Red Abalone FMP
Management Strategy Integration
Project Update

Marine Resources Committee Meeting
March 2020

Presentation Overview

- Overview of Integration Process
- Management Strategy Evaluation (MSE) Components and Findings
- Admin Team Recommendations
- Next Steps

Overview of Integration Process

Recapping the December 2018 FGC Recommendation

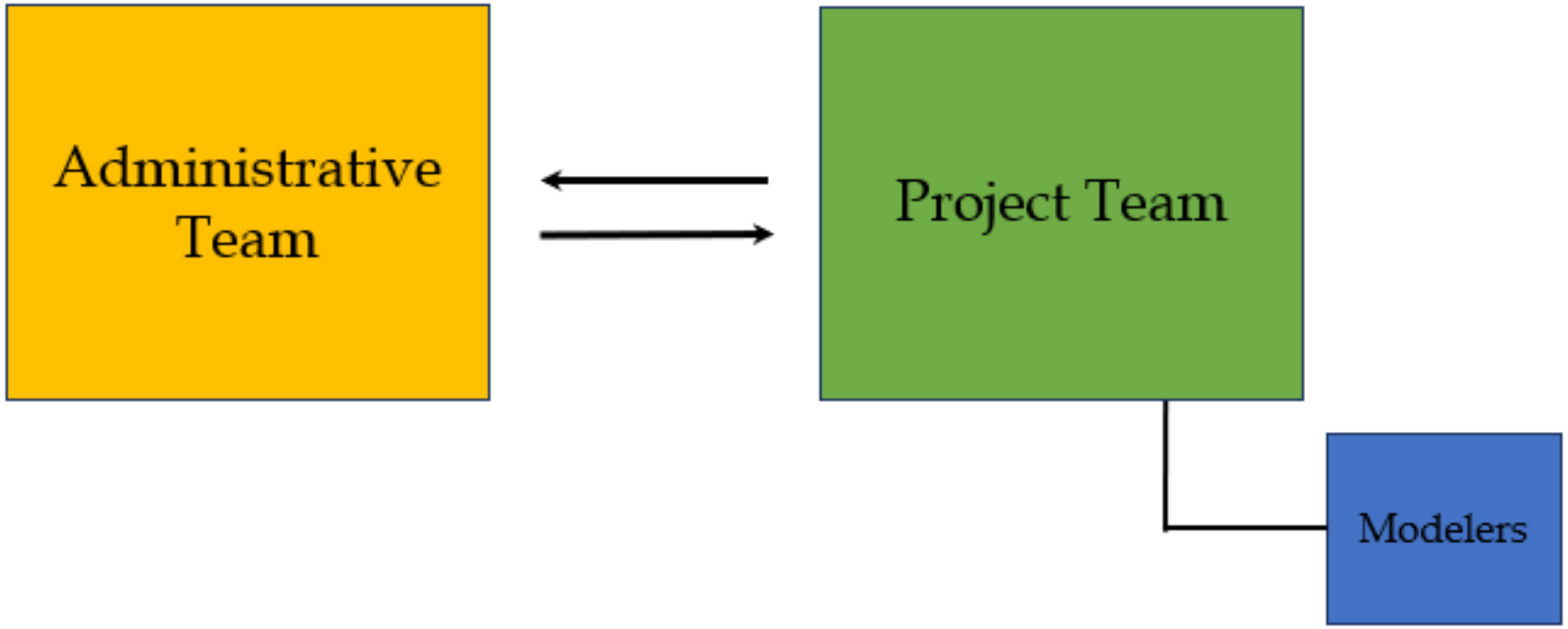
1. Support addressing peer review recommendations to integrate aspects of both draft management strategies, based on a simulation modeling approach co-developed by DFW and the TNC-led stakeholder team, including engagement with abalone divers and other stakeholders

2. Revise FMP goals to allow for a *de minimis* fishery option

3. Develop triggers for the *de minimis* fishery option in consultation with stakeholders

4. Request that DFW develop a proposed process and timeline which accounts for active public and MRC engagement

Management Strategy
Integration Team Structure



Public Engagement During Integration Process

- **Starting January 2019**: Representation included non-governmental organizations (NGOs), academic researchers, recreational and commercial industry, Tribes and Tribal communities, and state and federal agency staff

- **May-December 2019**: Six public facing Project Team meetings (in-person and webinar)

- **May 2019-February 2020**: Opportunity to provide written comment to Admin Team throughout

- **March 2019-April 2020**: Public comment during MRC and FGC Updates

MSE Components and Findings

Management Strategy Evaluation (MSE)

- A simulation modeling approach management strategy provides a framework for optimizing a fishery to achieve desired ecological and/or socioeconomic objectives. It defines a feedback loop whereby information from the data collection program informs an assessment of the resource and/or fishery status relative to established reference points, which results in a change to management action. Performance of these management strategies is then evaluated via simulation testing known as management strategy evaluation

Additional Context

- Modeling work primarily focuses on the rebuilding timeframe to achieve a *de minimis* fishery

- Only a two fishing zone configuration could be explicitly modeled

- All proposed management strategies are structured in two parts -
  1) Exceptional Circumstances and 2) an harvest control rule informed by density and length data

- MSE operating models incorporates environmental variability and uncertainty

Oregon Border

Mendocino/Sonoma County Line

Marin County Line

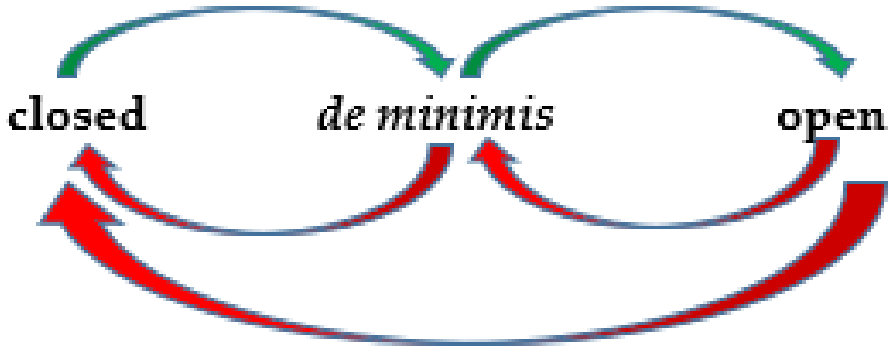
Oregon Border

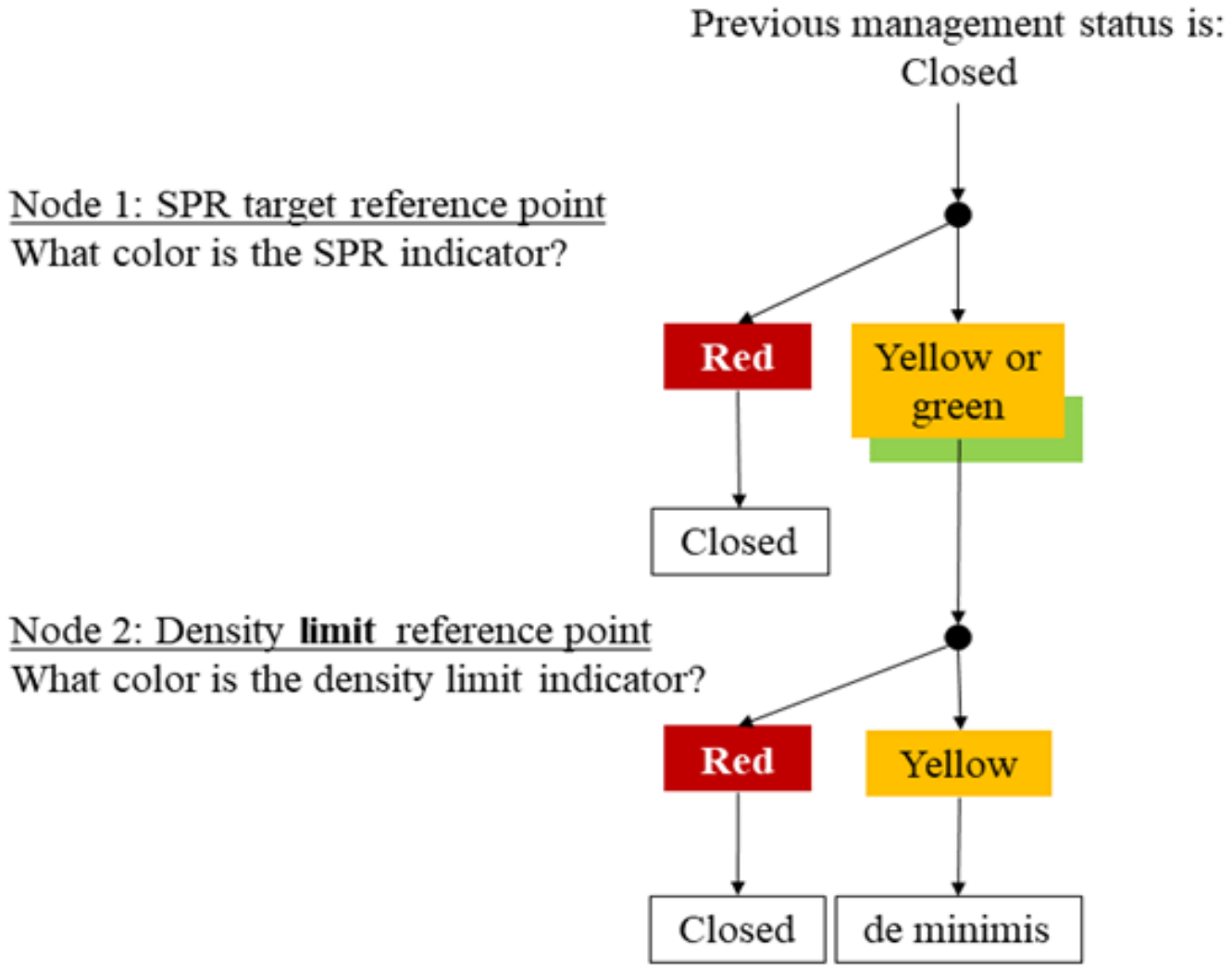
Humboldt/Mendocino County Line

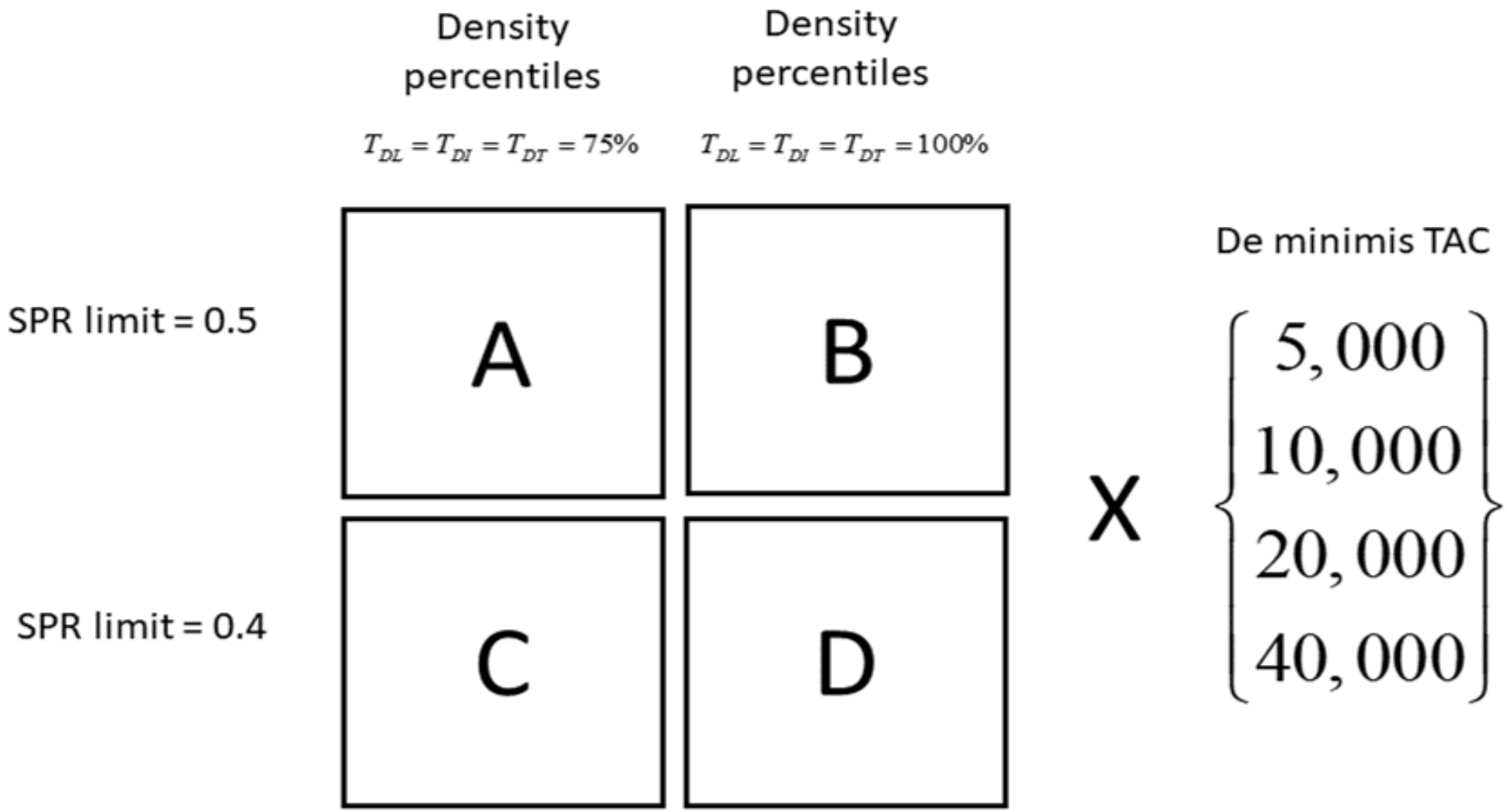
Mendocino/Sonoma County Line

Marin County Line

Management Status

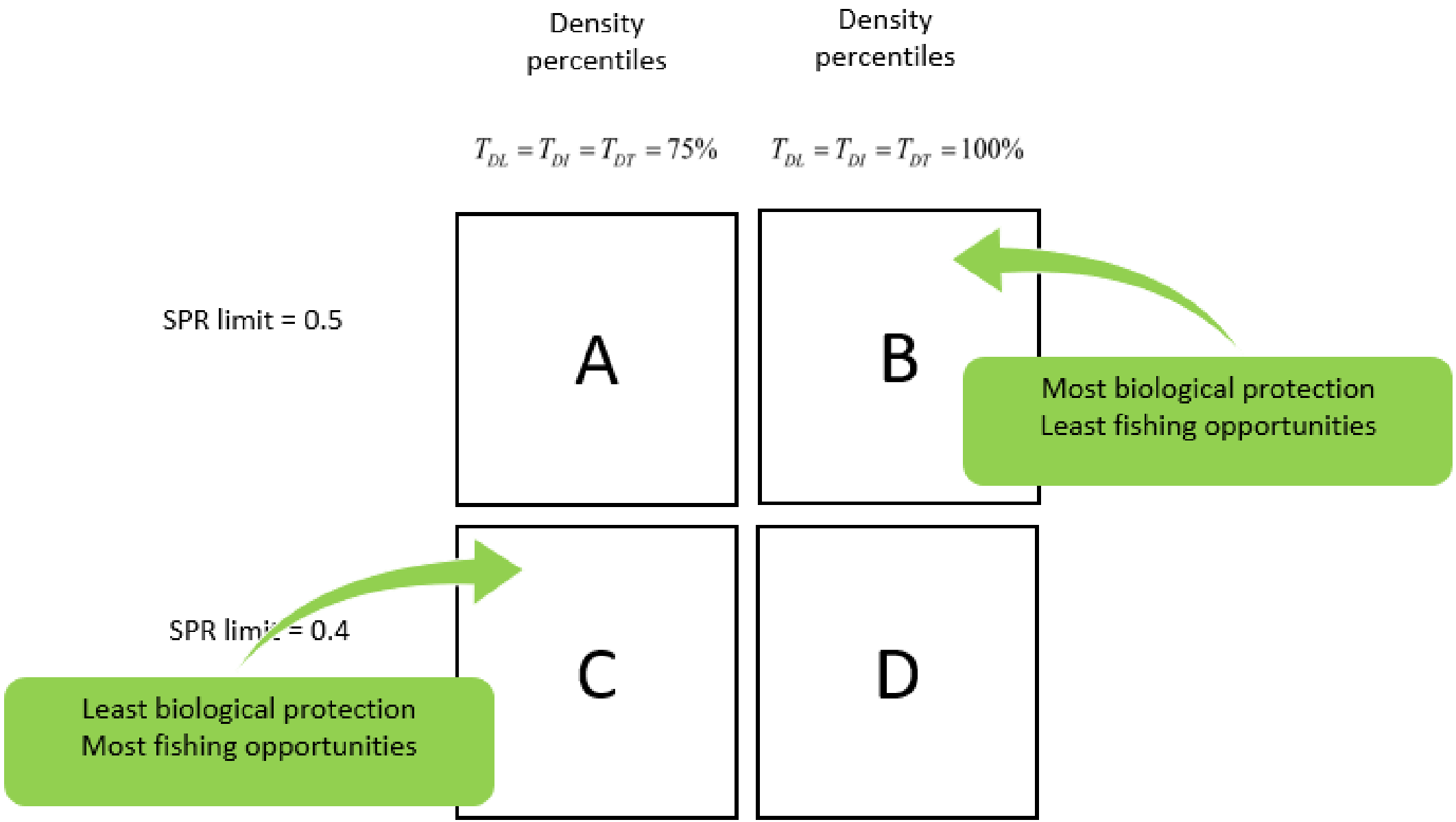





Density percentiles
$T_{DL} = T_{DI} = T_{DT} = 75\%$
Density percentiles
$T_{DL} = T_{DI} = T_{DT} = 100\%$
SPR limit = 0.5
SPR limit = 0.4
A
B
C
D
X
De minimis TAC
5,000
10,000
20,000
40,000

Management Strategy Evaluation (MSE) Results

- Median rebuilding times from a closed status to a *de minimis* fishery varied between 11 and 31 years
  - If poor conditions do continue through 2022, it could increase the recovery period to achieve a *de minimis* fishery by 8 to 10 years.
- In the absence of fishing, the median recovery times from closed status to an open fishery status ranged between 28 and 59 years
- Acknowledge uncertainty and modeling limitations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SPR limit = 0.5
SPR limit = 0.4
A
B
C
D
Most biological protection
Least fishing opportunities
Least biological protection
Most fishing opportunities

Trade Offs

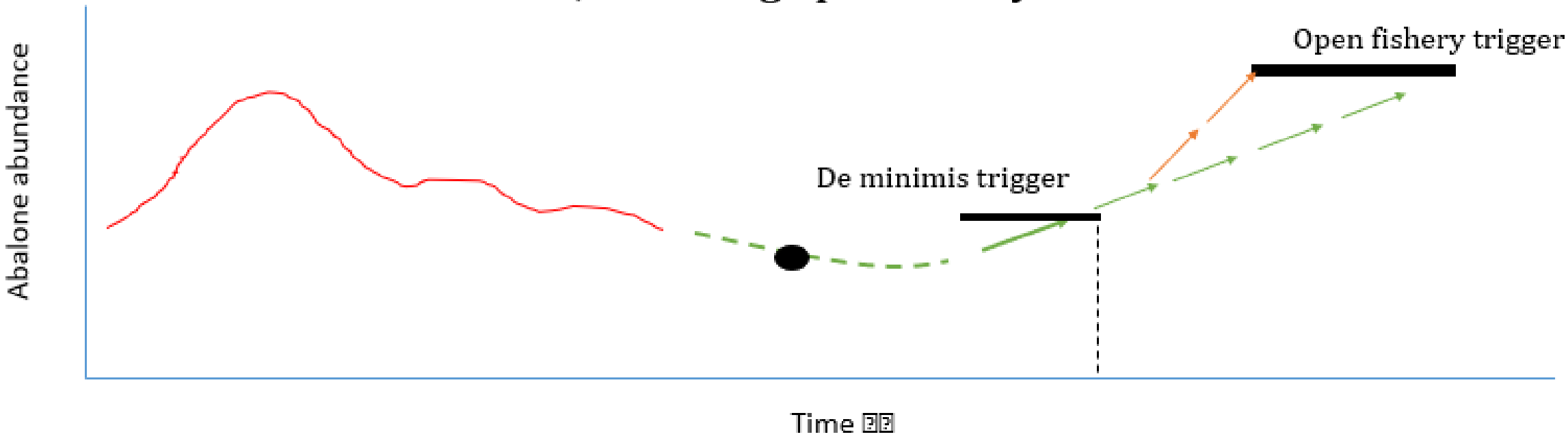
- Primary trade-offs include: (1) length of time to *de minimis* or open fishery status, (2) cumulative catches prior to achieving *de minimis* and open status, and (3) depletion at *de minimis* and open status.

Trade offs #1 and 2:

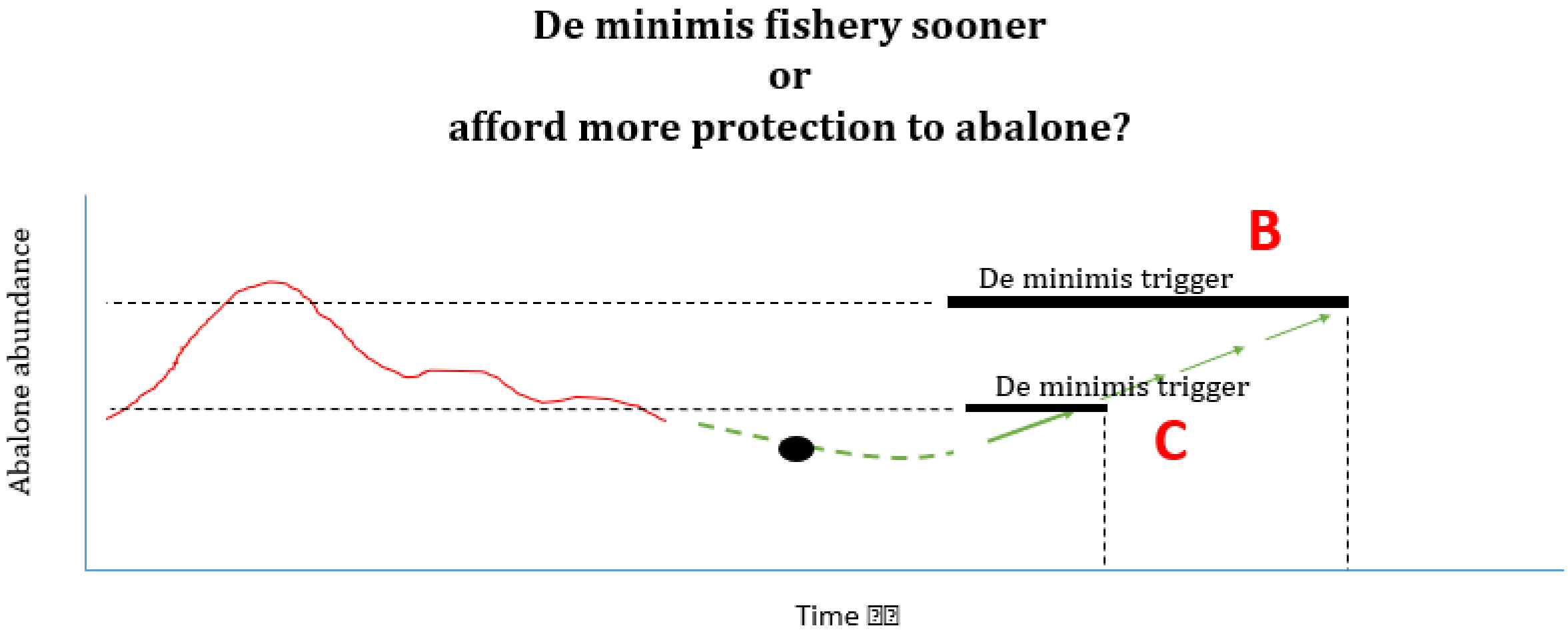
Higher de minimis TAC

Lower de minimis TAC

Catch more, prolonging the de minimis phase
or
Catch less, achieving open fishery sooner



Trade off #3:


De minimis fishery sooner
or
afford more protection to abalone?
Abalone abundance
B
De minimis trigger
De minimis trigger
C
Time

Public Perspectives on Management Strategies

- **Management Strategies A or C:** Industry was more supportive of prioritizing management strategies that support a *de minimis* fishery in the near-term

- **Management Strategies B or D:** Tribes and Tribal community members favored more conservative and precautionary options to better protect the resource

***De minimis* fishery:** A fishery with a level of catch that is anticipated to have little to no effect on the health or recovery of a fishery resource. It is applied at the fishing zone level and occurs based on predefined thresholds set in an associated harvest control rule.

Administrative Team Recommendations

Admin Team Recommendations

- **Recommendation #1:** Consider selecting a management strategy (or consider developing a new one) that addresses the charge provided by the Marine Life Management Act and Commission goals, while being mindful of the Project Team guidance.
- **Recommendation #2:** Explore a citizen science-driven data collection program for Humboldt and Del Norte counties that could inform the development of a management strategy and inform future management of these data-limited counties.

Admin Team Recommendations

- **Recommendation #3:** Consider a biological fishery (bio-fishery) as a means of allowing for near-term recreational harvest opportunities, that also helps support the state's data collection needs.
- **Recommendation #4:** Consider adopting the De Minimis Fishery Strawman Proposal (Appendix F) as guidance for CDFW to incorporate into the draft recreational red abalone FMP.
- **Recommendation #5:** Support further development of the Exceptional Circumstances strawman proposal (Appendix G) with interested stakeholders, ensuring that any indicators used are aligned with peer review guidance.

Admin Team Recommendations

- **Recommendation #6:** Prioritize research needs to enhance the management of the red abalone resource off California.
- **Recommendation #7:** Request that CDFW develop a data management plan with stakeholders to better coordinate and streamline data collection efforts across the state.
- **Recommendation #8:** Consider selecting an allocation scheme for recreational permits that uses a preference point lottery system for recreational permits and explore a pathway for the Commission to gain authority to consider allocating a subset of the recreational fishery TAC to Tribes and Tribal communities for subsistence.

Next Steps

Next Steps

- **March 17, 2020**: Potential MRC recommendation
- **March 17 - 31, 2020**: MRC comments integrated into final Admin Team report
- **April 15, 2020:** FGC consideration of approval of final Admin Team report and guidance regarding FMP development
- **Post April 15, 2020**: CDFW development of FMP

Acknowledgements

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Modelers: Dr. Bill Harford, Dr. Julia Coates, Dr. Laura Rogers-Bennett, Dr. Jono Wilson