EBS Snow Crab Rebuilding Plan

Presentation to the Joint Protocol Committee

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Overfishing and Rebuilding Plans

- Rebuilding of overfished stocks is required by the MSA section 304
  - MSA section 304 and the NS 1 guidelines for rebuilding overfished stocks
- Council must specify a time period for rebuilding the stock (T_{target}) based on being as short as possible taking into account:
  - Status and biology of the stock
  - Needs of fishing communities
  - Recommendation by international organizations in which the U.S. participates, and
  - Interaction of the overfished stock within the marine ecosystem
- Time period shall not exceed 10 year, except where biology of the stock, other environmental conditions, or management measures under an international agreement dictate otherwise

Council Snow Crab Rebuilding Timeline

- **October 19, 2021:** Snow Crab was declared overfished
  - Rebuilding of overfished stocks is required by the MSA section 304 within 2 years (October 2023)
    - MSA section 304 and the NS 1 guidelines for rebuilding overfished stocks
- **June 2022:** The Council selected snow crab rebuilding alternatives for analysis
  - Staff will analyze the impacts of each of the alternatives
- **October 2022 SSC meeting** – establish rebuilding parameters
  - Staff (Jon, Sarah, Doug) will analyze the impacts of each of the alternatives including status quo for an initial review of the snow crab rebuilding plan
- **December Council Meeting 2022:** initial review of the snow crab rebuilding plan and potentially selected a preliminary preferred alternative
- **February 2023 Council meeting** – Council will take final action and select a preferred alternative to recommend to the Secretary of Commerce
  - Following selection of preferred alternative, NMFS prepares proposed FMP amendment text, draft notice of availability, draft Environmental Assessment, and, if required, a draft regulatory package

Alternatives for Analysis

- Alternative 1: No Action
- Alternative 2: Adopt a rebuilding plan and specify a target rebuilding time not to exceed TMAX, as recommended by the SSC. The stock will be considered “rebuilt” once it reaches BMSY.
  - Option 1: No directed fishing until the stock is rebuilt, allow bycatch removals only
  - Option 2: Allow bycatch removals and a directed snow crab fishery under the current State of Alaska harvest strategy

Overfishing and Rebuilding Plans

- The shortest rebuilding time (T_{min}) is calculated based on time frame to rebuild the stock to its MSY biomass (B_{MSY}) in the absence of no fishing mortality (F=0)
  - If T_{min} is $\leq$ 10 years, then the maximum rebuilding time (T_{max}) is 10 years for rebuilding a stock to its B_{MSY}
  - If T_{min} for the stock exceeds 10 years, then one of the following methods can be used to determine T_{max}:
    - T_{min} plus the length of time associated with one generation time for the stock
    - Amount of time the stock is expected to take to rebuild to B_{msy} if fished at 75% of maximum fishing mortality threshold, or
    - T_{min} multiplied by 2

Rebuilding Projections Parameters

- **Rebuilding timeline**
  - The recommended approach for projecting *M*, *R*, and unobserved mortality results in T_{min} = 2029 (6 years from 2023)
  - Since T_{min} is less than ten years, the recommended T_{max} = 2033 (10 years from 2023)

SSC Rebuilding Parameter Recommendations

Rebuilding Projections	BMSY sq
No Fishing	2029
ABC	2031
Bycatch only	2029
State + Bycatch	2029
State - Bycatch	2029