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Risk Assessment Working Group Update

CFMC EBFM Technical Advisory Panel

August 1, 2024

Tauna Rankin

Lenfest Fishery Ecosystem Plan Framework



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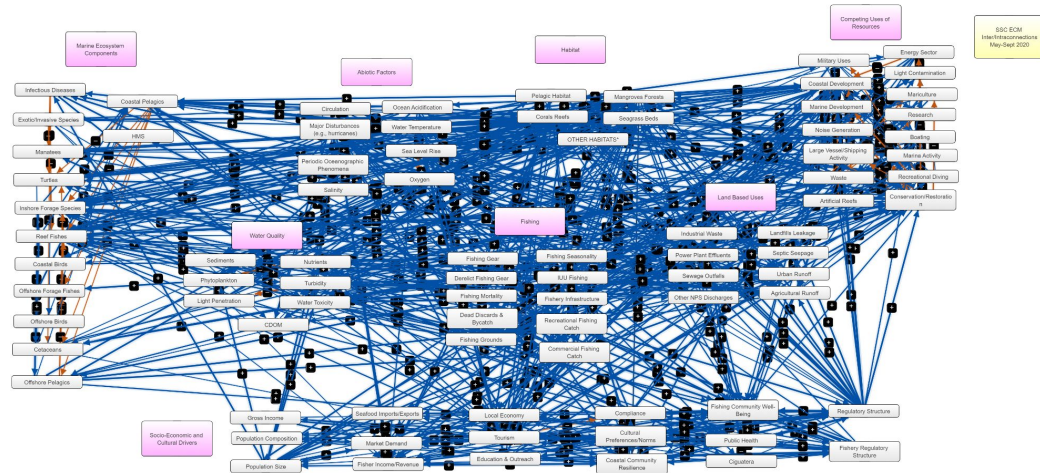
Benefits of Ecosystem Risk Assessments

- Standardized, yet flexible and transparent framework
- Deliberate process for thinking through threats
- Screening out low risk factors of less importance
- Identifying management priorities, including developing and refining strategic objectives
- Capturing uncertainty and informing where data collection efforts should be focused
- Incorporating ecosystem information when evaluating management options or providing management advice



The Complicated Years...

Marguez Community												
Category	Risk Element	Regional Presence (1-5)		Temporal scale of impact (1-4)	Core Management Objective	Secondary Management Objective	Risk Similarity to Marguez Bay (Y/N)	Risk Similarity to Ocean Habitat areas (Y/N)	Prevalence (1-5) Abundance (3)		Consequence Score (1-5)	Rationale
		1	2						Intensity Score (1-5)	Confidence Score (1-5)		
4	Increased storm frequency & duration of SST above highest				1	2	3	4	5	6	7	
5	Climate	1	2	3	4	5	6	7	8	9	10	
6	Climate	1	2	3	4	5	6	7	8	9	10	
7	Climate	1	2	3	4	5	6	7	8	9	10	
8	Climate	1	2	3	4	5	6	7	8	9	10	
9	Climate	1	2	3	4	5	6	7	8	9	10	
10	Climate	1	2	3	4	5	6	7	8	9	10	
11	Climate	1	2	3	4	5	6	7	8	9	10	
12	Ecological	1	2	3	4	5	6	7	8	9	10	
13	Ecological	1	2	3	4	5	6	7	8	9	10	
14	Ecological	1	2	3	4	5	6	7	8	9	10	
15	Ecological	1	2	3	4	5	6	7	8	9	10	
16	Ecological	1	2	3	4	5	6	7	8	9	10	
17	Ecological	1	2	3	4	5	6	7	8	9	10	
18	Ecological	1	2	3	4	5	6	7	8	9	10	
19	Fishing	1	2	3	4	5	6	7	8	9	10	
20	Fishing	1	2	3	4	5	6	7	8	9	10	
21	Fishing	1	2	3	4	5	6	7	8	9	10	
22	Fishing	1	2	3	4	5	6	7	8	9	10	
23	Fishing	1	2	3	4	5	6	7	8	9	10	
24	Fishing	1	2	3	4	5	6	7	8	9	10	
25	Recreation	1	2	3	4	5	6	7	8	9	10	
26	Recreation	1	2	3	4	5	6	7	8	9	10	
27	Recreation	1	2	3	4	5	6	7	8	9	10	
28	Recreation	1	2	3	4	5	6	7	8	9	10	
29	Recreation	1	2	3	4	5	6	7	8	9	10	
30	Recreation	1	2	3	4	5	6	7	8	9	10	
31	Recreation	1	2	3	4	5	6	7	8	9	10	
32	Recreation	1	2	3	4	5	6	7	8	9	10	
33	Recreation	1	2	3	4	5	6	7	8	9	10	
34	Recreation	1	2	3	4	5	6	7	8	9	10	
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38	Recreation	1	2	3	4	5	6	7	8	9	10	
39	Recreation	1	2	3	4	5	6	7	8	9	10	
40	Recreation	1	2	3	4	5	6	7	8	9	10	
41	Recreation	1	2	3	4	5	6	7	8	9	10	
42	Recreation	1	2	3	4	5	6	7	8	9	10	



RISK ASSESSMENT Working Group

- Members:

- Orian Tzadik
- Sennai Habtes
- Tauna Rankin (lead)
- Tarsila Seara
- Sarah Stephenson
- Maria Lopez-Mercer
- Adyan Rios

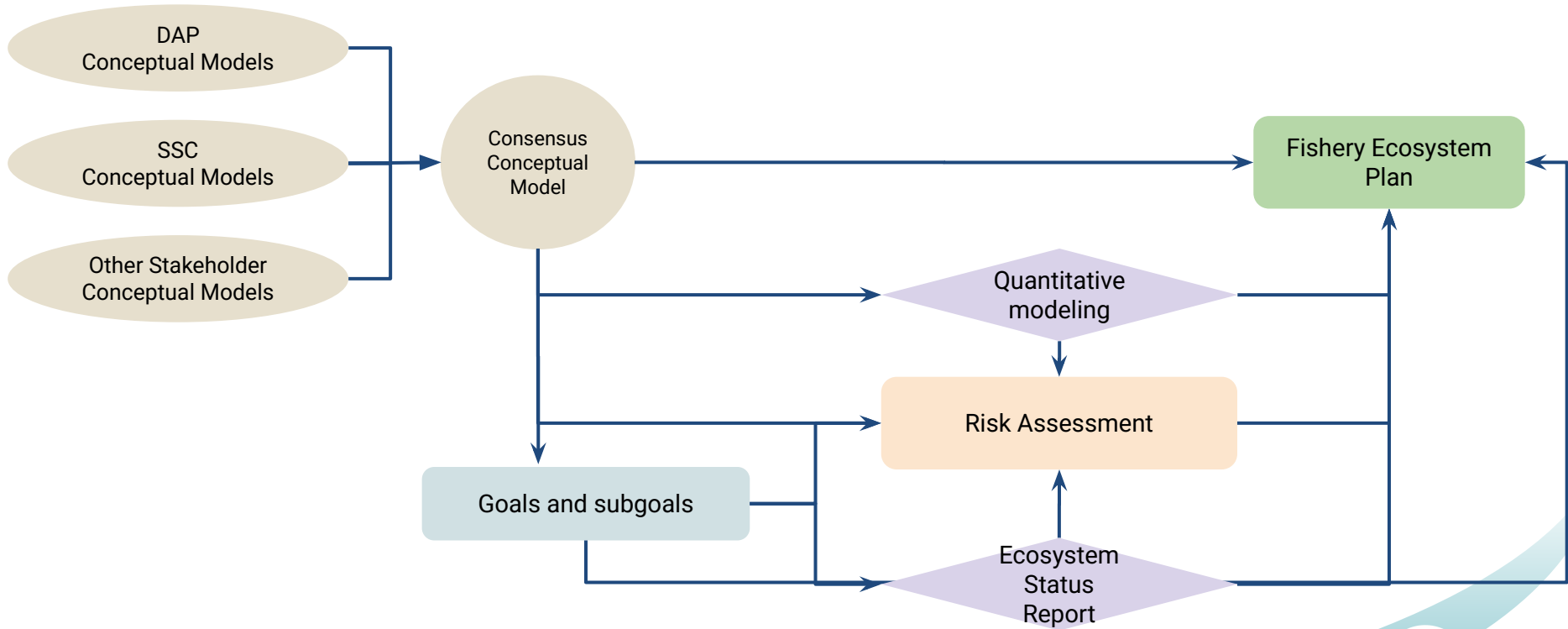
- Tasks:

- Goal: Define the framework for carrying out an ecosystem framework by the Council and how the results can be in decision-making.

- Steps:

- Identify desired elements
- Hire contractor
- Identify risk elements (from conceptual models & past framework), units of analysis (stocks, fisheries, habitats, etc.), and strategic objectives to assess risk against
- Identify available reliable data streams and indicators
- Define thresholds for high, med, low risk
- Draft methodology to carry out risk assessment and decision framework for using results to include FEP
- Conduct pilot risk assessment and report on results (time permitting)

Relevant Products to the ERAQ



Example ERAs

- Ecological Risk Assessment for the Effects of Fishing (ERAEF) - applied to over 30 fisheries in Australia (Hobday et al. 2007)
- NPFMC developed an ERA for the Aleutian Islands FEP (2007) to id and prioritize issues of concern and develop a warning system to monitor ecosystem changes in the region
- MAFMC applied an ERA to focus on the highest risk issues for further evaluation and mitigation, including to prioritize further EAFM analyses (Gaichas et al. 2018, Muffley et al. 2020)
- ERA with bowtie analysis - case study with commercial specie in New South Wales, AU - connects the relationship between management objectives, management controls, threats, potential impacts, and consequences to objectives (Astles and Cormier 2018)
- For more examples see Holsman et al. 2017 and specific to regional fishery management councils (Rankin et al. 2023)

Desired elements of the CFMC ERA

- Includes a framework for how the Council can use the results
- Points out risk factors that the Council can affect/influence
- Includes specific management objectives – for evaluating what is the risk to
- Can accommodate data gaps
- Includes spatiotemporal context (a component of likelihood)

Then the calvary arrived...



Leigh Fletcher



Amy Dempsey

Bioimpact, Inc.



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