Hawaii Invasive Species Council
Stakeholder Priorities Survey Results
Fiscal Year 2016

Introduction

The interagency Hawaii Invasive Species Council (HISC) requests proposals from government agencies and partners each year in order to support projects that strategically fill gaps between agency mandates and/or advance our knowledge through research and tool development related to invasive species prevention, control and outreach. To inform the proposal evaluation process in Fiscal Year 2016 (FY16), HISC support staff conducted a survey to gather stakeholder input on current issues that should be prioritized for funding. The results of this survey, presented here, will be incorporated into the FY16 Call for Proposals and utilized in the preparation of a recommended budget to be presented to the HISC.

Survey Methods

The FY16 priorities survey presented 17 potential priority topics to be scored by respondents on a scale of importance (Unimportant, Somewhat Unimportant, Neutral, Somewhat Important, Very Important). The 17 suggested topics were based on input received during the preparation of the 2015-2020 HISC Strategic Plan as well as on projects that received funding in previous years. The survey form allowed respondents to note what type of entity they represent, and input any comments or additional topics not represented in the survey's list of potential priorities. The survey form was sent to the stakeholder mailing list maintained by the HISC support staff, which is open to the public and may be joined via hisc.hawaii.gov. At the time of mailing this list included 315 individuals and two listserves (one addressing all state senators and one addressing all state representatives). Of these recipients, 110 individuals opened the email requesting their participation in the survey, and 53 individuals completed the survey (Fig 1). The survey was sent on April 9, 2016 and data were collected for analysis on April 20.

Qualitative responses were converted to quantitative scores as follows: "Unimportant"=-2, "Somewhat Unimportant"=-1, "Neutral"=0," Somewhat Important"=1, and "Very Important"=2. Responses were averaged across all respondents for each topic (Fig 2). A grand mean ($\bar{x}$) and standard deviation (σ) were calculated and utilized to group topics into four priority classes based on the relationship between the a given priority's average score (x) and the grand mean (Table 1):

- Priority 1: $x > (\bar{x} + \sigma)$
- Priority 2: $\bar{x} < x < (\bar{x} + \sigma)$
- Priority 3: $(\bar{x} - \sigma) < x < \bar{x}$
- Priority 4: $x < (\bar{x} - \sigma)$

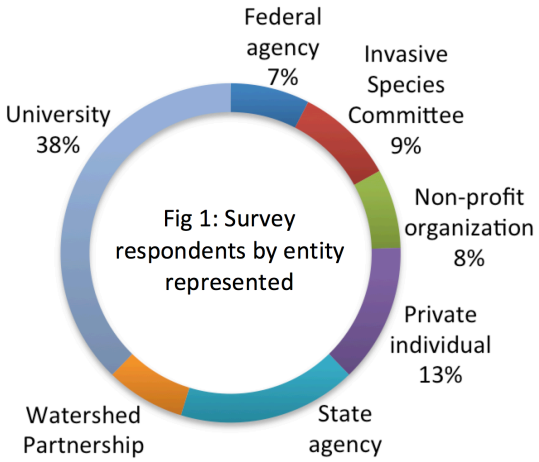
Survey respondents were asked to evaluate the suggested topics in the specific context of interagency HISC funding, i.e., not to consider whether a topic is generally important, but whether it should be a priority for interagency funding by the HISC. Respondents were

reminded of the specific role of HISC funds to fill gaps between agency mandates or expand knowledge through research, rather than replacing core agency functions that are supported by individual department budgets.

Survey Results

Respondents

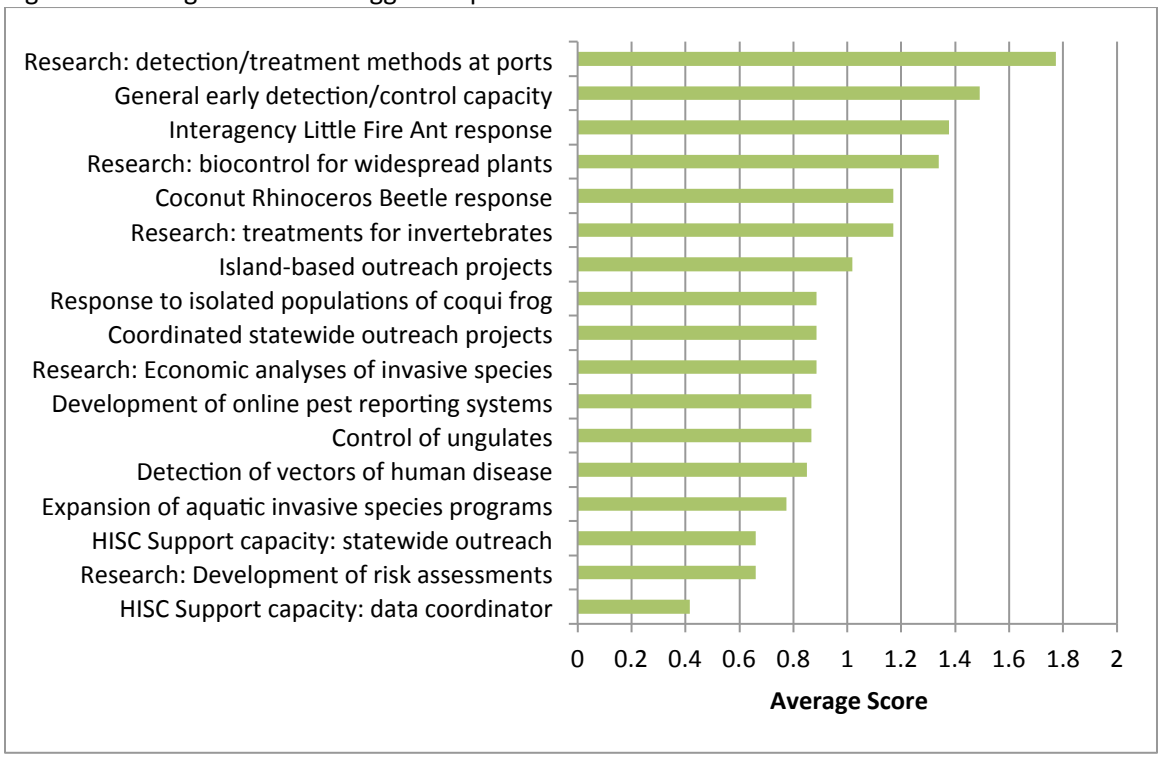
Nearly 40% of the 53 survey respondents were university representatives. As the Invasive Species Committees and Watershed Partnerships (comprising 9% and 8% of respondents, respectively) are projects of the Pacific Cooperative Studies Unit organized under the university's Department of Botany, the total proportion of respondents affiliated with the university is 55%. Of the remaining respondents, 17% represented a state agency other than the university, 7% represented a federal agency, 8% represented a non-profit, and 13% were private individuals. Though presented as an option, no respondents selected their affiliation as "Legislature" or "County agency."



Evaluation of Suggested FY16 Funding Priorities

Of the 17 suggested priorities included in the survey, all received positive average scores (i.e., none were generally considered "unimportant" or "somewhat unimportant").

Figure 2: Average scores for suggested priorities



It is important to note that even the lowest ranked priorities received generally positive scores and were identified as goals and strategies to be pursued by the HISC during the stakeholder input process for the 2015-2020 HISC Strategic Plan.

Priorities were objectively grouped based on the relationship of the average score to the grand mean (the average score across all respondents and topics). Topics grouped as "Priority 1" are those for which the average score was greater than the grand mean by more than one standard deviation. Topics grouped as "Priority 4" are those for which the average score was less than the grand mean by more than one standard deviation. "Priority 2" and "Priority 3" topics are those with scores that are within one standard deviation of the mean (above and below, respectively).

Table 1: Ranked Priorities for FY16 HISC Funding

Group	Topic
Priority 1	Research: Methods for pest detection/treatment at ports of entry
	General early detection/control capacity for incipient plant species
	Interagency Little Fire Ant response
Priority 2	Research: biocontrol for widespread plant species
	Research: new treatment methods for invertebrates
	Interagency Coconut Rhinoceros Beetle response
	Island-based outreach projects
Priority 3	Research: Economic analyses of invasive species impacts and mitigation costs
	Coordinated statewide outreach projects
	Increased response to isolated populations of coqui frog
	Control of ungulates
	Development of online pest reporting systems
	Detection of vectors of human disease
	Expansion of aquatic invasive species programs
Priority 4	Research: Development of risk assessments
	Increased HISC Support capacity: statewide outreach coordinator
	Increased HISC Support capacity: interagency data coordinator

Additional Topics or Comments

Survey respondents provided additional suggestions and comments for consideration, including:

- Better integration of aquatic issues into existing priorities (1 comment)
- Biocontrol, particularly for plant pests such as lobate lac scale and hala scale (2 comments)
- Biosecurity, including a gap analysis, creation of voluntary biosecurity teams, and any action relating to brown tree snake (3 comments)
- Capacity, including increased enforcement and field staff (2 comments)
- Native species, including their protection and their use in roadside restoration projects (3 comments)

- Outreach, including the need for increased public service announcements and the integration of outreach programs at Invasive Species Committees and Watershed Partnerships (3 comments)
- Rat lungworm disease, including research on control methods for disease vectors and increased public outreach (3 comments)
- Technological infrastructure, including implementation of an online reporting system, mobile apps for early detection and identification, and video conferencing for meetings (3 comments).
- New tools, including development of a bird feed containing native plant seeds and new treatment methods for invasive plants (2 comments)
- Control of widespread species, including ungulates, Jackson's chameleons, widespread plants, and the development of a statewide miconia management strategy (5 comments)
- Other comments, including:
    - A need for compassion for invasive species
    - The need for funded projects to publish results in peer-reviewed scientific journals