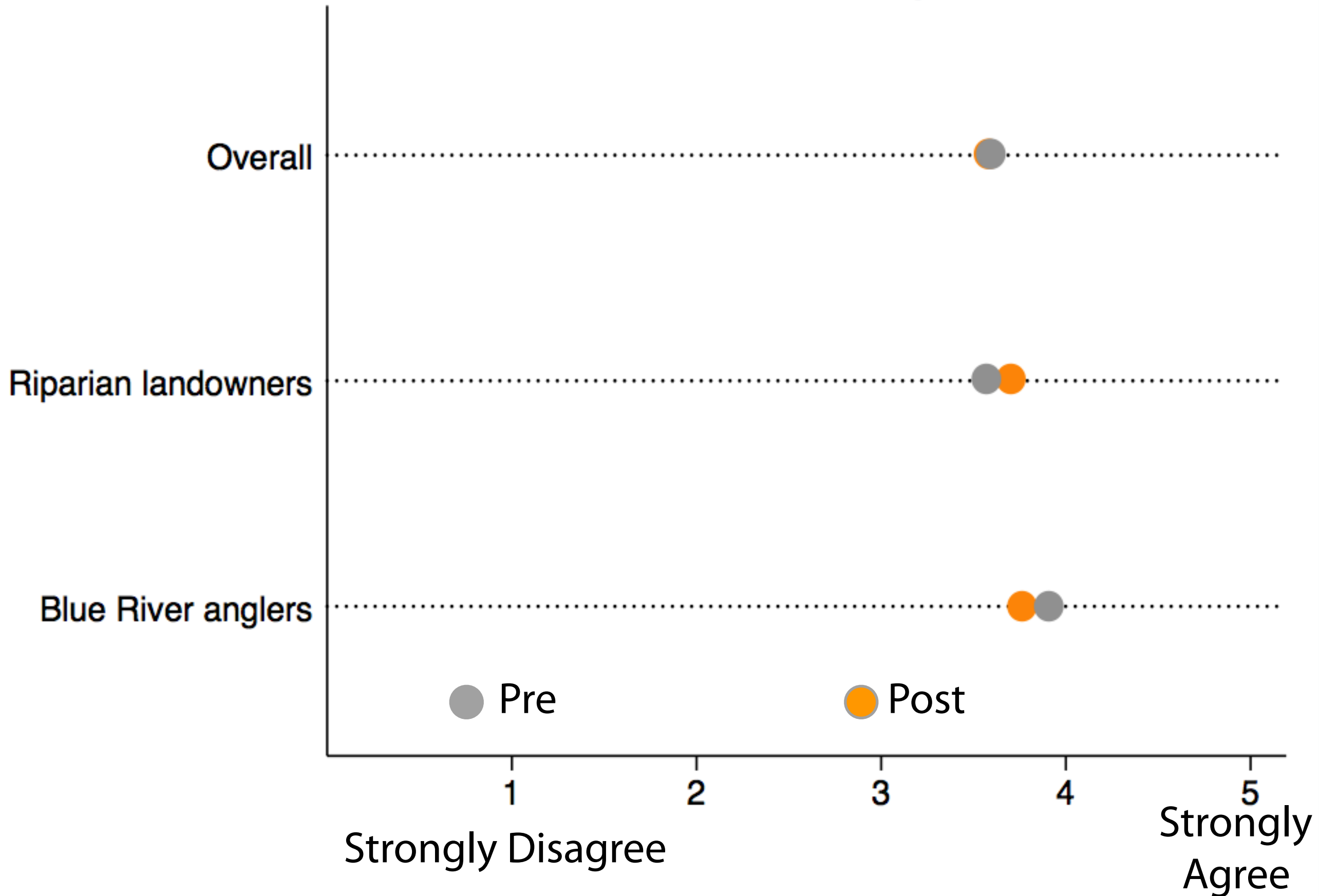
I think this animal eats sport fish



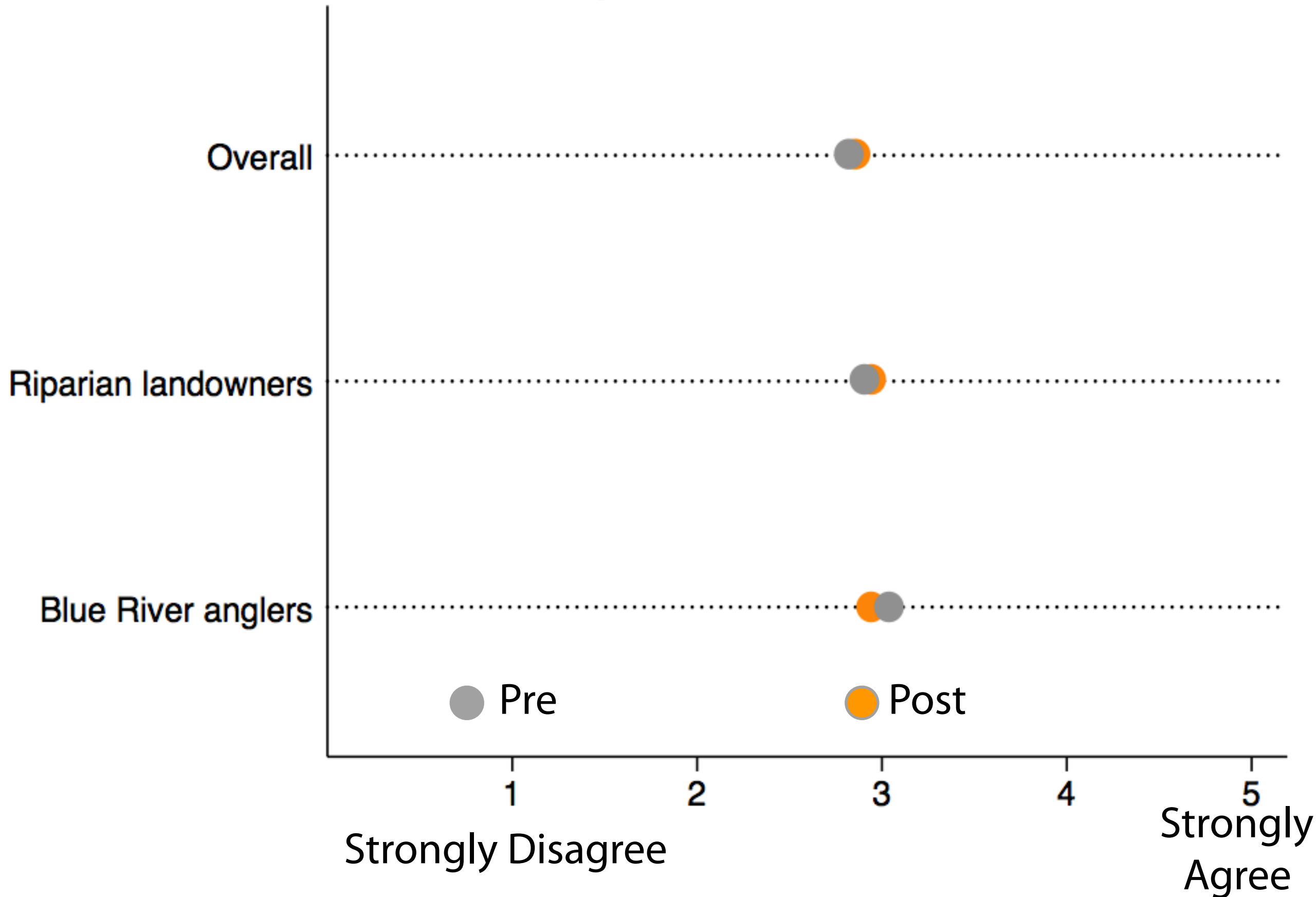


Evaluation: attitudes

Hellbenders are important to the Blue River ecosystem



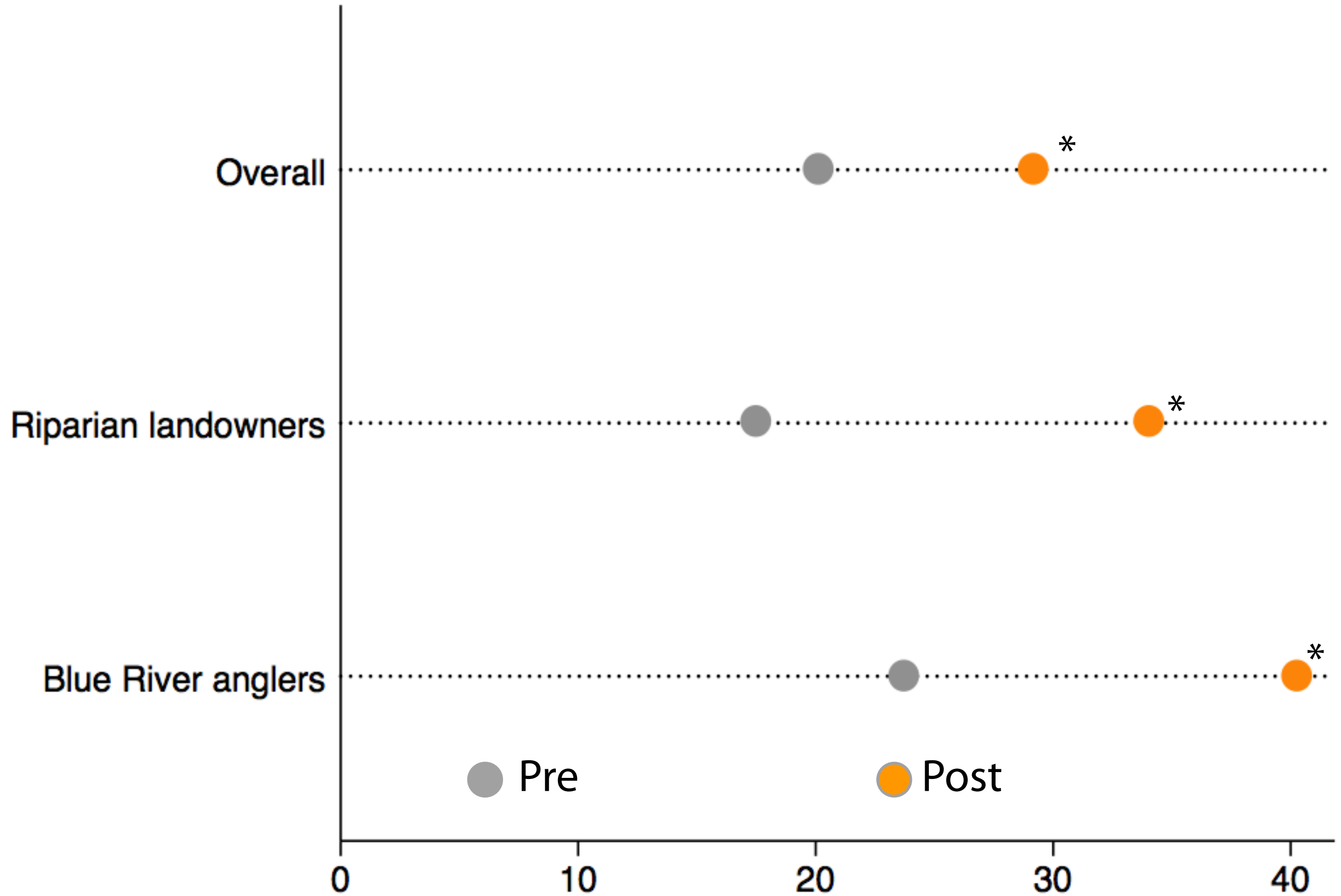
Government money should be spent to protect the hellbender



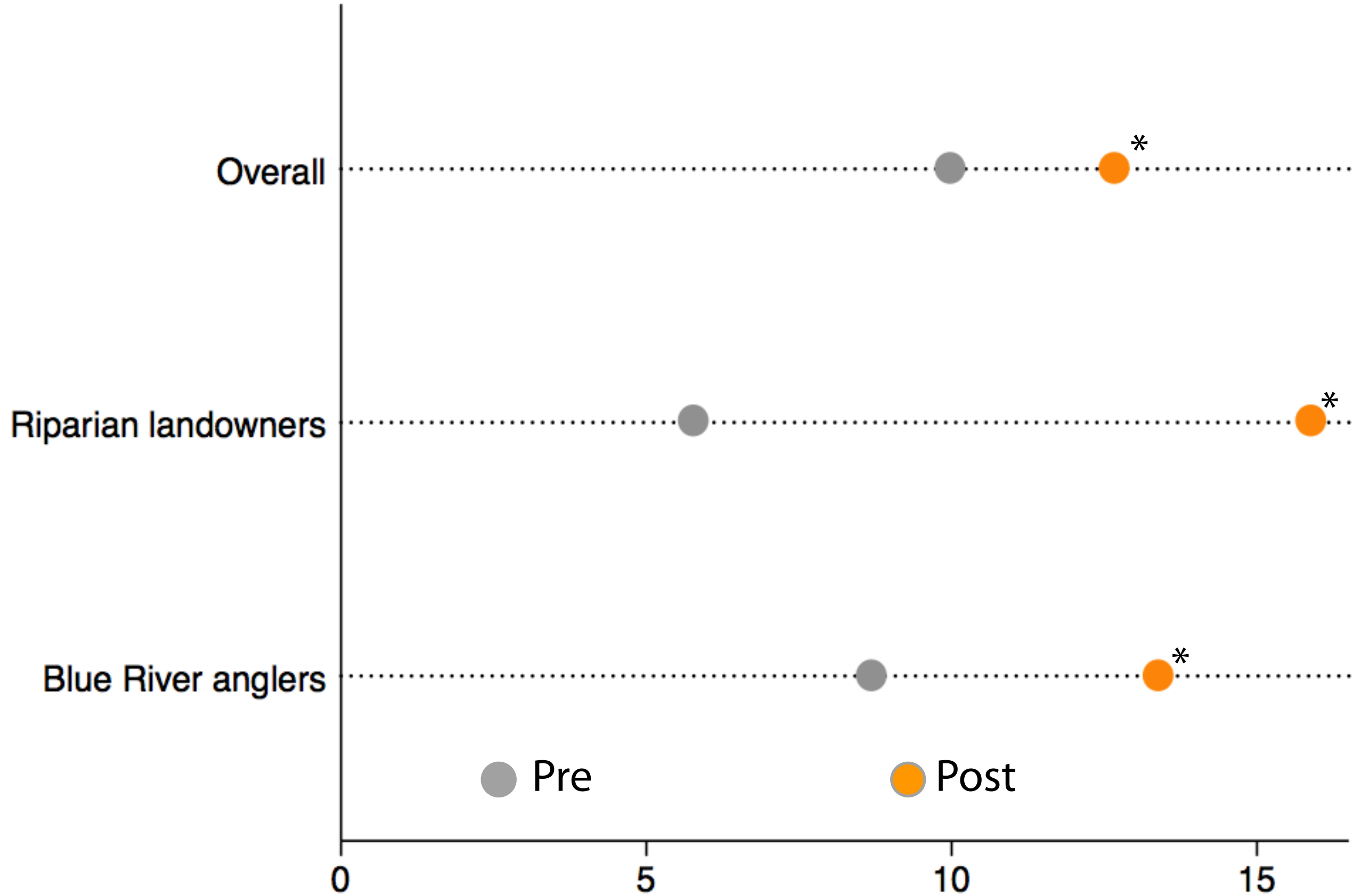


Evaluation: behaviors

% Who would cut the line



% respondents who would report a sighting



Lesson learned 2: Be realistic about what you can change and what takes time.

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Awareness & actions are easier to change than attitudes



Drivers of attitudes & intentions



Behavioral intention

Logistic regression, dependent variable: behavioral intention

Controls include age, gender, wildlife value orientations

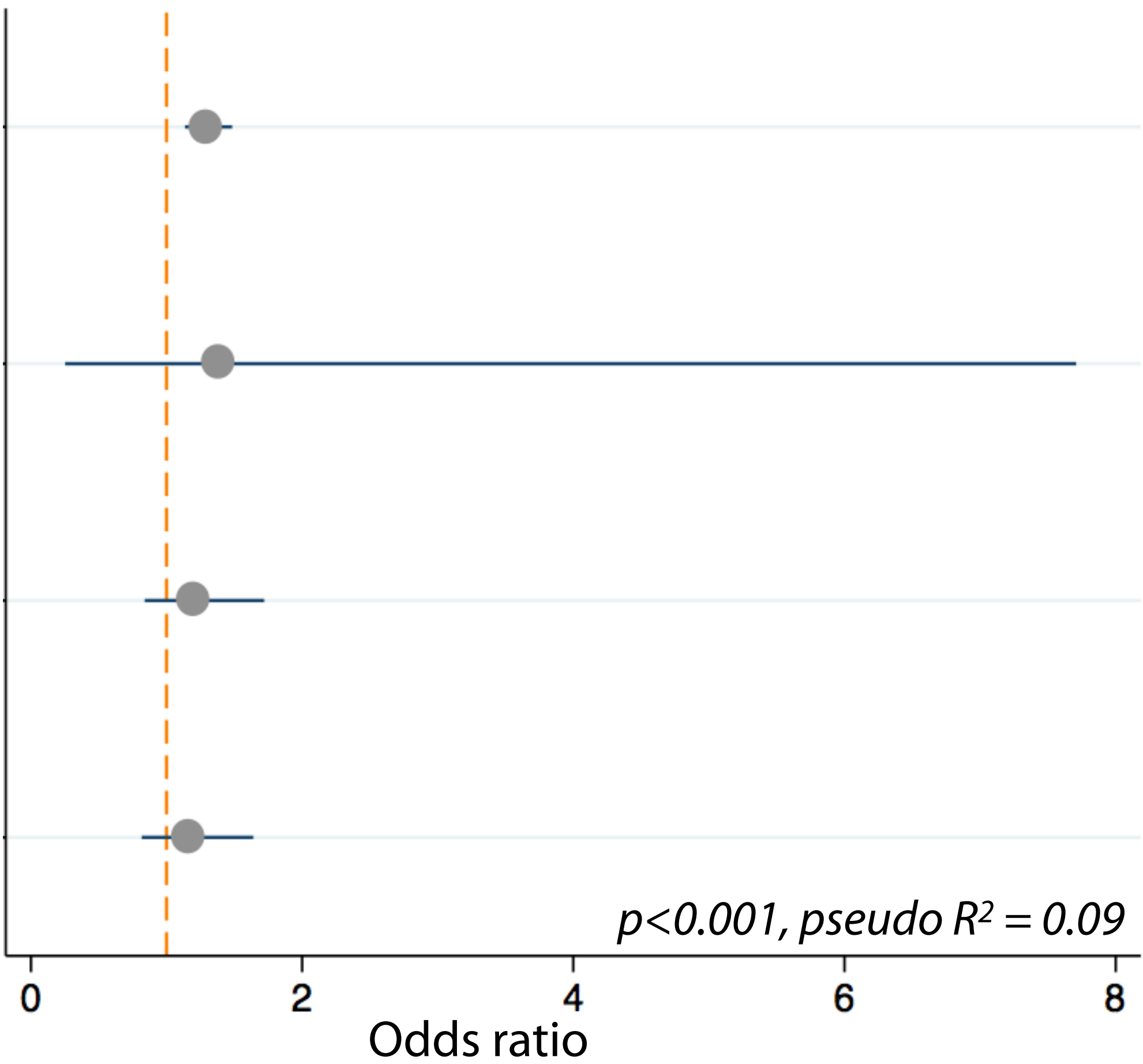
Did respondents report they would cut the line?

Total outreach
seen

Special events
attended

Knowledge that
the hellbender
is native

The hellbender
is important to
the ecosystem



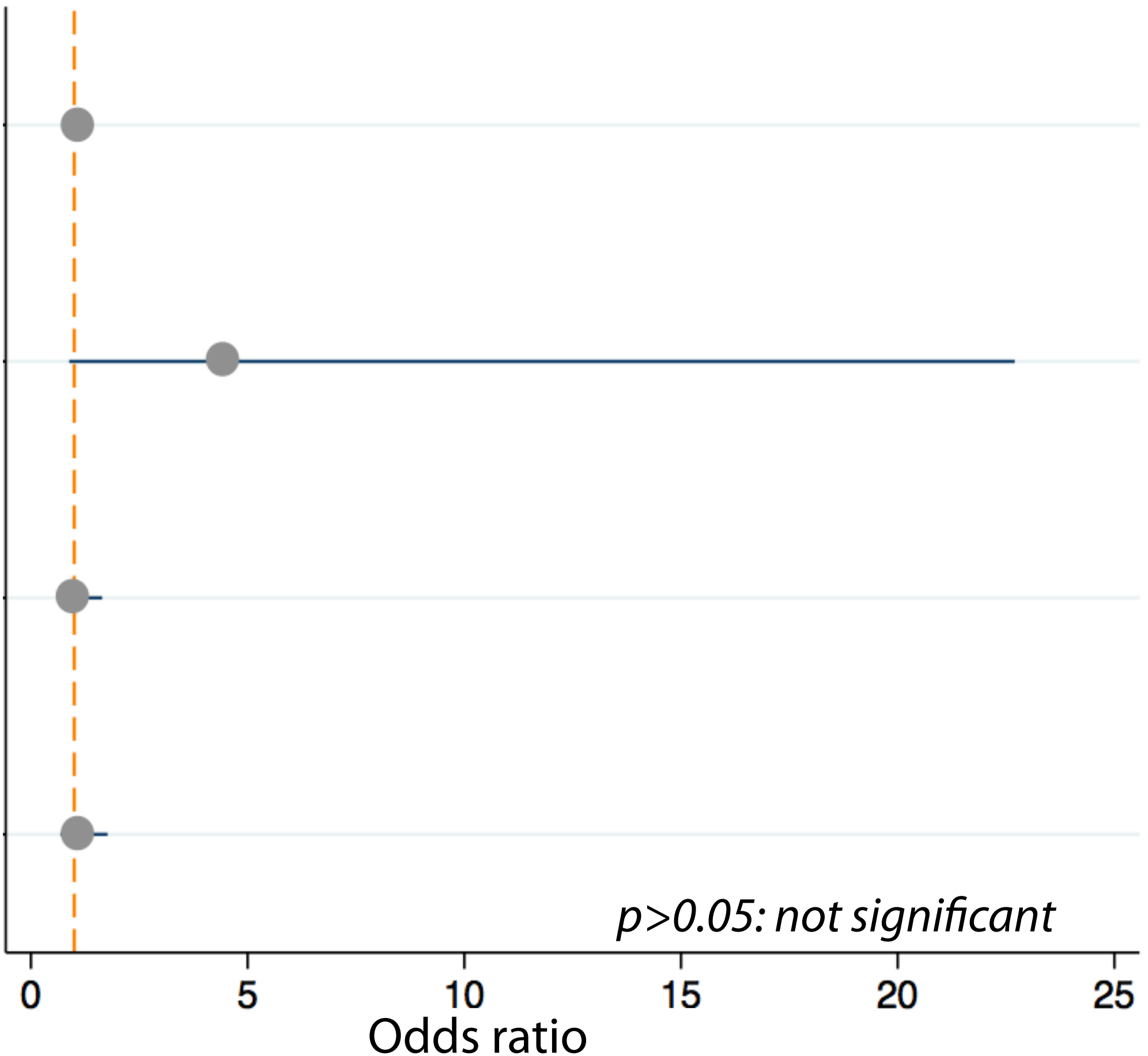
Did respondents say they would report a sighting?

Total outreach
seen

Special events
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Knowledge that
the hellbender
is native

The hellbender
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**Lesson learned 3:
Outreach matters, at
least in some
situations.**

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Outreach matters, at
least in some
situations.**

*More effective for behaviors than attitudes, at
least in the short run.*

**Lesson learned 4:
There is value in
efficiency.**

Lesson learned 4: There is value in efficiency.

Piggybacking seems like a much better strategy than expensive specialized events.



Let's recap.



1. Know your audience and question your assumptions.
2. Be realistic about what you can change and what takes time.
3. Outreach matters, at least in some situations.
4. Be efficient.

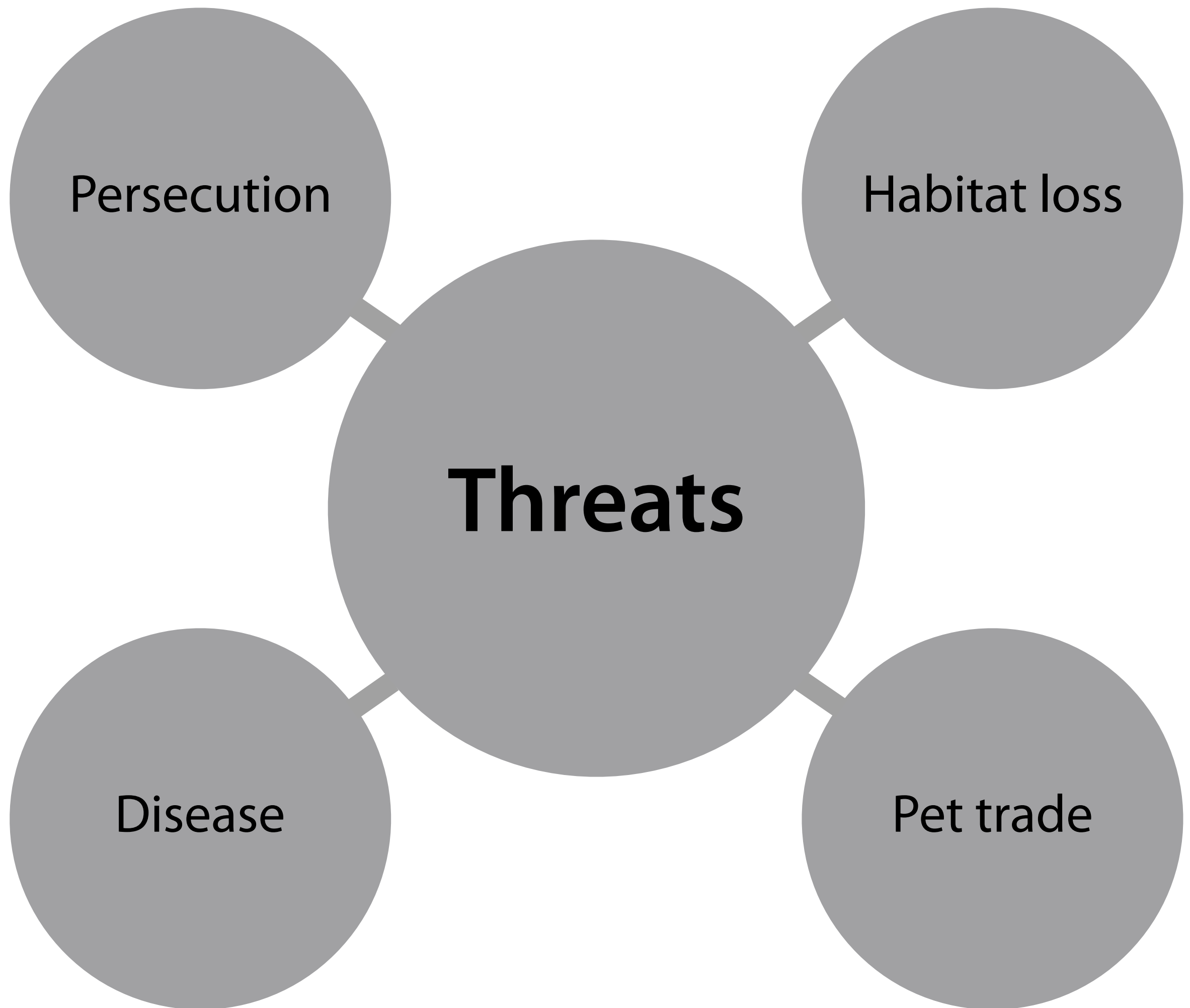


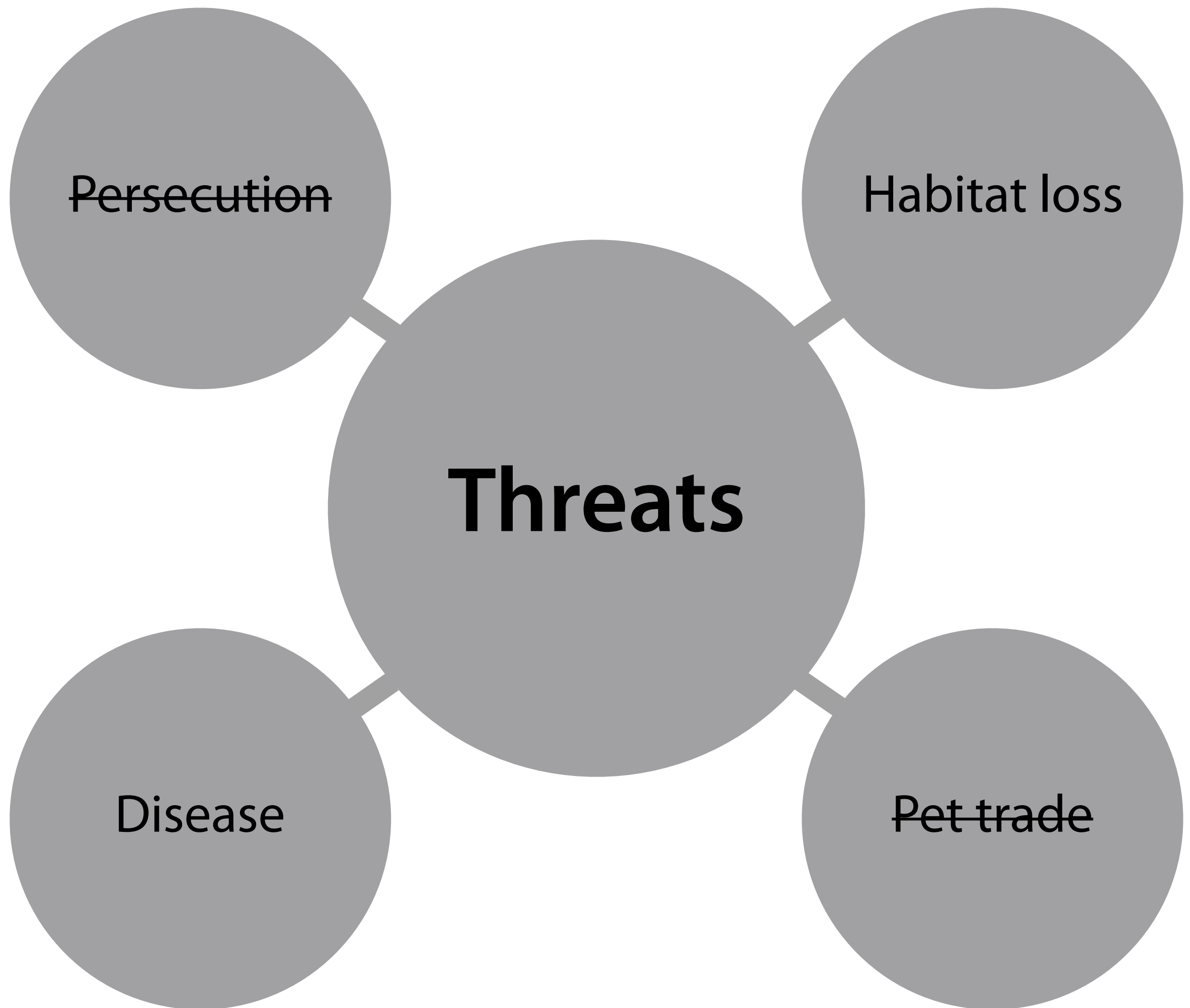
But wait there's more!

**Lesson learned 5:
This is a long-term
commitment.**

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This is a long-term
commitment.**

*Be adaptive, reactive, and keep paying social
scientists.*



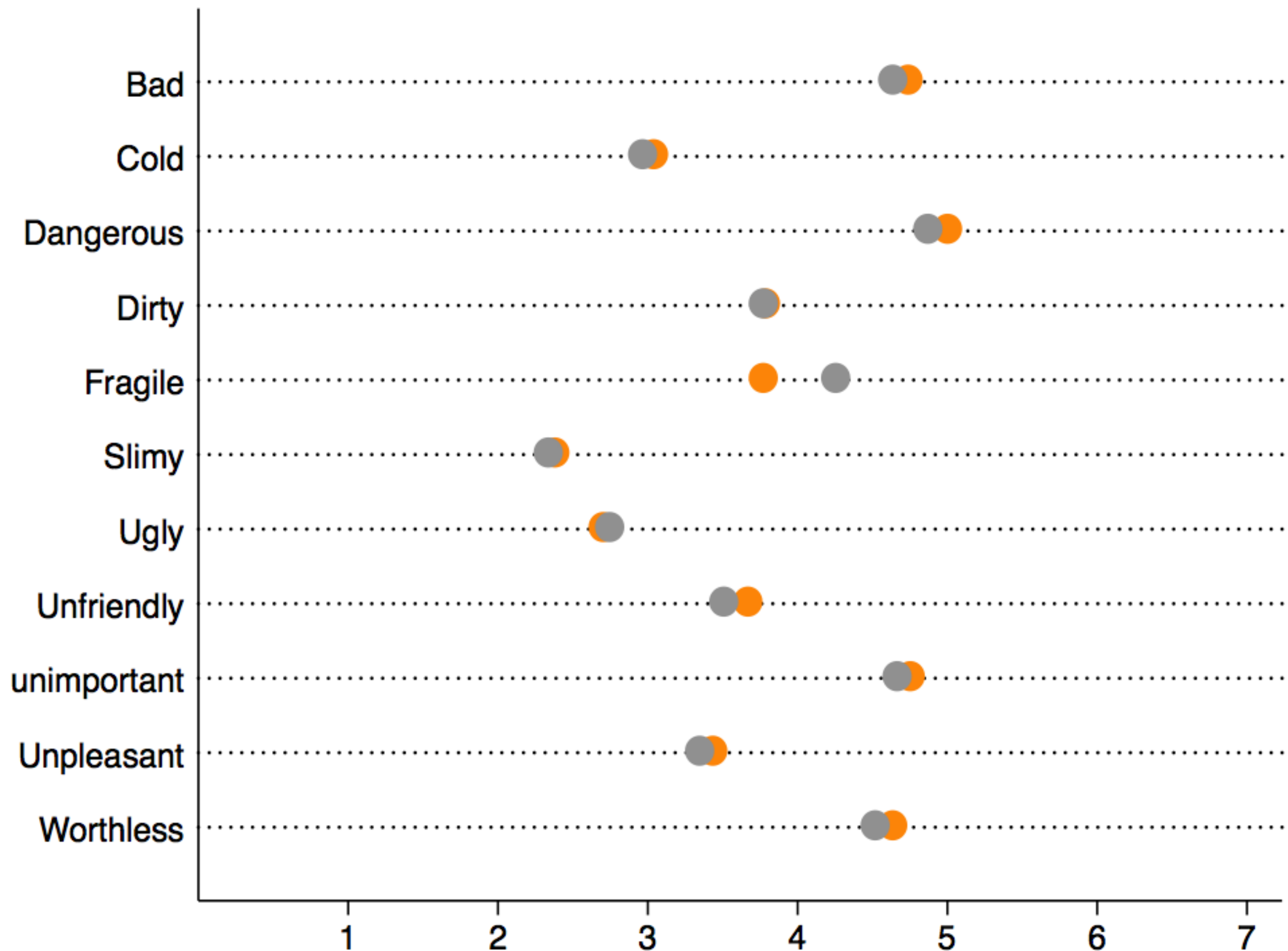


Thank you.

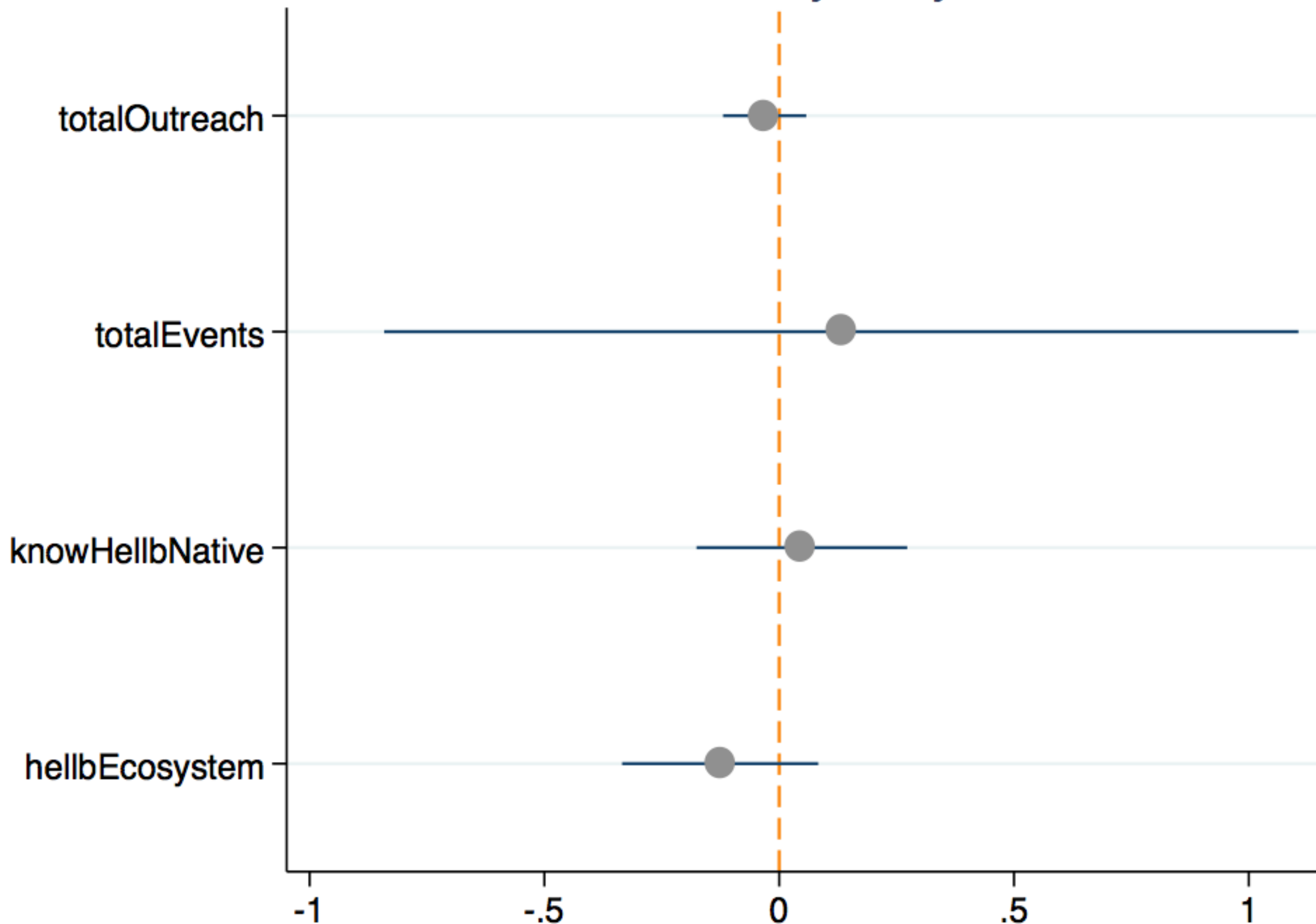
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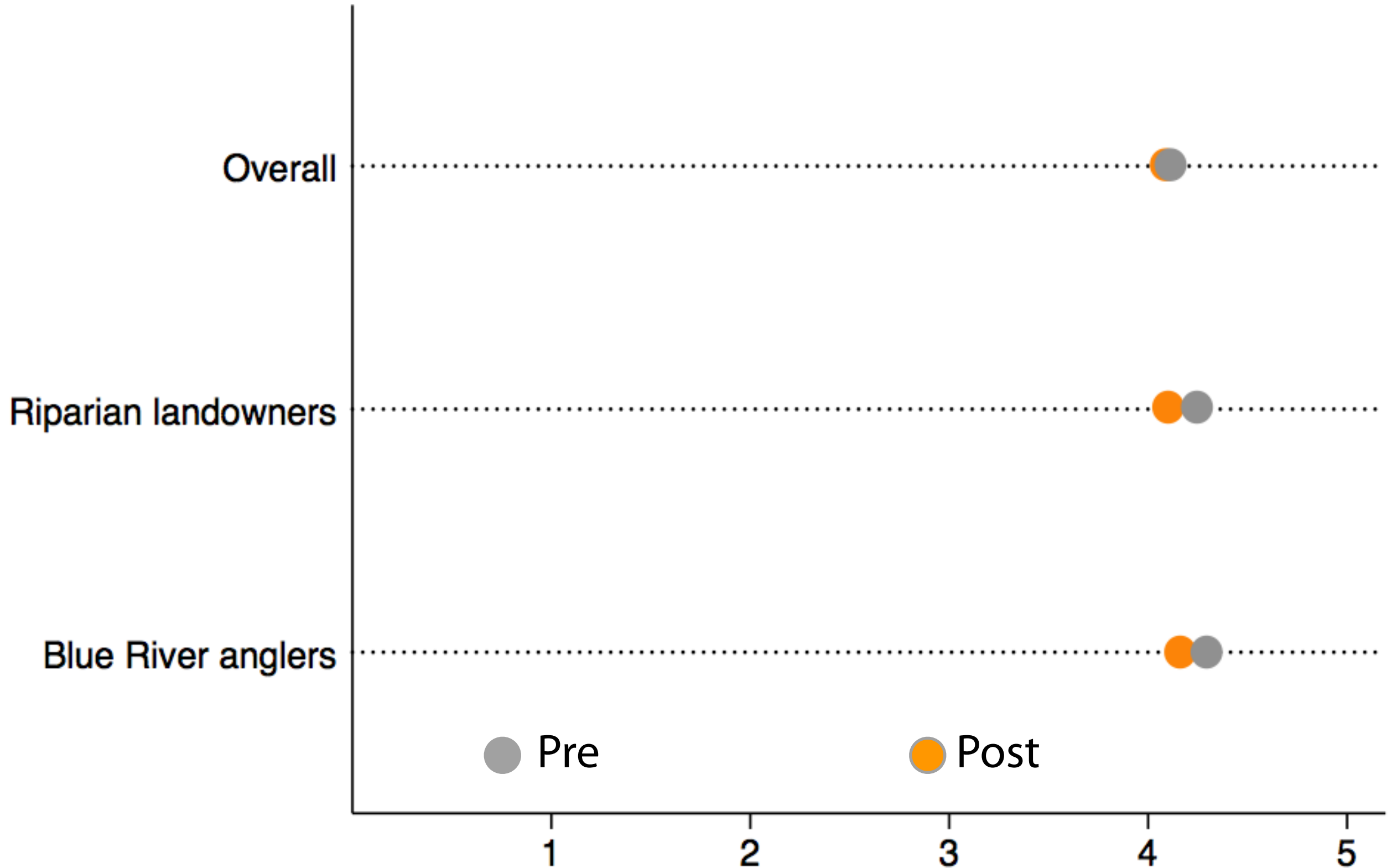




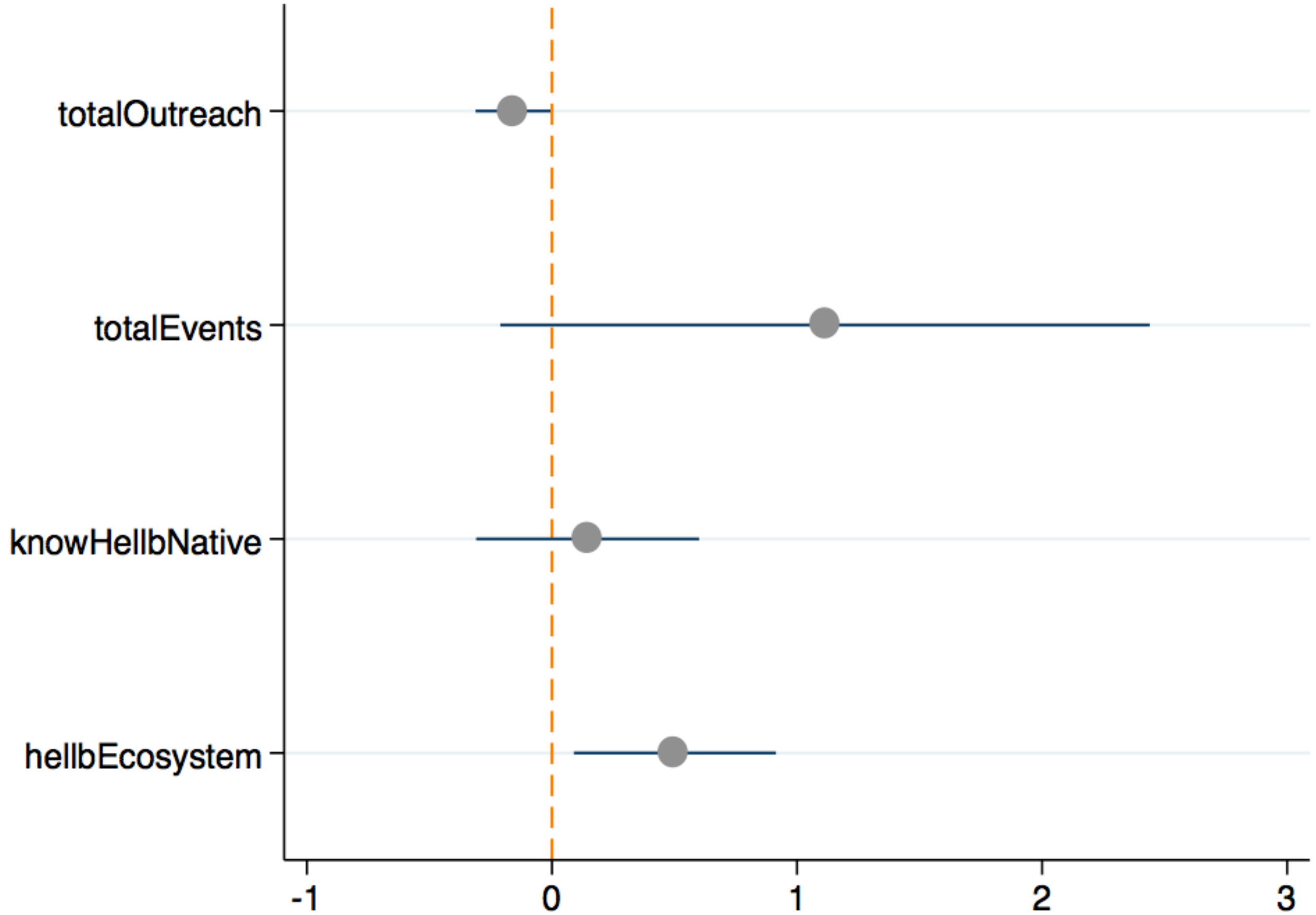
hellbDrySlimy



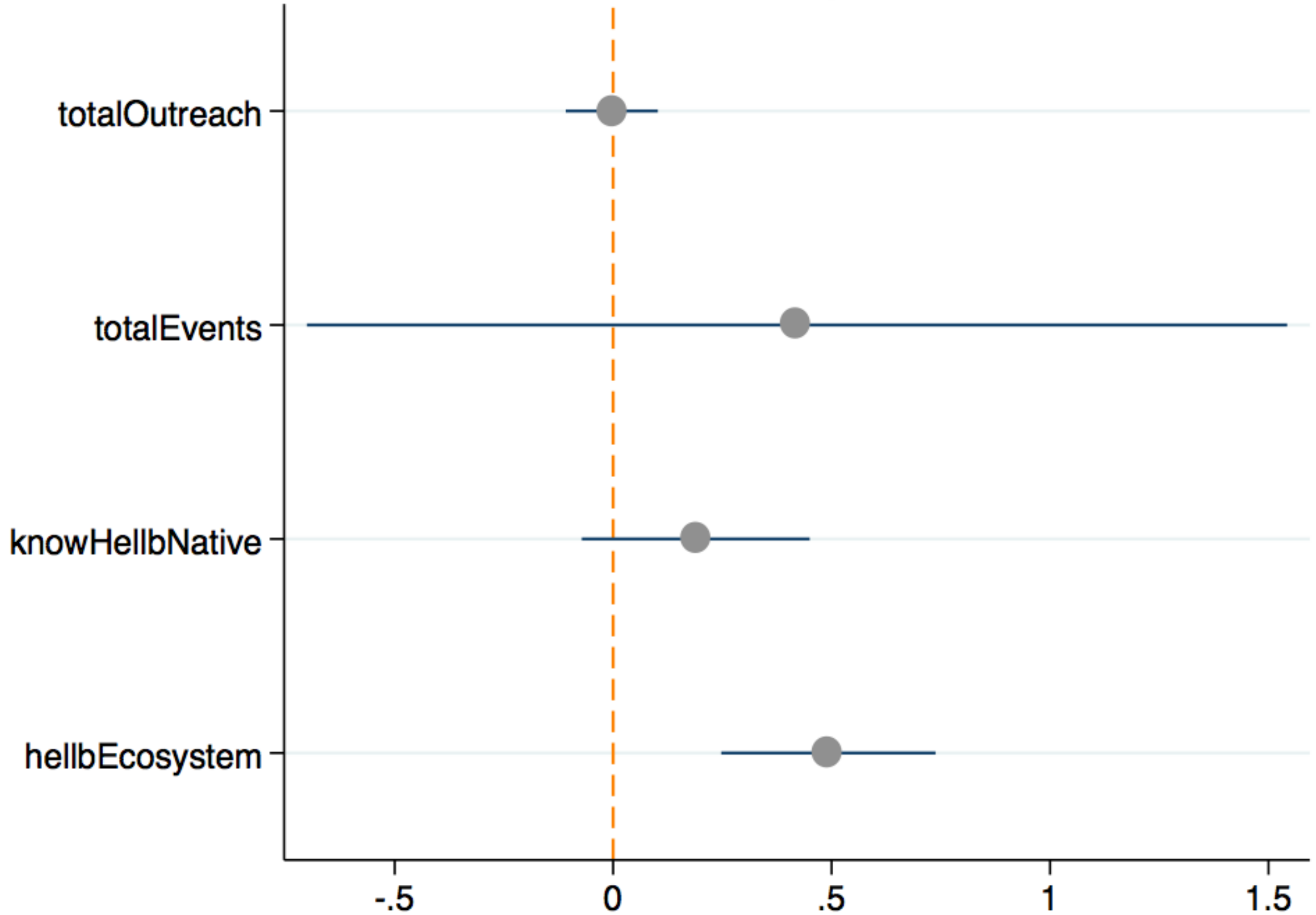
Hellbenders have as much right to live as any other animal



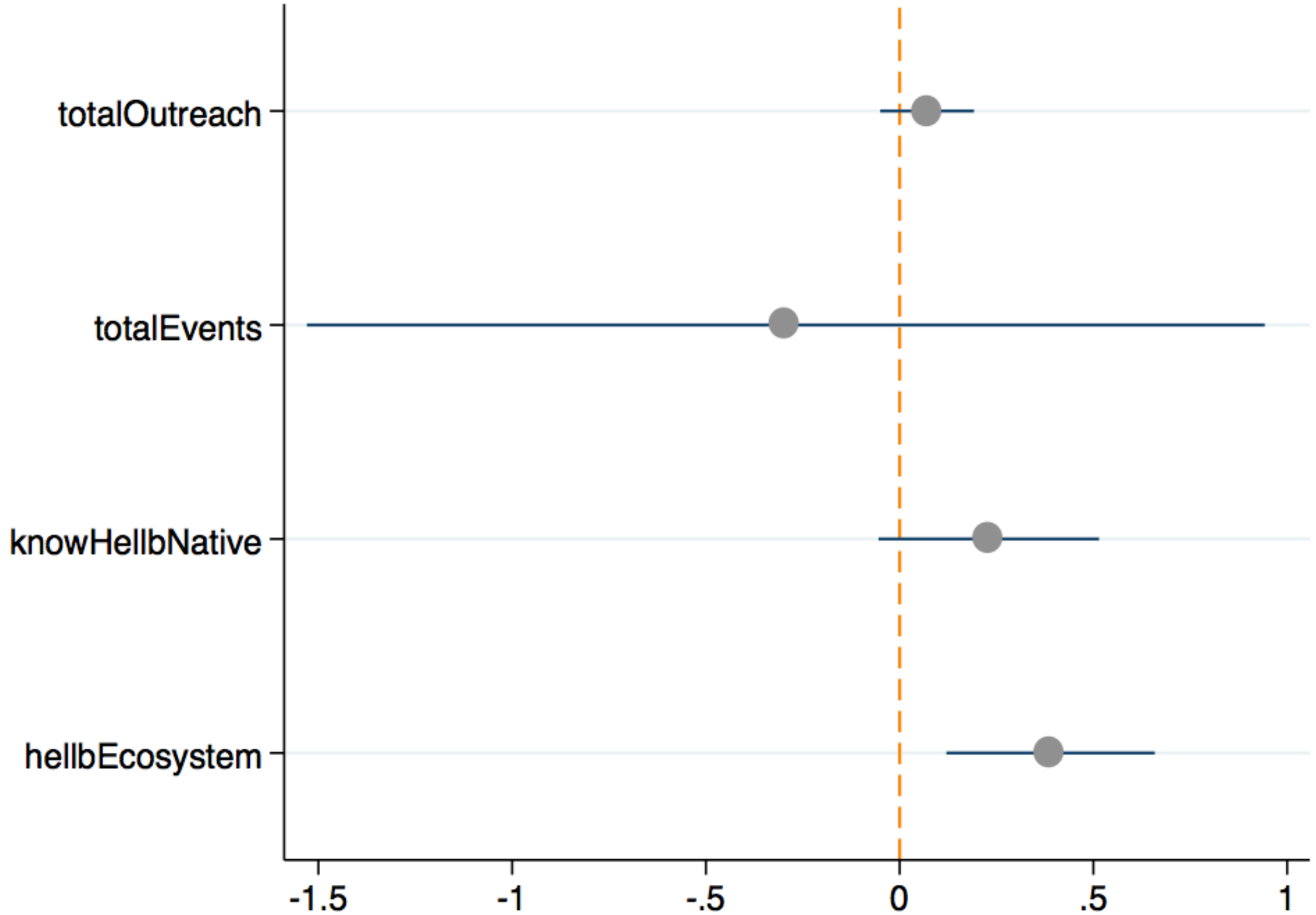
hellbGoodBad



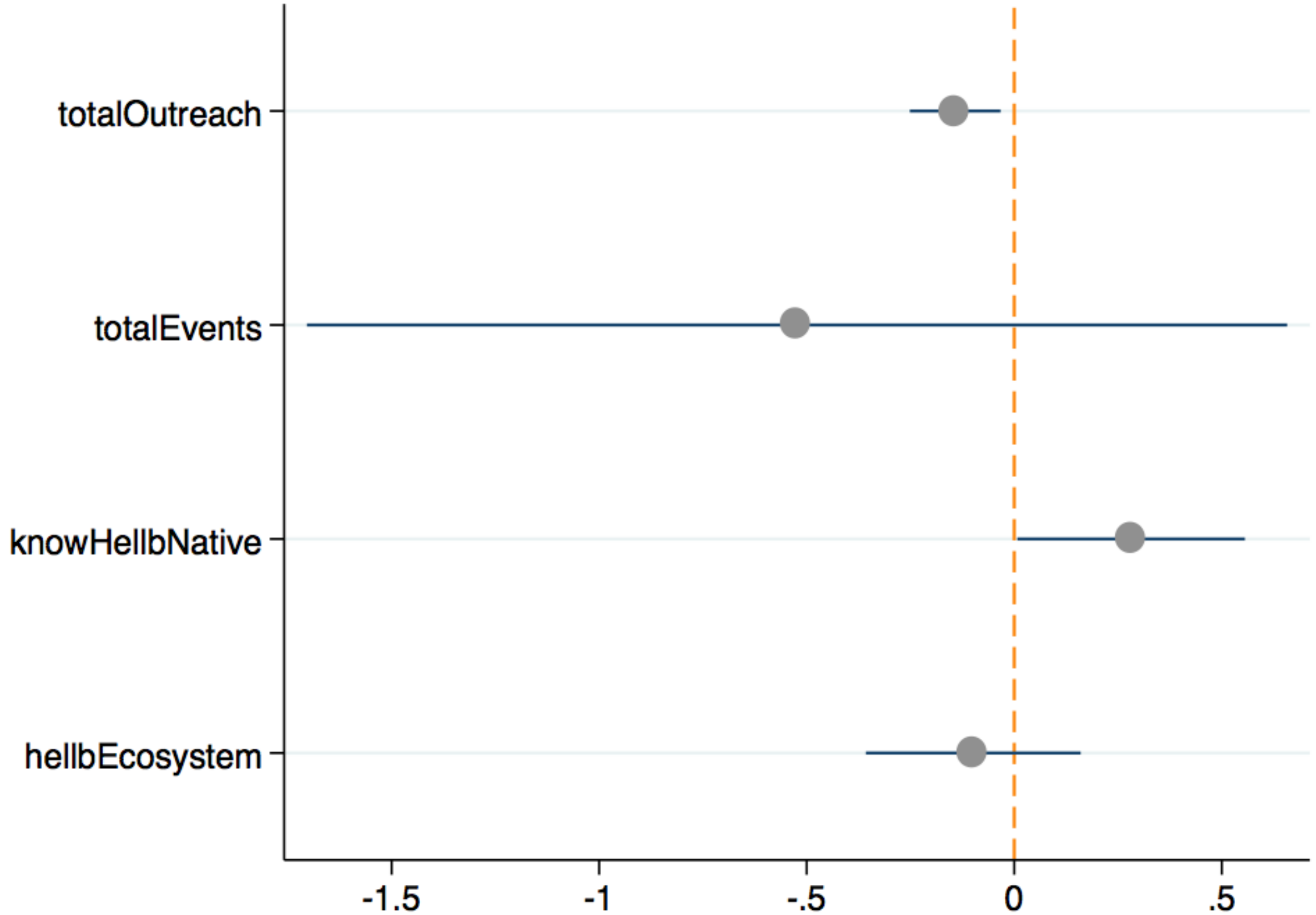
hellbDangerous



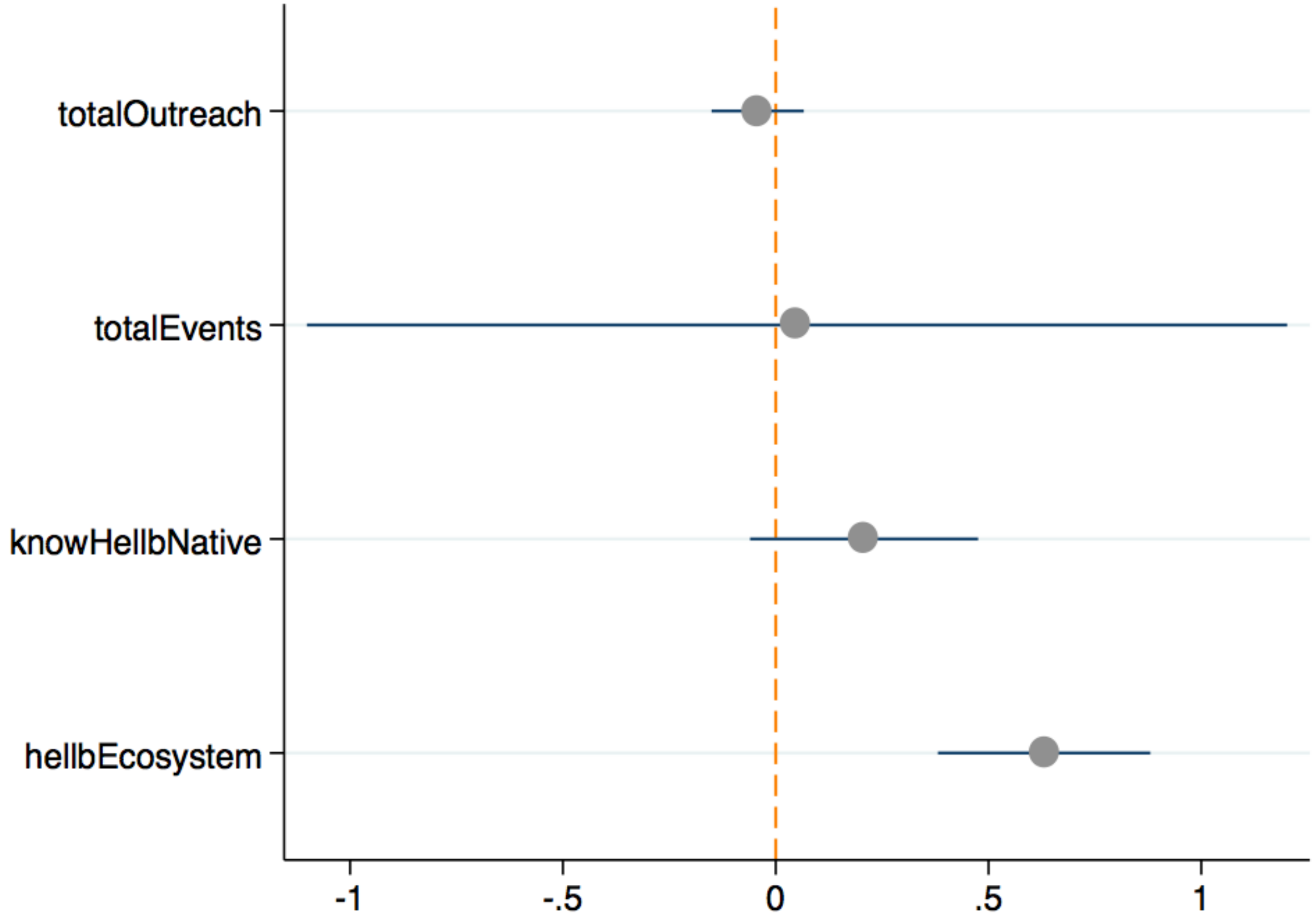
hellbCleanDirty



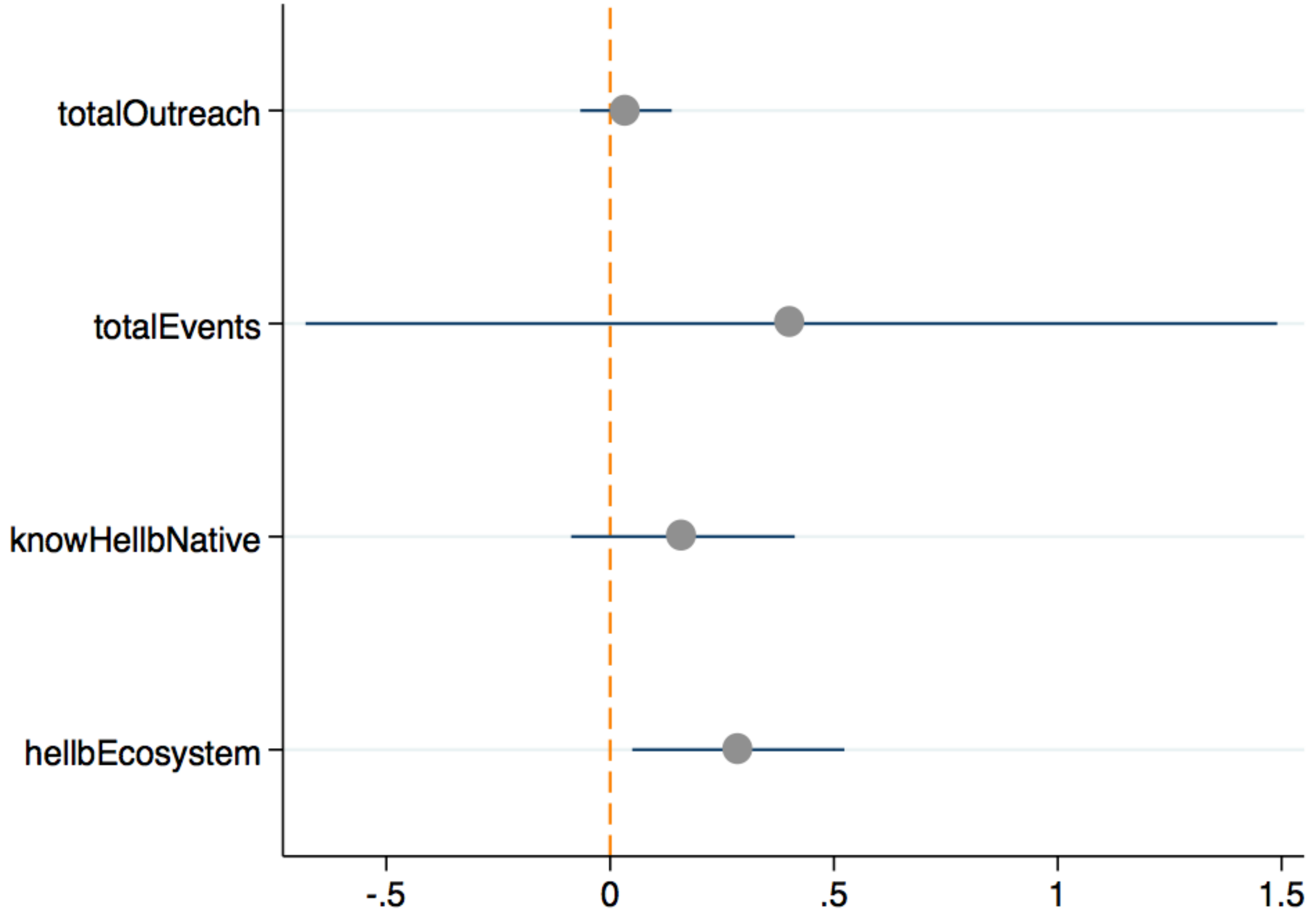
hellbHardy



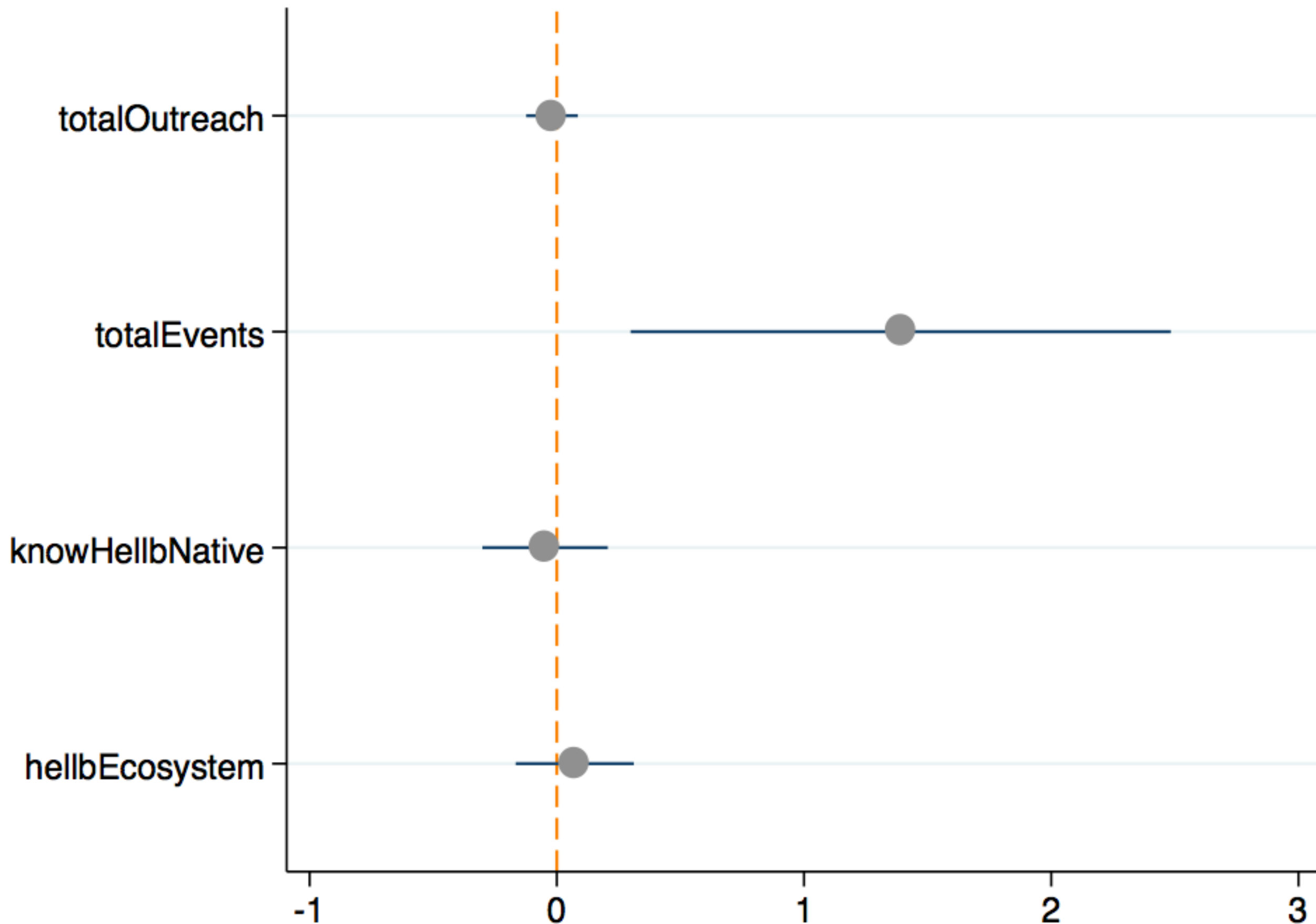
hellbValuable



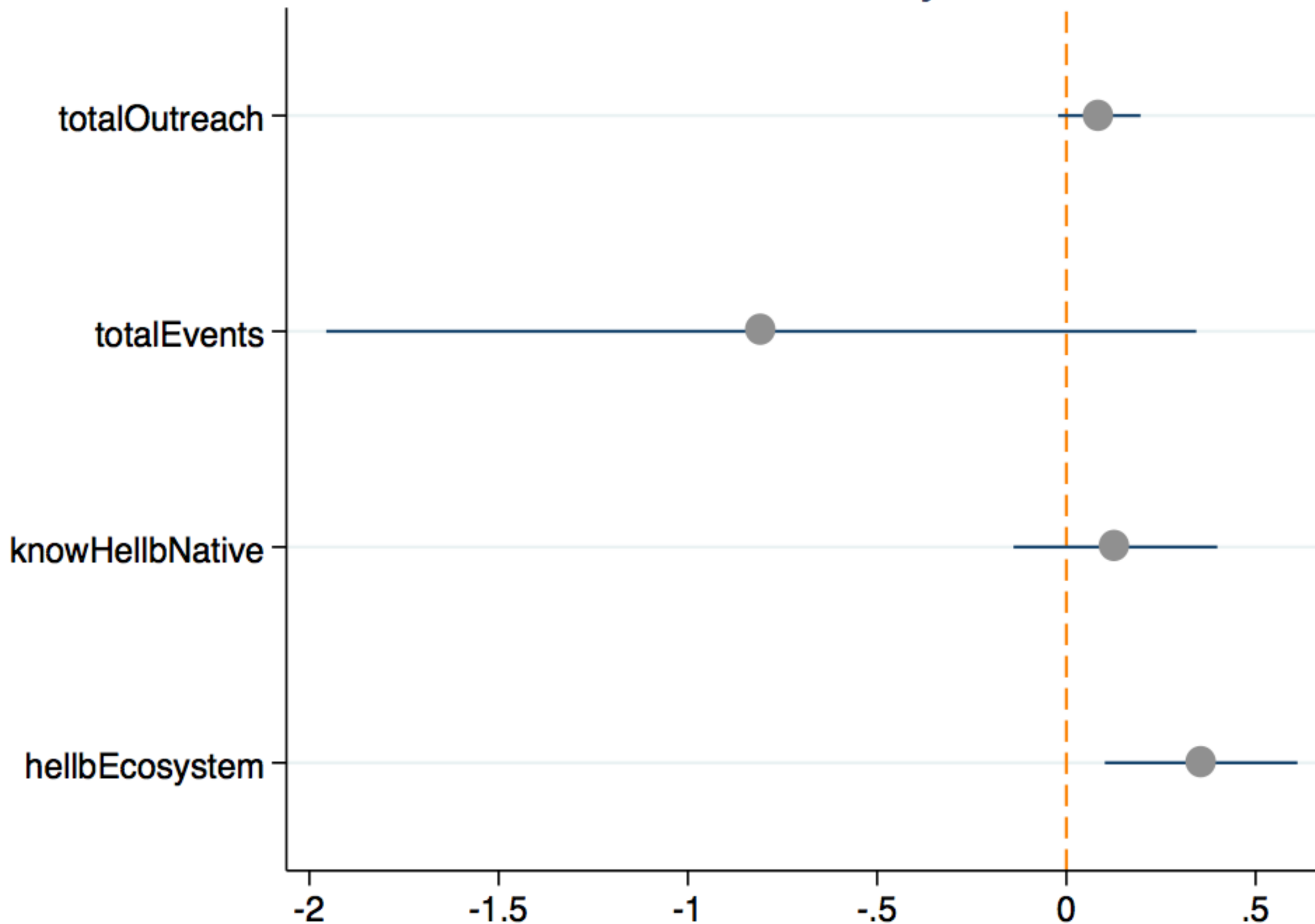
hellbPleasant



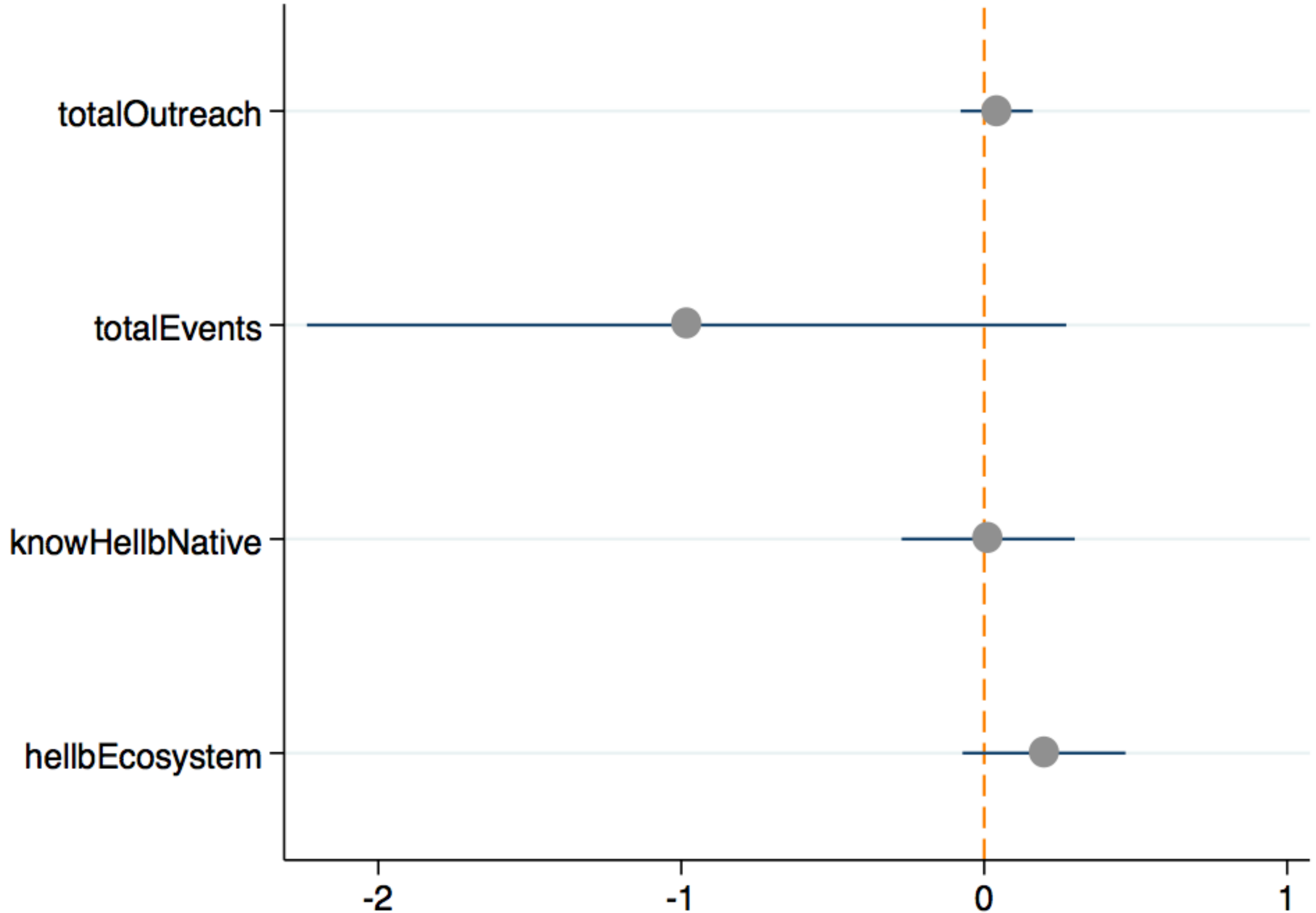
hellbWarmCold



hellbFriendly



hellbBeautifulUgly



hellbGoodBad

