Evaluation to Advance Science Policy: Lessons from the RISA Programs

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RISA Evaluations Support Science and Policy

- Policy for science – quantifies mechanisms of success and supports decisions about funding priorities
  - Demonstrates program value
  - Establishes effective mechanisms
  - Provides info for course corrections, if needed
  - Helps prioritize program goals with limited resources
- Science for policy - advances participatory science program evaluation
  - Demonstrates how climate science is being utilized in decisions
  - Provides generalizable knowledge about making science usable
  - Contributes to broader field of program evaluation

Evaluation Opportunities and Challenges

- Central opportunity: flexible research governance environment favors the iterative improvement
- Central challenge: to causally link activities to outcomes and impacts

Evaluation Research in the RISA Program

- An explicit evaluation process has been required in RISA proposals since 2011
- Diverse methods include:
  - Program theory-based;
  - Project specific;
  - Interviews, surveys, independent and in-house, statistical analyses, focus groups, network analysis…
  - Assessments within the team, from collaborators, stakeholders, and decision makers.

From Process to Impact: Theory of Action

- Program theory
  - Opinions vary on its appropriate role in evaluation
  - Theories of action/implementation
- Logic models
  - Help to conceptualize, identify, and implement range of metrics
  - Examine multiple steps in underlying reasoning of a program
  - Focus on process and outcomes helps to demonstrate faulty assumptions
  - Potential for monitoring and adaptive management

Action-Logic Model for Pacific RISA

Context

ASSESSING CLIMATE RISKS & VULNERABILITIES

SUPPORTING ADAPTATION STRATEGIES

EVALUATING ADAPTATION POLICIES

EVALUATING PACIFIC RISA PROGRAM

Priorities

PROGRAM GOALS

PROGRAM OBJECTIVES

RESOURCES

LOCAL DYNAMICS

FUNDING AGENCY NEEDS

INTENDED OUTCOMES

Inputs

Investments

staff

time

funding

research & assessment base

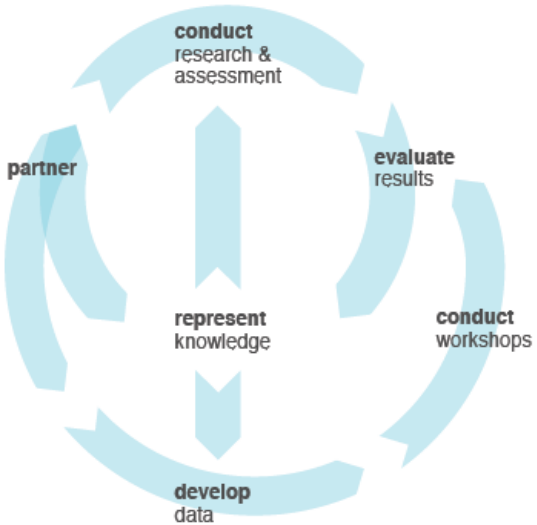
technology

facilities & materials

partners

Outputs

Activities



Participants

resource managers, planners, policy makers
legislators, communities

Outcomes/Impact

SHORT TERM	MEDIUM TERM	LONG TERM
Change in		
attitudes, knowledge, & skills	**behavior & policies**	**situation**
increased awareness of climate-society interactions	robust models	climate-resilient island communities
increased knowledge about risks & vulnerabilities	informed decision-making	
improved skills in using climate information	equitable policies	
	integrated adaptation strategies	

Assumptions

SUPPORT FROM FUNDING AGENCY & PARTNERS

External Factors

ENVIRONMENTAL FACTORS, POLITICAL ENVIRONMENT, ECONOMIC FORCES

Examples of qualitative and quantitative metrics

Component of ALM	Variable or Indicator	Metric
Context/Rationale		
Assessing Climate risks	-Scientific Understanding -Practical Experience	- Model outputs - Qualitative observation - Quantitative change in knowledge via survey
Inputs		
Financial support as planned from NOAA	-Level and continuity of support from funder	-Funding amount requested and received -Expected date and actual date of funding
Outputs		
Workshop research activities	-Interest among stakeholders -Learning and change in knowledge	- Attendance & feedback from post-workshop evaluations - Expressed feedback on learning impacts
Research & Assessments	-Research conducted -Key findings and novel insights -Presentation of findings	-Peer-reviewed publications and other reports -Downloads of publications or website visits -Media coverage generated
Partnerships and collaborations	-Degree, type, and quality of partnership	-Lists of partners and stakeholders -Description of roles and involvement
External Factors		
Progress of State or County adaptation planning	-Type of and/or change in adaptation planning activity	-Existing or planned adaptation plans -Executive or Gubernatorial orders -Regulatory changes
Environmental Factors	-Climate-related extreme events and disasters -Non-climatic environmental problems	-Disaster impacts -Other event impacts (financial, change in public support)
Outcomes		
Short-Term (1-2 yrs)	-Changes in stkhldr knowledge or awareness -Level of trust between scientists, stakeholders, and among partners	-Self reported perceptions of CC importance -Change in reported attitudes -Quality of interactions and self-reported trust

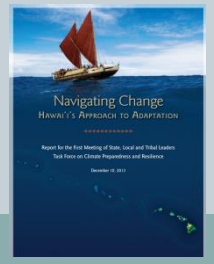
Case Study: External Evaluation of the PIRCA

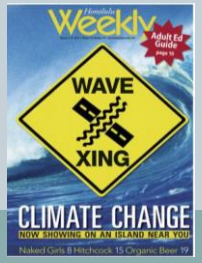
- Background and context:
  - The Pacific Islands Regional Climate Assessment (PIRCA) – report and activities surrounding the regional input to the third US National Climate Assessment
    - Lead role in coordination, writing, editing, and publishing

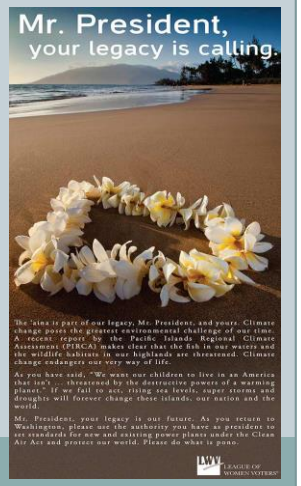
  - Written reports and products
  - Two public fora (Honolulu and Fiji)
  - Specific presentations (to state water management, disaster risk groups, congressional representatives, military, conservation groups, business…)

Event-Based Project Evaluation

- Tracing the role of Pacific RISA in progressing climate adaptation planning via the PIRCA
  - Stakeholder involvement, project reach and influence, perceived credibility, documenting traceable impact in policy.
- Annual in-depth focused external evaluation
  - Exclusive focus on Pacific RISA, Of benefit to ongoing work with stakeholders
  - Useful insights for all PIRCA partners and sustained national assessment process





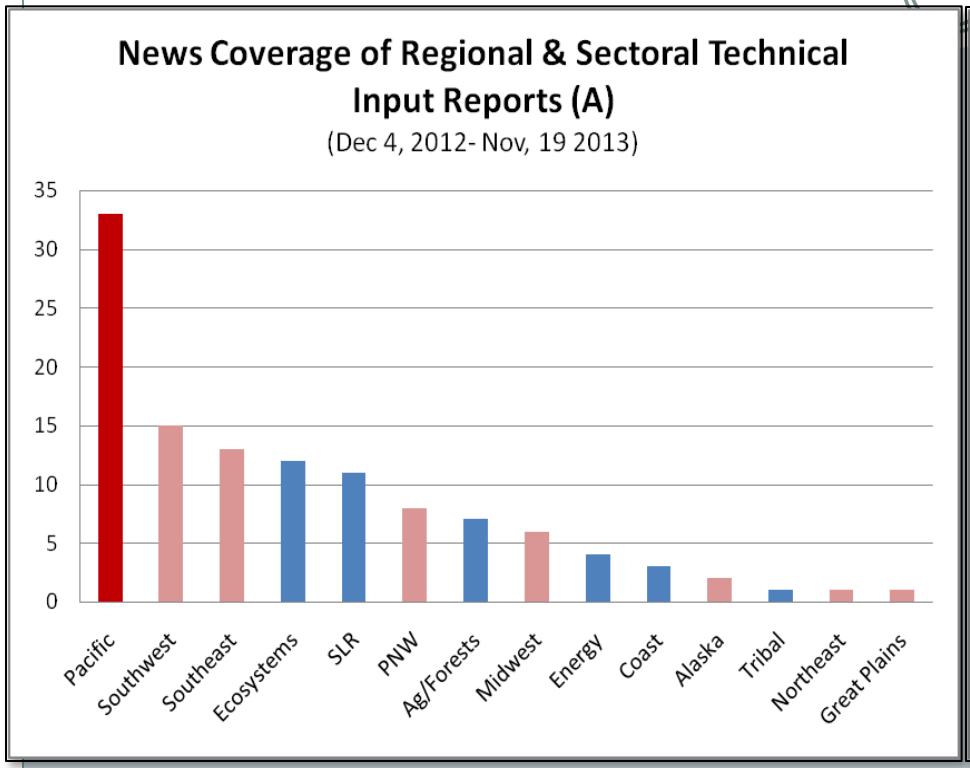


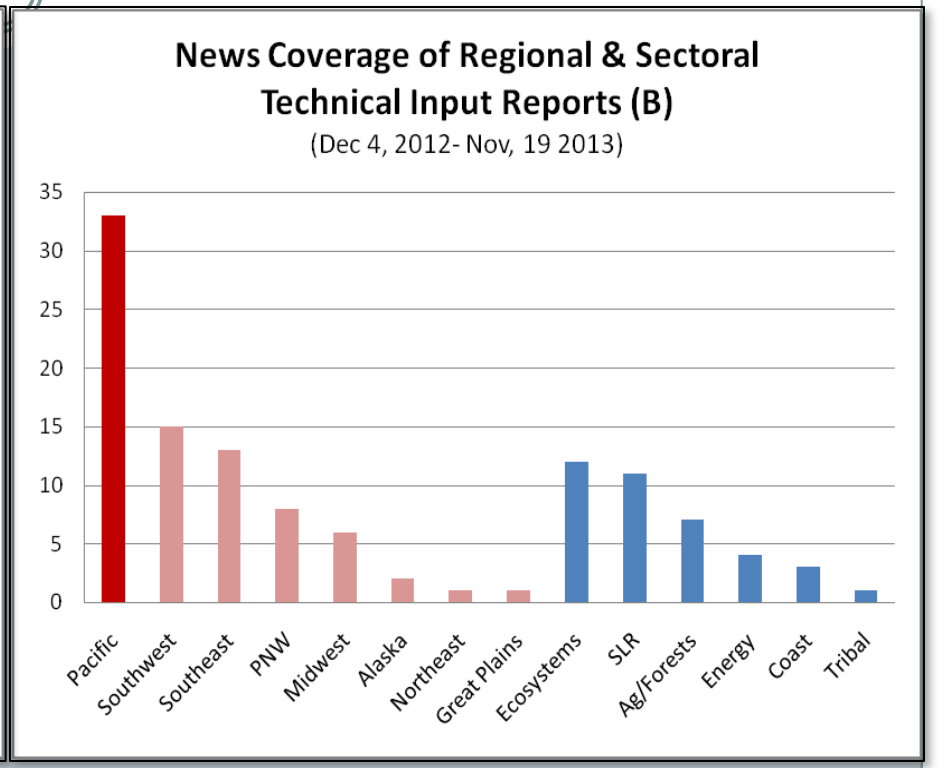
Multi-methods approach – Selected Metrics

Evaluation component	Method/approach
Media analysis (print, TV, radio) collected via Lexis-Nexus, RISA website, NCA media tracking)	Quantitative and qualitative descriptive analysis
Web analysis (online postings, links)	Quantitative and qualitative descriptive analysis
Conference evaluations (Fiji and Honolulu release events)	Qualitative analysis and synthesis of participant evaluation
Survey of PIRCA collaborators, PIRCA mailing list, other individuals (online)	Quantitative analysis of survey responses
Interviews of key informants (state, federal, regional, internatl., NGOs)	Qualitative analysis of recorded telephone interviews with key informants

From: S. Moser, 2013

Comparison of news coverage for technical input reports released to date





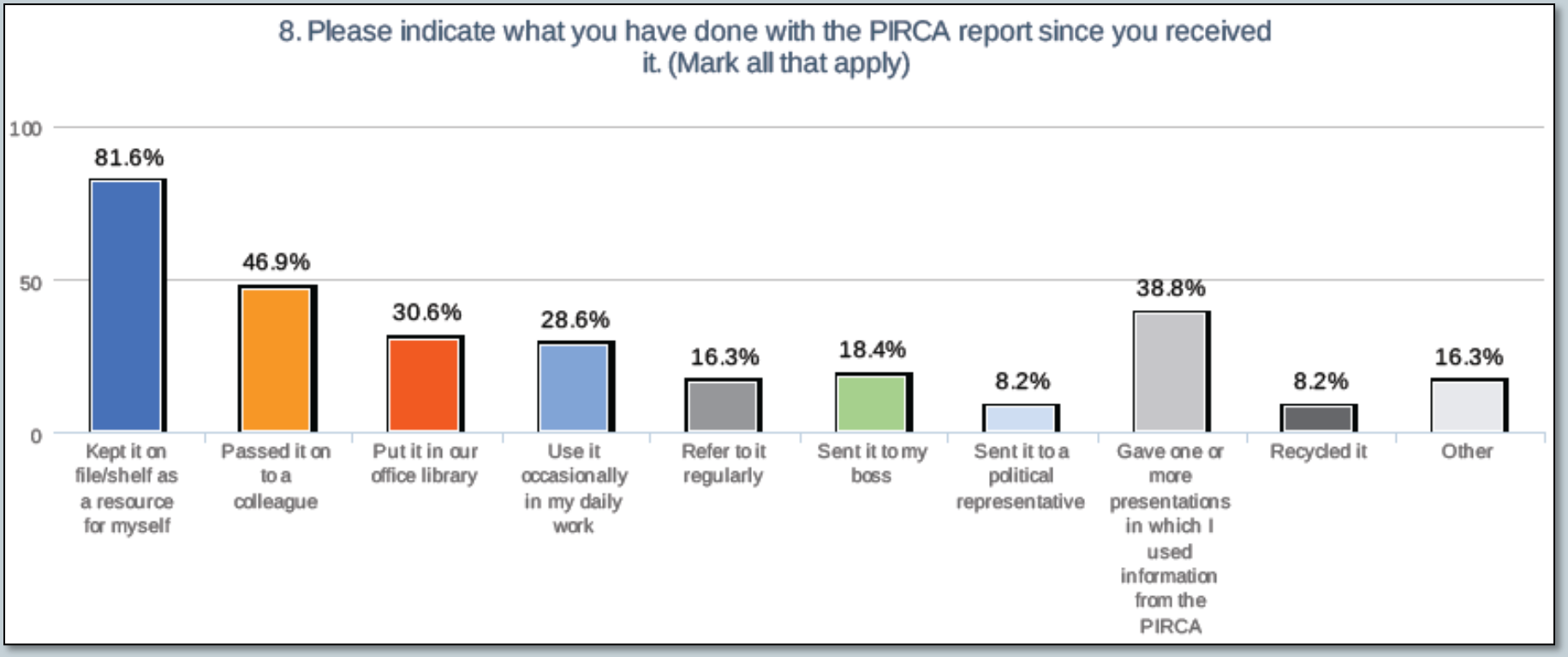
Comparison of (A) All Reports and (B) Regional and Sectoral Reports, in Descending Order

(Source: Combined data of tracked news by E. Cloyd and S. Moser for the PIRCA)

Perceived credibility of the PIRCA

Source: S. Moser, 2013

Use of the PIRCA report



Source: S. Moser, 2013

Evaluation Results – Qualitative and Quantitative Metrics

- Delivered Timely Input to the NCA
- Successful Assessment Process
  - Coalesced a dispersed research community and centralized access to important scientific information
- High Visibility Through Media Work
- Inclusive, Informative and Impactful Outreach
- High-Quality, Useful Information: Salient, Legitimate, and Highly Credible
- **Traceable use**/impact of the PIRCA in state and federal policy-making, state agency planning

Utility of Recommendations

- Quantitative data supports continued investment in the project, process, and especially the role of the RISA
  - For funders, collaborators, participants, and users of the report
- Prioritizes sustained assessment goals and RISA research goals
- Outlines improvements in process from the bottom up
  - Improved outcomes for stakeholders AND Pacific RISA