Exceptional Circumstances *DRAFT* Proposal

Red Abalone FMP Project Team Webinar

November 21, 2019

Exceptional Circumstances Proposal

More precautionary management measures may be needed in the face of unusual or extreme environmental conditions
(' **exceptional circumstances** ')
that could drastically impact the red abalone resource

Exceptional Circumstances Proposal

- Part A was added to the management strategy to account for exceptional circumstances

- Part A of the decision tree would evaluate presence of broader scale ecosystem events or impacts, and/or rapidly assess indicators to evaluate any risks that could be detrimental or result in mass mortality of the red abalone resource.

- If no exceptional circumstances are observed, then proceed to Part B (indicator-based decision-tree)

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- Broader-scale ecosystem events and impacts would include:

  - Persistence of large marine heat waves

  - Presence of disease (e.g., withering syndrome)

  - Presence of toxic harmful algal blooms

  - Oil spills

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- Rapid assessment would include an evaluation of pre-determined and justified indicators:
  - Ocean Warming
    - Dissolved oxygen level
    - Ocean temperature
  - Environmental Shifts
    - Kelp abundance
    - Sea urchin density
    - Sea star density
  - Ocean pH/acidification
  - Red Abalone Reproductive State
    - Body condition
    - Gonad condition
    - Presence of empty abalone shells

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- Three potential actions if exceptional circumstances are triggered –

  o Collect more data and continue on to Part B

  o Fishery closed across one or multiple fishing zones

  o Go to Fish and Game Commission for direction on management

  action

Discussion Questions

- Given capacity and cost constraints and current data availability, which three indicators would you suggest we prioritize for monitoring in Part A? Which data streams do we anticipate using?

- Are the indicators under consideration directly or indirectly related to impacts on red abalone health and productivity? Is the mechanism clearly understood or does a clear threshold exist?

- Which exceptional circumstances would trigger closure of all fishing zones and which would trigger closures at the individual fishing zone?

- What could data collection/sampling protocols look like during rapid assessments? Would data sources and sampling entities be pre-defined?

- How do we account for persistence of events like marine heat waves?

- Do you have any insights or concerns about how Part A would function? Would you be interested in serving in an advisory capacity or reviewing a more complete version of this proposal in advance of the draft FMP being presented?