

MSE type	Count
Published (estimated)	110-160
Random Sample	30
Climate Change	11

Figure 1 consists of six horizontal bar charts arranged in a 3x2 grid, comparing the distribution of climate change processes across different stakeholder groups. The x-axis for all charts represents the percentage of respondents (0 to 100). The y-axis lists the stakeholder groups. The legend indicates that dark blue bars represent the 'Random Sample' and light blue bars represent the 'Climate Change' group.

- Process:** Shows the distribution of climate change processes. The 'Climate Change' group shows a higher percentage of 'Scientists' (approx. 85%) and 'Management' (approx. 75%) compared to the 'Random Sample' (approx. 25% and 15% respectively).
- Participants:** Shows the distribution of participants. The 'Climate Change' group shows a higher percentage of 'Scientists' (approx. 85%) and 'Management' (approx. 75%) compared to the 'Random Sample' (approx. 25% and 15% respectively).
- Explicit Objectives Process:** Shows the distribution of explicit objectives. The 'Climate Change' group shows a higher percentage of 'Scientists' (approx. 85%) and 'Management' (approx. 75%) compared to the 'Random Sample' (approx. 25% and 15% respectively).
- Subjective Objectives Process:** Shows the distribution of subjective objectives. The 'Climate Change' group shows a higher percentage of 'Scientists' (approx. 85%) and 'Management' (approx. 75%) compared to the 'Random Sample' (approx. 25% and 15% respectively).
- Explicit Alternatives Process:** Shows the distribution of explicit alternatives. The 'Climate Change' group shows a higher percentage of 'Scientists' (approx. 85%) and 'Management' (approx. 75%) compared to the 'Random Sample' (approx. 25% and 15% respectively).
- Subjective Alternatives Process:** Shows the distribution of subjective alternatives. The 'Climate Change' group shows a higher percentage of 'Scientists' (approx. 85%) and 'Management' (approx. 75%) compared to the 'Random Sample' (approx. 25% and 15% respectively).

Main Conclusions

DE, Wani, Romain Loefer, and Ernst Thoenes. 2019. *Figulorum: Fugitate the Mind Output of R Markdown with Cn for Print*. <https://www.r-project.org/doc/2019-05-figures/>.

Figure 3: Who guided, participated in, or provided input during the specified steps of the MSE process

Use of management strategy evaluation to inform in fisheries management in a changing climate

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Abstract

Management strategy evaluation (MSE) is "widely considered to be the most appropriate way to evaluate the trade-offs achieved by alternative management strategies and to assess the consequences of uncertainty for achieving management goals". Thus, MSE is a compelling tool to address the impact of climate change on fisheries management. We reviewed MSEs that consider climate change as a system driver, reviewing MSE publications in terms of the completion and documentation of the steps in the structured decision making process. We record who participated in MSE processes and the roles participants played, as well as how the problem, objectives, alternatives, consequences, and trade-offs were elicited and considered. We also review whether the MSE results were utilized for decision making in the modeled fisheries. We highlight lessons learned from these exercises and unique aspects of MSEs that model climate change as a driver relative to a sample of MSEs that do not consider climate change. We also note lessons learned from successful MSEs that do not consider climate change that can be adopted to inform fisheries management in a changing climate.

Keywords:

management strategy evaluation, documentation, review, adaptive management, structured decision making, best practice

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