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SCHOOL OF EARTH, ENERGY
& ENVIRONMENTAL SCIENCES

Strengthening Monitoring and Evaluation in Conservation Adaptation Practice

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National Adaptation Forum

Climate change adaptation increasingly urgent.

“For many regions, climate change impacts are not a distant future event; rather, they are being felt in the present... Moving forward efficiently relies on understanding implementation to date and on documenting past and current efforts and assessing their effectiveness.”

– Editorial, *Nature Climate Change*, November 2021





Evaluating conservation outcomes
has always been difficult.



Climate change adds further
complexity.

Indicators for Monitoring Biodiversity: A Hierarchical Approach

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Abstract: *Biodiversity is presently a minor consideration in environmental policy. It has been regarded as too broad and vague a concept to be applied to real-world regulatory and management problems. This problem can be corrected if bio-*

Resumen: *La biodiversidad es hasta ahora una consideración menor en la política ambiental. Se ha visto como un concepto demasiado amplio y vago para ser aplicado en las regulaciones y el manejo de los problemas del mundo real.*

Increasing investments in nature-based solutions and support for “climate-smart” conservation has elevated interest in tracking progress and assessing outcomes of adaptation efforts.

Monitoring Matters: Examining the Potential of Locally-based Approaches

F. Danielsen

Biodiversity and Conservation

Insight, part of a Special Feature on [Exploring Opportunities for Advancing Collaborative Adaptive Management \(CAM\): Integrating Experience and Practice](#)

Results Chains: a Tool for Conservation Action Design, Management, and Evaluation

Richard Margoluis¹, Caroline Stem¹, [Vinaya Swaminathan](#)¹, Marcia Brown¹, Arlyne Johnson¹, Guillermo Placci¹, [Nick Salafsky](#)¹ and Ilke Tilders¹

ABSTRACT. Every day, the challenges to achieving conservation grow. Threats to species, habitats, and ecosystems multiply and intensify. The conservation community has invested decades of resources and hard work to reduce or eliminate these threats. However, it struggles to demonstrate that its efforts are having an impact. In recent years, conservation project managers, teams,

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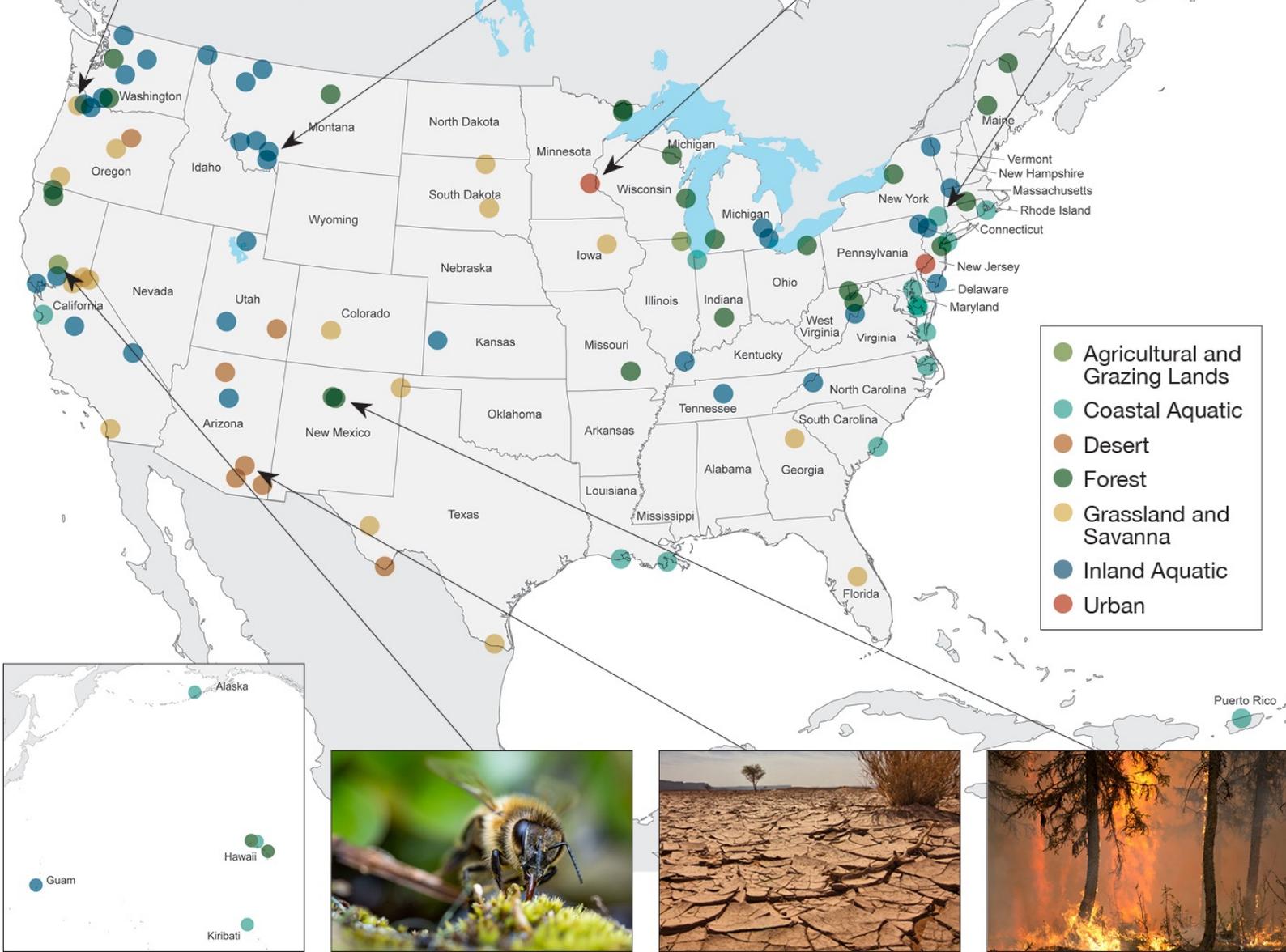
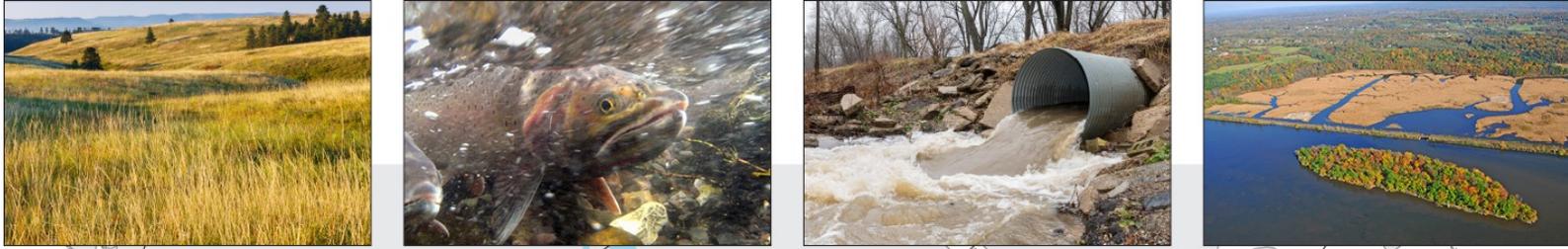


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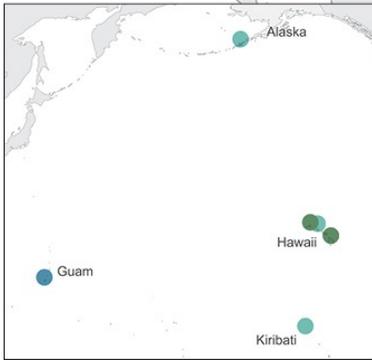
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Oakes, L.E., Cross, M., and Zavaleta, E. (2021) A rapid assessment to facilitate climate-informed conservation and nature-based solutions. *Conservation Science and Practice*.



St-Laurent, G.P., Oakes, L.E., Cross, M., and Hagerman, S. (2022). Flexible and comprehensive criteria for evaluation climate change adaptation success for biodiversity and natural resource conservation. *Environmental Science and Policy*.



- **How experts in the field of adaptation perceive/define adaptation success**
- **The range of criteria for evaluating success in adaptation**



Oakes, L.E., St-Lauren, G.P., Cross, M.S., Washington, T., Tully, E., and Hagerman, S. (In Press) Strengthening monitoring and evaluation of multiple benefits in conservation initiatives that aim to foster climate change adaptation. *Conservation Science and Practice*.



- **Use of best practices**
- **What practitioners are monitoring and how**
- **Factors enabling more comprehensive monitoring**
- **Practitioner views on what could improve M&E in conservation adaptation**



What is the range of criteria for evaluating success in adaptation?



Delphi process with experts (n=18)

1 Expert interviews

2 1st follow-up online survey

3 2nd follow-up online survey

Expertise:

- Diversified (e.g., social & natural sciences)
- Recognized (e.g., IPCC authors, highly cited academics, leading government scientists).

Criteria for success

Category	Criterion
Use of information	<ul style="list-style-type: none">• Adaptive management• Knowledge• Monitoring & evaluation



e.g., Knowledge: The adaptation project used the best available knowledge (e.g., western science, traditional and local knowledge) at suitable spatial and temporal scales.

Criteria for success

Category	Criterion
Use of information	<ul style="list-style-type: none">• Adaptive management• Knowledge• Monitoring & evaluation
Project management	<ul style="list-style-type: none">• Achievement of objectives• Engagement & communication• Financial & economic• Long-term sustainability• Partnerships• Resources & capacity

e.g., Engagement and communication: The adaptation project consulted, engaged and communicated with relevant stakeholders (i.e., individuals or groups interested in, or affected by, the project) and the general public before, during and after its design and implementation.

Criteria for success

Category	Criterion
Use of information	<ul style="list-style-type: none">• Adaptive management• Knowledge• Monitoring & evaluation
Project management	<ul style="list-style-type: none">• Achievement of objectives• Engagement & communication• Financial & economic• Long-term sustainability• Partnerships• Resources & capacity
Ecological & social outcomes	<ul style="list-style-type: none">• Ecosystem functioning• People & society• Wildlife & natural resources

e.g., Wildlife & natural resources: The adaptation project achieved reduction in the vulnerability and/or increased the adaptive capacity of the targeted wildlife and/or natural resources at suitable spatial scales.

Criteria for success

Category	Criterion
Use of information	<ul style="list-style-type: none">• Adaptive management• Knowledge• Monitoring & evaluation
Project management	<ul style="list-style-type: none">• Achievement of objectives• Engagement & communication• Financial & economic• Long-term sustainability• Partnerships• Resources & capacity
Ecological & social outcomes	<ul style="list-style-type: none">• Ecosystem functioning• People & society• Wildlife & natural resources
Advancing the field of adaptation	<ul style="list-style-type: none">• Capacity building• Innovation• Mainstreaming of adaptation• Rules & policy

e.g., Mainstreaming of adaptation: The adaptation project led to the scaling-up and mainstreaming of adaptation actions within the organisation(s) involved in its design and implementation and/or into the broader field of practice of conservation and management of natural resources.

Criteria for success: flexible and context-dependent

Category	Criterion
Use of information	<ul style="list-style-type: none">• Adaptive management• Knowledge• Monitoring & evaluation
Project management	<ul style="list-style-type: none">• Achievement of objectives• Engagement & communication• Financial & economic• Long-term sustainability• Partnerships• Resources & capacity
Ecological & social outcomes	<ul style="list-style-type: none">• Ecosystem functioning• People & society• Wildlife & natural resources
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Inputs, processes and outputs

Outcomes

Significance

In addition to evaluating adaptation success, the framework presented here could be used in other global contexts.

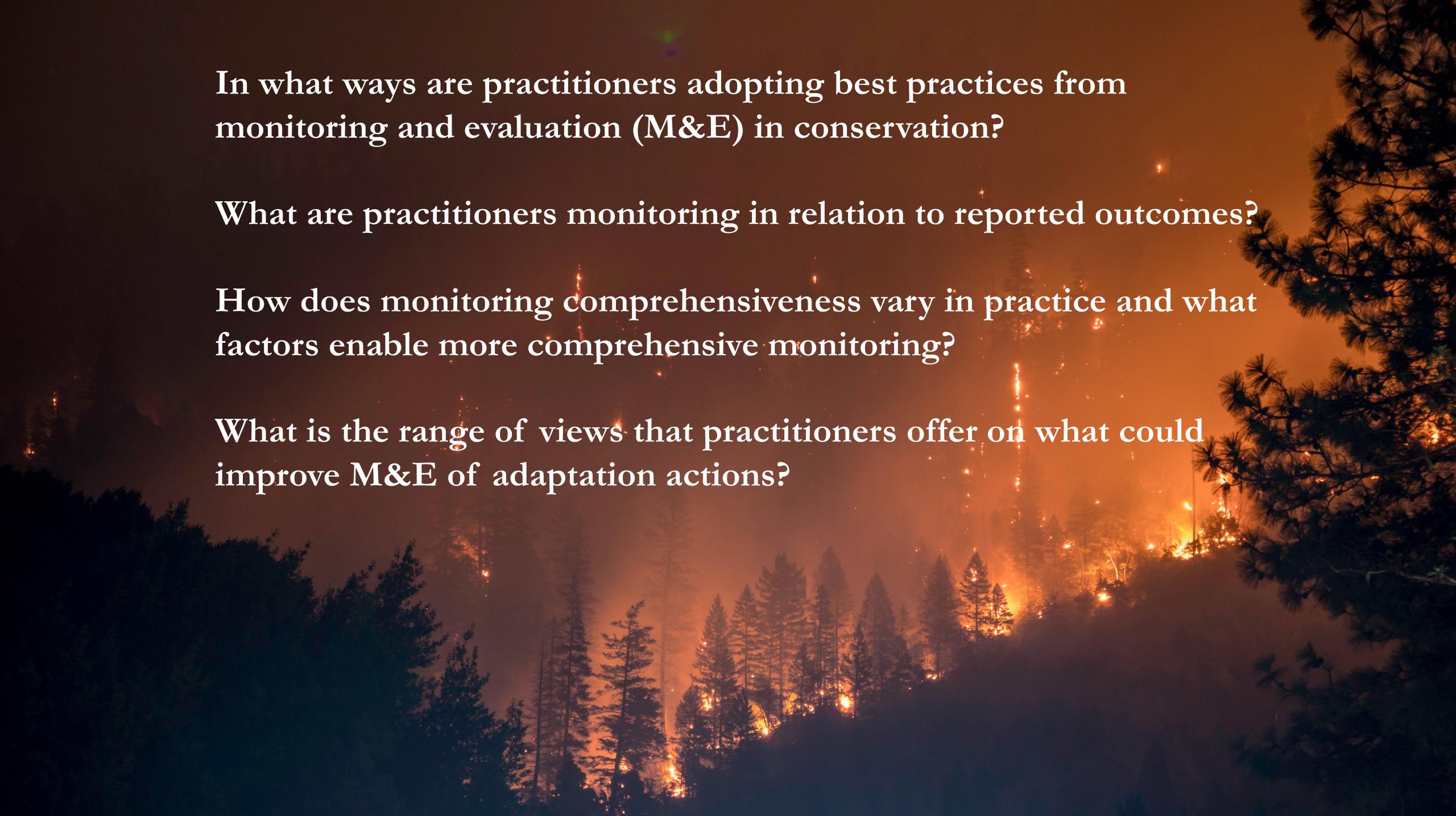
For example, the criteria could help inform the project design process by allowing project managers and partners—including local community members—to identify critical components that should be considered at the outset.

Our Next Steps

Developed questions to guide assessment;
Trialed the framework with our portfolio.



Used select questions from monitoring & evaluation
section for follow-up study



In what ways are practitioners adopting best practices from monitoring and evaluation (M&E) in conservation?

What are practitioners monitoring in relation to reported outcomes?

How does monitoring comprehensiveness vary in practice and what factors enable more comprehensive monitoring?

What is the range of views that practitioners offer on what could improve M&E of adaptation actions?

MIXED- METHODS

1 Document review (n=76)

2 Surveys of grantees (n=30)

3 Follow-up interviews (n=19)



Category	Criterion
Use of information	• Adaptive management
	• Knowledge
	• Monitoring & evaluation
Project management	• Achievement of objectives
	• Engagement & communication
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	• Partnerships
	• Resources & capacity
Ecological & social outcomes	• Ecosystem functioning
	• People & society
	• Wildlife & natural resources
Advancing the field of adaptation	• Capacity building
	• Innovation
	• Mainstreaming of adaptation

A few highlights from results

Use of best practices

- **66% of projects** described elements of a theory of change, conceptual model, or results chain within their monitoring plan.
- **But only a third of those projects (21% overall)** clearly detailed linkages between inputs, outputs, and outcomes, and closely tied their monitoring plans accordingly.

A few highlights from results

What they're monitoring and how

- (84%) of the 76 projects reported social outcomes at project completion, in addition to ecological outcomes (100%).
- Use of indicators to assess social outcomes clearly lagged.
 - Only 15% planned to collect data related to social outcomes

Monitoring Comprehensiveness

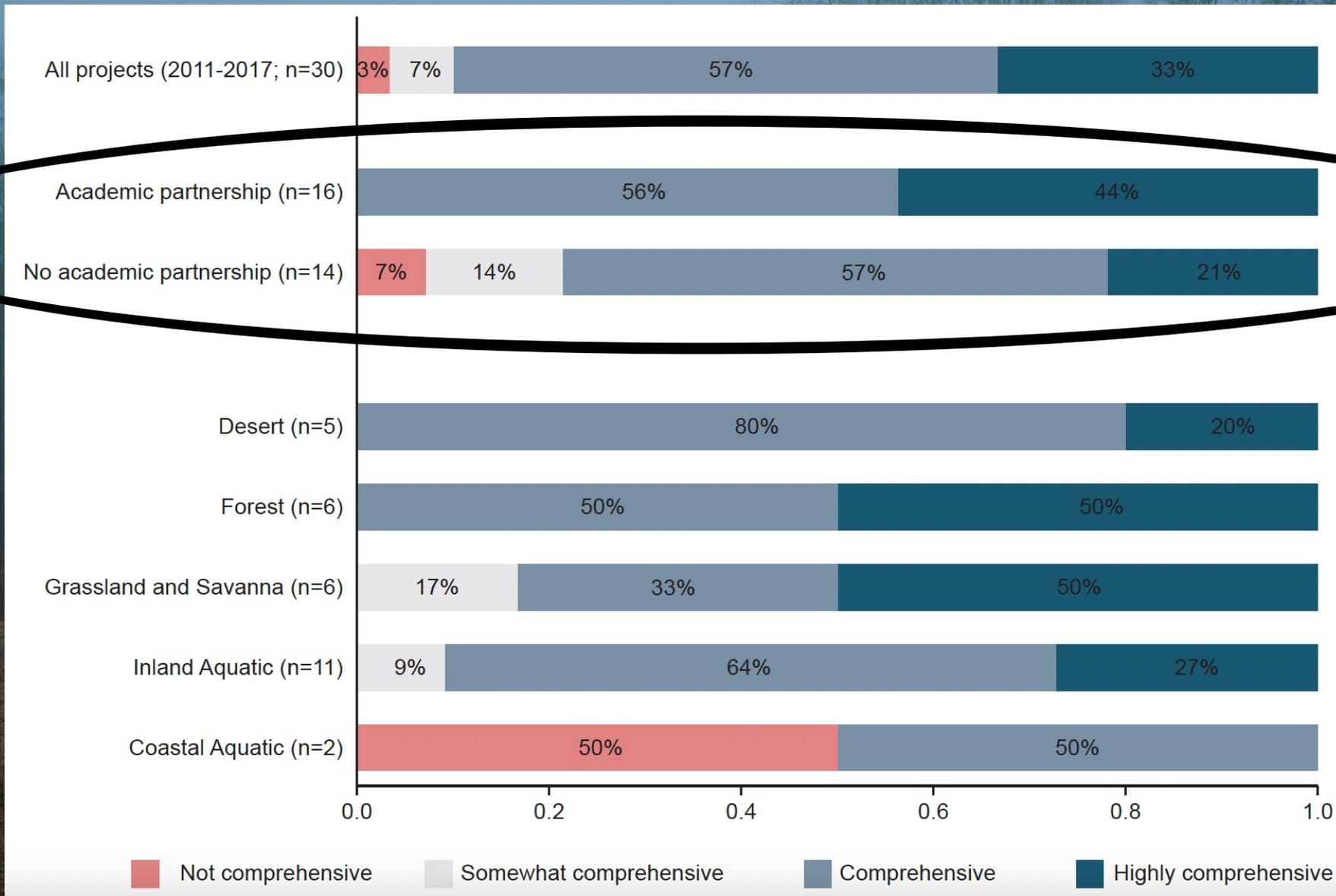
Category	Score (0-2)
Question-driven approach and/or use of theory of change	
Clarity of purpose in planning	
Indicators/metrics	
Baseline data	
Completion of monitoring	
Monitoring after project completion	



Aggregated score

 Highly comprehensive	10, 11, 12
 Comprehensive	7, 8, 9
 Somewhat comprehensive	4, 5, 6
 Not comprehensive	0, 1, 2, 3

Factors associated more comprehensive monitoring



A few highlights from results

- Partnerships were most commonly discussed as the primary enabling factor for comprehensive monitoring efforts and effective monitoring, and interviewees noted a breadth of benefits.
 - e.g., consistency in data collection, bolstering capacity for analysis, rigorous design, more people engaged in adaptation

**What could
improve
M&E in
adaptation**

Practitioners	Funders
Develop partnerships early and leverage partnerships (e.g., additional funding and capacity)	Extent project timeline and/or offer continued support for monitoring
Embed monitoring operations as a standard of practice	Increase flexibility to account for learning-by-doing or challenges
Use monitoring for proof-of-concept	Ask monitoring partners to share information directly with funders
Use monitoring for learning-by-doing and adaptive management	Require monitoring and allocate funding directly

Significance

Room for improvement in adaptation & opportunities to learn from conservation practice

- Use of theory of change, results chain, question-driven design
- Better alignment of monitoring to project goals; consider the co-benefits early on
- Develop partnerships early to strengthen monitoring efforts



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