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Assessing the Social Value of Gulf of America Fisheries

Pilot Expert Survey

Methodology Review and Discussion

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Purpose and decision sought

Review whether—and how—to refine the pilot for a larger expert-panel application

Decision Sought

Does the SSC support refinement and expansion of this structured expert-elicitation framework?

Today’s Scope

Review the instrument, pilot findings, methodological lessons, and design questions for a future application.

PILOT PURPOSE

Methodological Focus

Serves as a methodological pilot rather than an exhaustive population-level social-value estimate.

SEEKING GUIDANCE ON:

01. Overall methodology

Framework design, measurement approach, and analytical procedures.

02. Engagement of experts

Effective involvement and panel structure for subject matter experts.

03. Direction of future analyses

Scalability and next steps toward a full-scale application.

04. Appropriateness of findings

General suitability and practical utility of preliminary pilot results.



Why assess social value?

Social value can inform species prioritization and regulatory review alongside economic and ecological information

Purpose

Assess the social value of U.S. fisheries to support species prioritization and regulatory review.

Risk/Value Matrix Framework

Combines value categories (commercial, recreational, social) and risk categories (climate vulnerability, ecosystem impact) to classify and prioritize species groups.

NOAA Fisheries Multi-Annual Priority Strategies (MAPS) 2026

Goal 1 (4): Prioritize Key Species

By focusing on the species and fisheries of greatest economic, cultural, or ecological significance.

Goal 2 (7): Revise & Address Regulatory Barriers

Revise regulations and regulatory processes as appropriate, prioritizing fisheries with significant economic or social value.

RISK ↑

High Risk / Low Value

High ecological/vulnerability risk with lower social & economic value ratings.

High Risk / High Value

★ **Priority Focus**
Highest urgency for management & regulatory review.

Low Risk / Low Value

Lower operational risk and lower social/economic value.

Low Risk / High Value

High economic/social value with manageable ecological risk.

VALUE →



Pilot objective

OVERALL PILOT OBJECTIVE

Determine whether structured expert elicitation is a useful approach for assessing the social value of fisheries and, if so, identify the refinements needed before a full-scale application.

EVALUATION CRITERIA

Pilot success is methodological

The pilot is useful if it identifies a workable framework, clarifies limits of the current design, and provides a credible path to a larger expert panel or other approach.

- 01 Develop and test a standardized survey instrument for application across multiple fisheries.
- 02 Evaluate whether the framework produces interpretable descriptive patterns across fishery groups.
- 03 Document respondent familiarity, response availability, and uncertainty.
- 04 Assess whether the approach is efficient, timely, and technically justifiable.
- 05 Identify needed refinements to the instrument, respondent panel, species-group definitions, scoring procedures, and analysis plan.

Pilot methodology

Draws on structured expert knowledge

01 Units of Analysis

- **Eleven species groups** evaluated across Gulf of Mexico fisheries.

02 Criteria

- **Five social value dimensions** assessed.
- Experts evaluated geographic scope, number/diversity of users, and additional criteria.

03 Scoring

- **Likert Scale ranking** applied across all dimensions.
- Structured scoring to capture relative contribution to regional sociocultural value.

04 Implementation

- **Standardized Qualtrics Survey** used for systematic elicitation.
- Streamlined digital instrument for expert input gathering.

05 Context Information

- Experts identified **primary species** informing each rating.
- Provided optional qualitative comments or examples to help interpret ratings.

06 Classification Rule

For purposes of the **Risk/Value Matrix**, species groups are classified as **High Social Value** if they meet a predefined threshold.
(e.g., >60% supermajority of experts rating high)

Scoring Criteria

CRITERIA	DEFINITIONS
Heritage and Traditions	This species is tied to the history of the area. It is central to long-standing customs, ancestral harvests, or rituals that have been practiced for generations.
Community Identity and Connection	This species is a local icon that people are proud of. It brings the community together through clubs, local events, or simply by being a common topic that connects neighbors.
Subsistence Use and Food Security	This species is a vital source of healthy, affordable food. It is relied upon to feed the household or is shared with others in the community to ensure no one goes hungry.
Recreational Well-being (non-commercial)	This species is important for fun, relaxation, and mental health. It provides a reason to get outdoors, de-stress, and enjoy the challenge of the catch.
Teaching and Knowledge	This fishery is used to pass down specific skills or environmental wisdom. It is a way for elders or experts to teach the next generation how to "read the water" and respect nature.

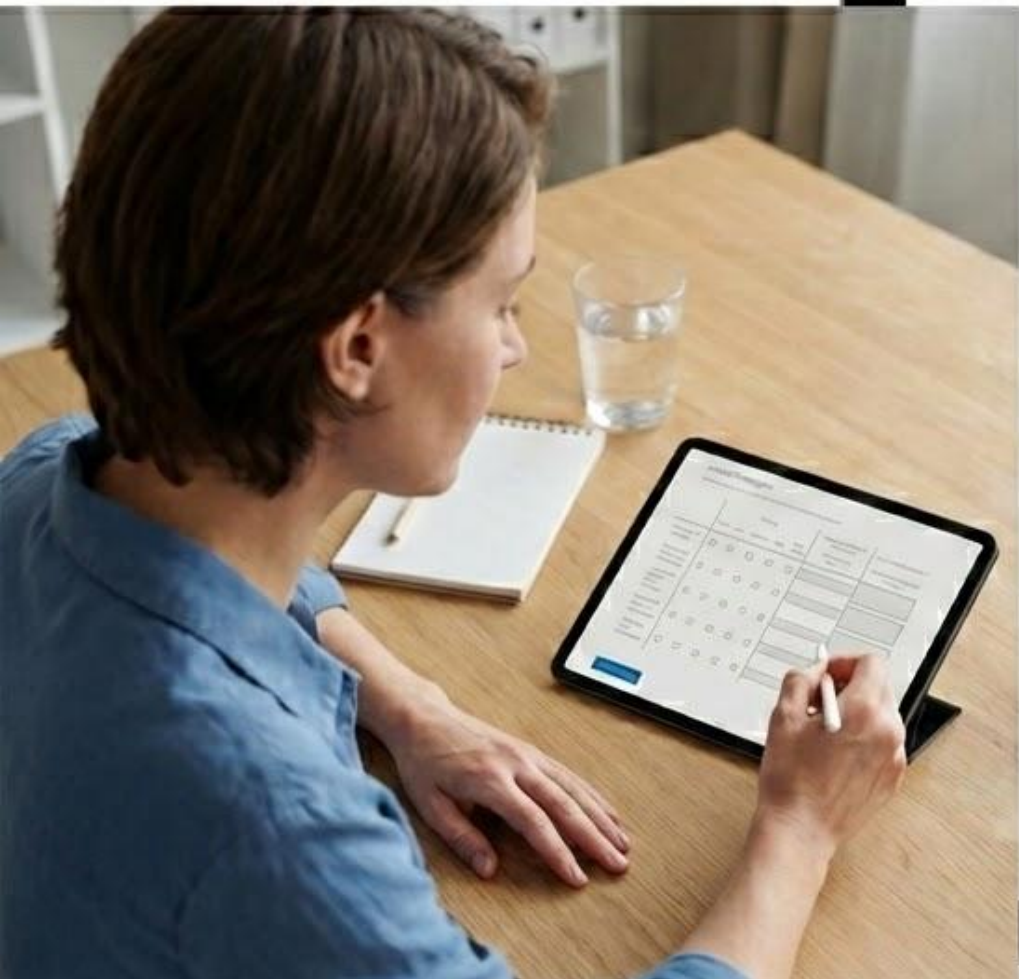
Scoring Criteria

Assign one ranking (none, low, medium, high) based on extent to which species in group contribute to regional sociocultural value. Consider:

-  Geographic scope across the region
-  Number and diversity of communities or user groups
-  Frequency and consistency of recognition or use
-  Cultural depth or identity linkage
-  Degree of substitutability

LIKERT SCALE	
Score	Definition
None (0)	No meaningful contribution at the regional scale
Low (1)	Limited or localized contribution; relevant to a few communities or user groups
Medium (2)	Meaningful contribution across multiple communities/subregions; not broadly defining at the regional level
High (3)	Broad, consistent, regionally defining; central to identity, tradition, or social function

Sample survey page for South Atlantic



Coastal Pelagics:

Species group includes: Cobbi, Mackerels (Bullet Frigate, King Spanish)

	Ranking					Primary species (if applicable)	Click to write Column 3
	None	Low	Medium	High	Don't know	Write species name(s)	Comments/Examples (Optional)
Heritage and Traditions	☐	☐	☒	☐	☐		
Community Identity and Connection	☐	☐	☐	☐	☐		
Subsistence Use and Food Security	☐	☐	☐	☐	☐		
Recreational Well Being (non-commercial)	☐	☐	☐	☐	☐		
Teaching and Knowledge	☐	☐	☐	☐	☐		

Instructions

Queen Conch

Coastal Pelagics: Social Value Analysis

Social Value Dimensions



Heritage and Traditions

→ Medium (2)

Primary species: King mackerel

Comments: Regional kingfish tournaments and seasonal runs are part of coastal fishing traditions, though not as deeply rooted as reef fisheries.



Community Identity and Connection

→ Medium (2)

Primary species: King mackerel

Comments: Important to charter fishing communities and tournament circuits; contributes to local coastal identity in some areas.



Subsistence Use and Food Security

→ Low (1)

Primary species: Spanish mackerel, cobia

Comments: Consumed locally but not a major subsistence species, more relevant for recreational and commercial markets.



Recreational Well-Being (non-commercial)

→ High (3)

Primary species: King mackerel, cobia

Comments: Highly valued by recreational anglers; supports fishing trips, tournaments, and seasonal targeting that contribute strongly to enjoyment and tourism.



Teaching and Knowledge

→ Low (1)

Primary species: Spanish mackerel

Comments: Used to teach basic fishing methods (e.g., trolling), but not a major focus of cultural or ecological knowledge systems.

Analysis Summary

Sample Calculations:

- Heritage and Traditions = Medium (2)
- Community Identity = Medium (2)
- Subsistence = Low (1)
- Recreational Well-Being = High (3)
- Teaching and Knowledge = Low (1)

Total = 9

Overall Rank:



→ **Overall Rank: Medium**

Interpretation:

- 🎣 Strongly driven by recreational value (one high score)
- 🌐 Lacks depth in heritage, subsistence, and knowledge dimensions
- ✓ Lands squarely in the middle overall

Pilot panel and outputs

Fifteen internal experts were invited; seven completed the pilot

Pilot Participation

7 / 15 Completed

Seven internal experts completed the pilot out of fifteen invited participants.

Panel Purpose

Test the instrument and analytical framework.

Note: Not intended to represent the full range of Gulf stakeholders.

Primary Outputs

- Value dimension means
- Cumulative descriptive scores
- Valid-rating counts & missing-response rates
- Qualitative comment summaries

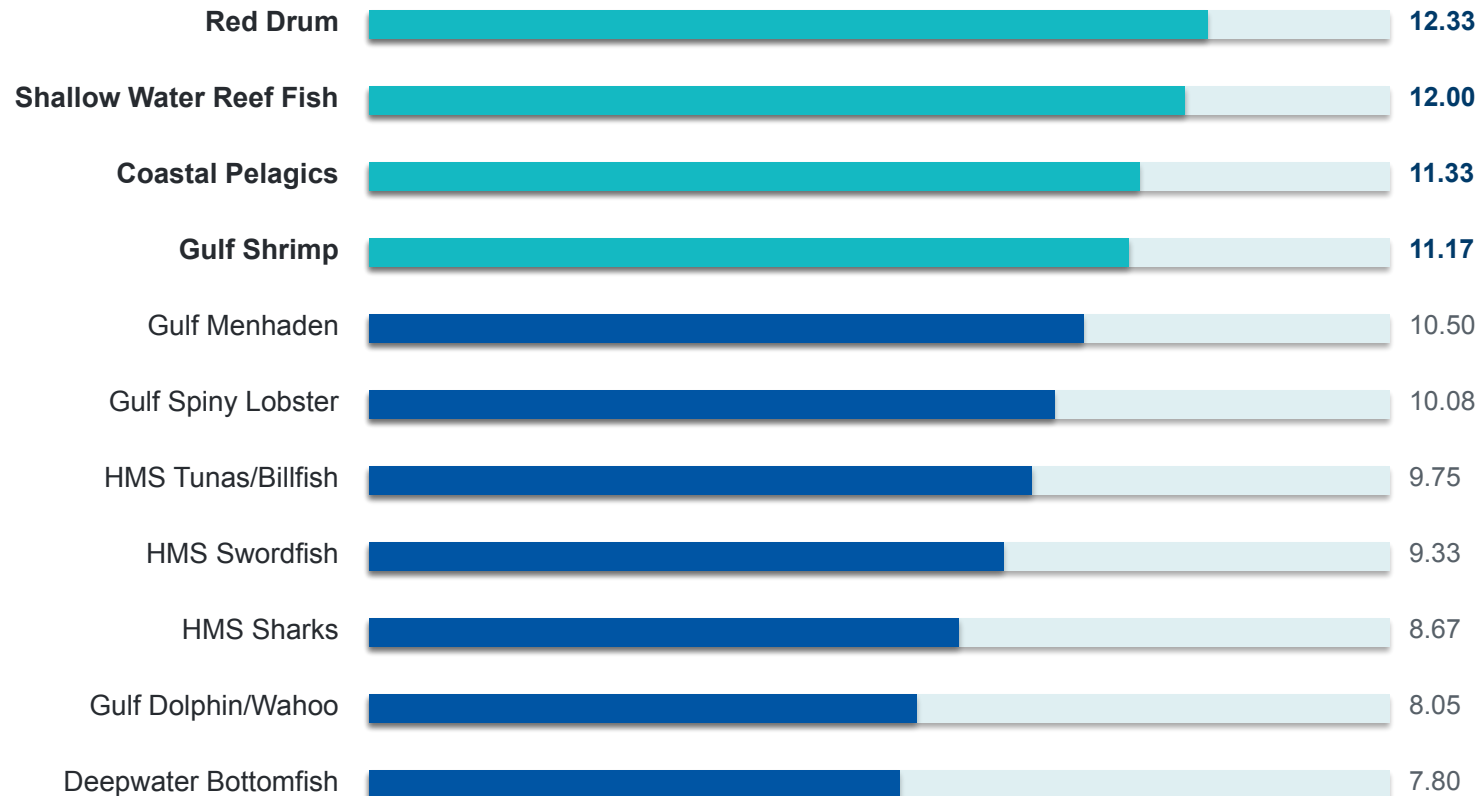
Missing Data Treatment

“Don’t Know” and blank items were treated as missing. No respondent selected “None.”

Missingness is reported as a response-availability indicator.

Pilot results: cumulative scores

Descriptive expert-panel scores; possible cumulative range = 0–15



Interpret cautiously

Scores summarize this pilot panel's ratings; they are not definitive rankings or population-level estimates.

Key Summary

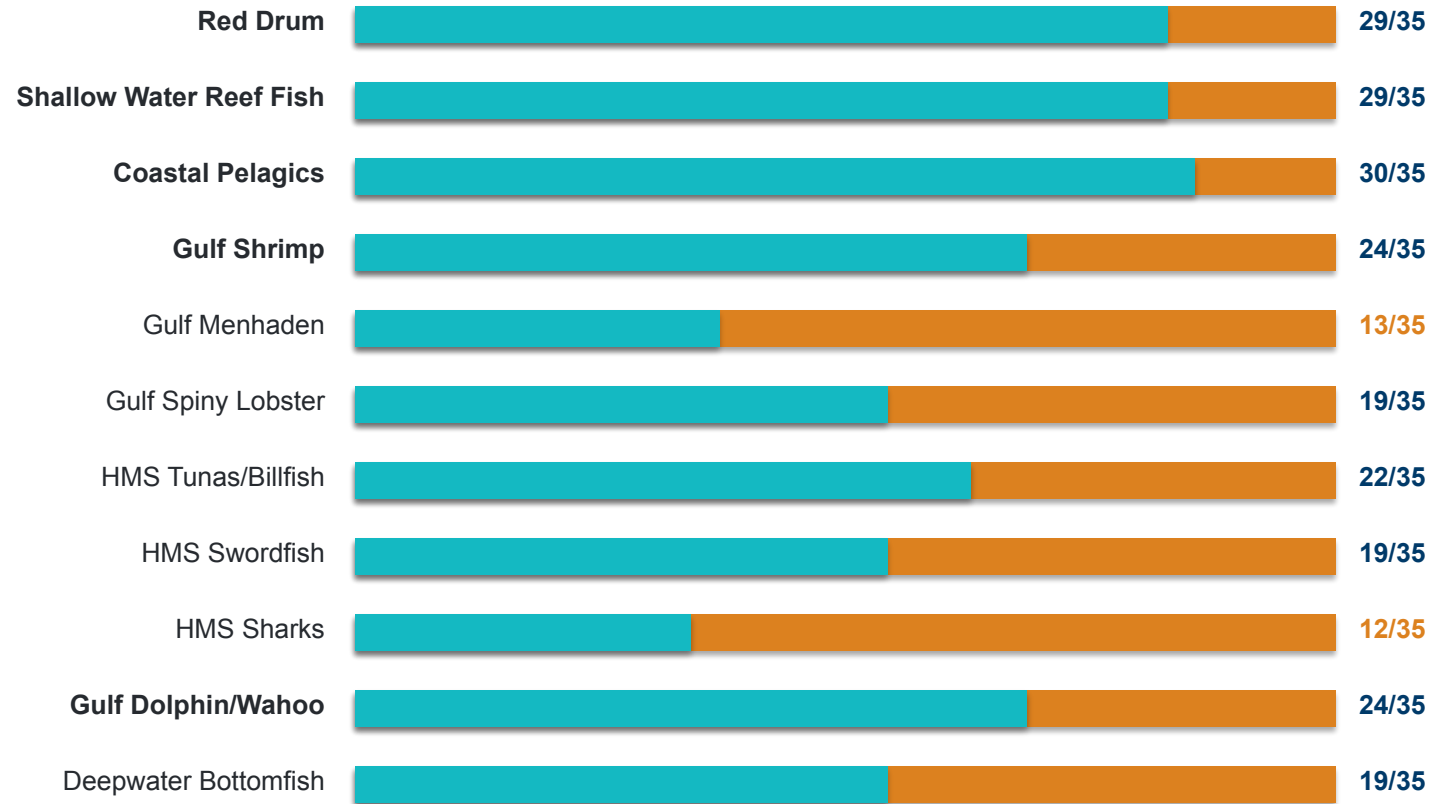
Highest score: **Red Drum (12.33)**

Lowest score: **Deepwater Bottomfish (7.80)**

Cumulative Range: 0 – 15

Pilot results: response availability

Valid ratings out of 35 possible ratings for each group



Teal = valid numeric ratings Orange = "Don't Know" or blank

Key finding

HMS Sharks

12 / 35 valid ratings

Gulf Menhaden

13 / 35 valid ratings

Targeted expertise is needed in a larger panel.

Species Social Value Tiers & Primary Drivers

Summary of species groupings categorized by social-value tier and key social interpretation

Tier 1: Core Anchors

Red Drum
Recreational / Identity

Shallow Water Reef Fish
Subsistence / Recreation

Tier 2: General & Local Anchors

Coastal Pelagics
Recreational Well-Being

Gulf Shrimp
Heritage / Identity

Gulf Menhaden
Subsistence / Bait

Gulf Spiny Lobster
Recreational (Mini-Season)

HMS Tunas / Billfish
Recreational / Charter

Tier 3: Specialized & Niche

HMS Swordfish
Recreational / Tournaments

HMS Sharks
High Uncertainty

Gulf Dolphin / Wahoo
Recreational Well-Being

Deepwater Bottomfish
Teaching (Commercial)

What the pilot illustrates

- Scores and comments point to several social-value pathways
- Fisheries that have broad public access, widespread recreational participation, and recognizable community connections generally received higher cumulative scores.
- Fisheries that require greater offshore range, specialized equipment, or narrower sector-specific knowledge generally received lower cumulative scores and higher rates of missing responses

Broadly accessible groups

Red Drum, Shallow Water Reef Fish, and Coastal Pelagics received relatively high scores. Comments emphasized recreation, access, identity, and intergenerational experience.

Specialized or localized groups

Offshore, HMS, and localized groups generated lower scores or higher uncertainty. This may reflect narrower access, sector-specific roles, or panel familiarity—not absence of social value.

Historical and cultural continuity

Gulf Shrimp scored highly on heritage and community identity, illustrating that cultural importance may persist amid commercial and community pressures.

Use comments appropriately

Comments interpret expert ratings; they should not be generalized as independently verified Gulf-wide facts.

Lessons learned

The pilot provides actionable design information

Framework Performance

Five-dimension framework yielded interpretable summaries.

Data Dependencies

Cumulative scores depend on valid-rating and missing-response data.

Group Framing & Expertise

Broad or specialized groups require clearer framing and targeted expertise.

Response Classification

Maintain a distinct separation between “Don’t Know” and None.

Statistical Rules & Analysis

Predefine statistical rules for future analyses involving repeated expert ratings to assess species group variation and tier separation.



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Larger application: proposed design

Improve expertise coverage and response completeness before expanding the analysis

01

Panel

- Aim for approximately 20–30 completed, purposively selected experts;
- Prioritize coverage across disciplines, fisheries, and Gulf subregions.

02

Instrument

- Review appropriateness of species groups;
- Put “Primary Species” before Scoring
- Target specialized groups to experts with relevant knowledge.
- Sub-regional differentiation?

03

Familiarity

- Add a self-assessed familiarity or confidence ranking for each species group;
- Retain “Don’t Know” separately from blank nonresponse.

04

Analysis plan

- Set clear minimum standards for valid ratings, complete scoring, and how repeated feedback will be analyzed as the panel expands.
- Use suitable analysis to identify meaningful differences in social-value ratings across species groups.



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Proposed next step

SSC-informed refinement before considering a larger application

01



Conclusion

The pilot is a promising first step as a structured screening and scoping tool for organizing expert judgment about social value.

- Working group with South Atlantic and Caribbean Council.
- Ideally national level proposal.

02



Before scaling

Review and refine key methodology elements prior to expanding scope:

- Species-group definitions
- Panel composition
- Familiarity screening
- Response-availability rules
- Analysis plan

03



Requested SSC action

Key guidance needed from the committee:

- Provide methodological feedback and advise
- Prepare a revised instrument
- Develop implementation plan for a larger expert-panel study



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Questions for SSC feedback

Feedback will guide revision of the instrument and a possible larger expert-panel application

01

Dimensions

Are the five dimensions appropriate and comprehensive?

02

Instructions

Are the species groups and regional instructions workable?

03

Familiarity

What minimum familiarity threshold should be required for group-level results?

04

Expertise

Which expertise domains and perspectives are needed for the next panel?

05

Analytics

What outputs and analytical approach best serve Council needs?