The following document highlights the reflections and lessons learned identified by the Working Group for the Risk Assessment and Mitigation Program (RAMP) conducted during the 2019-20 fishing season. It is intended to serve as a resource to inform the continued development of the RAMP for the 2020-21 fishing season and beyond.

Context
The 2019-20 commercial Dungeness crab fishing season was unique in that it was the first season where Working Group’s activities were influenced and directed by the settlement agreement reached by the California Department of Fish and Wildlife (CDFW) and the Center for Biological Diversity (CBD). The settlement agreement outlined a determination schedule requiring the CDFW Director to assess entanglement risk on specific dates throughout the fishing season. In order for the Working Group to assist in informing the Director’s decision, they met and performed 13 risk assessments from October 2019-June 2020.

Moving forward, the 2020-21 Dungeness crab fishing season is anticipated to be the first season with the RAMP regulations (add Section 132.8 to Title 14, California Code of Regulations (CCR)) in place. These new regulations, which are still in the process of being finalized by CDFW, will influence the Working Group’s operations for the upcoming and future season. The below reflections include updates and changes the Working Group would like put into practice for the 2020-21 fishing season as applicable within the broader context of the RAMP regulations. The reflections are based on feedback received during conversations throughout the 2019-20 season and during a reflections-focused discussion with the Working Group on July 15, 2020.

Risk Assessment Process Reflections

RAMP and the Settlement: The Working Group’s risk assessment framework (RAF) outlines questions and criteria to consider when evaluating each of the four risk factors that inform the tool. The Working Group identified challenges with the application of the RAF—which was still in development at the end of the 2018-19 RAMP—within the context of Working Group agreements and the settlement requirements. This led to confusion and inconsistency in its use and application since:

- The RAF criteria and questions developed by the Working Group were translated differently in the settlement (i.e., settlement did not consider how factors relate to one another in the context of assessing relative entanglement risk).
- There was lack of clarity and guidance from CDFW in how the settlement should/would be carried out and the role it played in informing the risk assessment process.
- There was misunderstanding by Working Group members on how the RAF would be applied during the 2019-20 RAMP.
- The Working Group often used different criteria than the settlement while CDFW was constrained by the settlement.
**RAMP Inconsistencies:** The Working Group identified challenges with using their original RAF leading to inconsistencies in its use throughout the 2019-20 RAMP.

- The Working Group felt more time should be spent developing the 2019-20 RAMP and bolstering the RAF objective criteria.
  - There was lack of agreement in how Working Group members considered objective criteria and thresholds for each factor’s determination and how data should be consistently applied (e.g., the concentration or number of whales that would lead to an elevated risk determination, do entanglements ‘count’ over the course of the entire season, how are ‘anomalous’ forage/ocean conditions defined, should data that is geographically specific be used to inform other areas on the coast).
  - When data wasn’t available for a particular factor or within a certain geographic area, the Working Group was still asked by CDFW to assess risk. There was no agreement within the group prior to the start of the 2019-20 season about how to assess risk in the absence of data, which led to inconsistencies in how data was evaluated and applied.
- General increases in whale populations over time, especially resident whale populations, are currently not considered in the marine life concentrations factor. This would benefit from additional discussion and agreement by the Working Group on how to consider.
- The RAMP changed from assessing risk based on the relationship across factors (i.e., co-occurrence of fishing and whales) to the settlement requiring management decisions to be made based on individual factors (e.g., once humpback whale concentrations reach a certain threshold a management area will be closed).
  - Some Working Group members prefer to assess risk factor-by-factor, while others thought it was important to provide an ‘overall’ risk assessment across factors.

Moving forward, the Working Group would like to spend time discussing the risk factors and details of the RAF to arrive at agreed upon objective criteria for evaluating risk for each of the four factors and use it consistently throughout the 2020-21 season.

**Data Compilation:** Throughout the season, CDFW led the effort to compile data by working with factor leads to gather the most up-to-date data available for each of the four factors. A data package was distributed to the Working Group in advance of each risk assessment. Based on Working Group feedback, adjustments were made during the season to share the data package as early as possible while balancing the need to ensure the data was still timely and informative. In an effort to make risk assessment calls shorter and more efficient, the Working Group shifted from reviewing the data package details during the risk assessment meeting to reviewing the data in advance. Overall, the Working Group thought these changes were successful and appreciated having the factor leads participate to help interpret and provide insight on how data had changed since the previous risk assessment. The Working Group would like to continue with this format for the 2020-21 season.

- Similar to past risk assessment processes, consider having factor leads initiate each call with a proposed level of risk to act as a starting place for Working Group discussions.

**Recommendations Form:** A recommendation form was used for each risk assessment to capture and convey the Working Group’s assessment of risk and related management recommendations. CDFW and OPC, with support from Strategic Earth, took the lead in developing each recommendation form. The Working Group felt that completing the form in real time was helpful as it served as both a guide for the discussion and ensured Working Group thoughts were being reflected accurately. The
recommendation form review process also worked well with the Working Group given 24 hours to review providing feedback via a shared Google document. The Working Group is receptive to keeping this approach for advancing their recommendations moving forward.

**Working Group Role/Responsibilities:** Over time, the Working Group’s role has evolved from serving as a ‘think tank’ that designed the RAMP into an ‘applications-focused’ advisory (or quasi decision-making) body responsible for assessing risk. The Working Group found this new role challenging in several ways:

- Prior to the settlement, the Working Group played a leadership role in driving and defining its evolution, but once the settlement was in place in April 2019 the Working Group lost its autonomy and ability to fulfill its charge as their focus shifted to risk assessments.
  - Due to the risk assessment schedule, there was no time available to address non-risk assessment priorities (e.g., data review, gear innovations, developing and fine tuning the RAMP, communications, etc.), which are important to fulfilling the group’s charge.
- During some risk assessments, it appeared to some Working Group members that CDFW came to risk assessment meetings with a predetermined outcome that was not transparently communicated and did not consider socioeconomic impacts to fishermen. There was also concern that some Working Group members were entering into risk assessment discussions with fixed positions informed by external discussions, which limited the ability to update perspectives in real-time and led to trust and transparency issues.
- In the past, the Working Group had a more collaborative approach to decision-making, but following the settlement and new risk assessment process, there was more positioning and less collaboration.
  - The recommendation process for risk assessments offered majority/minority opinions, which deviated from the Working Group’s traditional full/unanimous agreement approach to decision-making. Concerns were voiced as this approach didn’t fully capture the variety of perspectives especially when there was not a majority agreement on a particular issue.
  - Based on these voting procedures, questions have been raised on the composition of the Working Group. Some members are interested in having scientists be involved as members rather than advisors. The ability for fishermen to fully participate in risk assessments due to lack of compensation for their time (and the need to, at times, be on the water during calls) has also been raised as a concern.

Moving forward, the Working Group would like to better understand CDFW priorities for the Working Group and whether they will continue the ‘applications-focused’ role only. The Working Group would like to return to its ‘think tank’ role, in addition to evaluating risk. The group is also interested in upholding a more collaborative approach to decision-making, including a possible departure from voting/majority-minority and moving towards recommendations that reflect shared agreements across a range of perspectives on the group.

**Meeting Format/Length/Frequency/Workload:** The Working Group found the workload for the 2019-20 season excessive and the risk assessments exhausting, many of which lasted five hours. This was a lot to ask of a group composed mostly of volunteers.

- The meetings were very process heavy, which caused members to get lost during the discussion. As the season progressed, the facilitation team reduced the amount of introduction
and overview at the beginning of each risk assessment, which helped improve the pace of meetings.

● In an attempt to streamline the process, CDFW acted as meeting chair and used a tailored version of ‘Robert’s Rules.’ This created confusion among the Working Group.
  ○ The frequent process updates during each risk assessment created inconsistencies and confusion especially in the voting procedures and interpretations of the RAF and settlement requirements. This lack of consistency slowed the overall process of each risk assessment.

● While some Working Group members found the CDFW’s role as chair helpful for streamlining, others expressed a preference for not having CDFW facilitate the meetings and instead have OPC or another neutral organization facilitate and/or chair.
  ○ Some Working Group members expressed concerns that the facilitation team may not have been acting neutrally when helping CDFW meet its risk assessment goals.

● The first risk assessment in October 2019 was open to the public as listeners-only. This created challenges for Working Group members to evaluate risk in an open manner without fear of retribution from non-Working Group peers or others. After the October risk assessment, the Working Group conducted assessments via closed door session and outcomes and outputs from each risk assessment was reported out via a public call. This two-step process created a burden on the Working Group’s time.

Moving forward, the Working Group would like to develop a consistent, streamlined approach for risk assessments and perform fewer risk assessments during the season to reduce the time burden on the Working Group. This will also provide time available for non-risk assessment work/priorities. In general, the Working Group thought having a neutral facilitator was desirable to ensure there is support for the diverse voices on the Working Group to be engaged and heard. The Working Group wishes to continue discussing how best to share information with external audiences that strikes a balance between Working Group participant time constraints, the need for closed-door discussion, and the value of keeping the public informed on Working Group activities and progress.

**Relationship Building:** The 2019-20 RAMP differed from previous years with no scheduled in-person meetings between October 2019 and April 2020 (due to COVID-19, no in-person meetings are planned through to December 2020). Risk assessments were conducted via conference calls to be efficient with time and expenses. In the past, some risk assessments (pre-season, springtime) were conducted in-person to help advance more complex discussions and support relationship building. The lack of in-person meetings this season created challenges by hindering relationship building and changing group dynamics. The new cohort that joined the Working Group in September 2019 did not benefit from the same relationship building experiences (including less structured, informal opportunities for conversation) as those who have been on the Working Group for a longer period of time. It also created difficulties for the group in reaching resolution on difficult issues, where in-person have been used in the past to help support focused and distraction-free discussions.

Moving forward, the Working Group would prefer to have in-person meetings at least a few times each year to increase efficiencies in group discussions (in addition to phone calls). The Working Group recognizes the challenge of in-person discussions within the context of COVID-19, but emphasized that there was no substitute for the opportunity to meet face-to-face and the importance of building relationships among this diverse group.
Risk Assessment Outcome Reflections

Assessing Risk: The Working Group discussed the effectiveness of risk assessments through the 2019-20 season.

- There were times when the Working Group’s risk assessments differed from the CDFW Director’s determination resulting in questions and concerns from the Working Group.
  - As highlighted in the data discussion below, interpretation of available data, including marine life concentrations, was conducted inconsistently across Working Group members including agency staff. This informed, at times, different management measure recommendations made by the Working Group and CDFW staff.
  - Closing the Central Management Area on May 15 had a financial impact on the commercial fleet. Some Working Group members questioned whether the early closure was necessary based on the number of whales reported in surveys in May/June. Some members believed the fleet could have fished safely around the whales. The Working Group acknowledged the limitations of what CDFW could do based on the settlement during the 2019-20 and the role the settlement played in the May 15 closure.
- Assessing risk didn’t always translate well into identifying management measures. (The Working Group acknowledged this has been an ongoing struggle prior to the 2019-20 season.)
- Working Group members and CDFW reflected on the overall reduction in entanglements during the 2019-20 season (i.e., there was only one entanglement confirmed in California commercial Dungeness crab gear). CDFW felt this reduction demonstrated the effectiveness of the RAMP, while some Working Group members believed it was due to heightened awareness among the fleet on the need to implement best fishing practices and the status of other risk factors (e.g., forage/ocean conditions).

Moving forward, the Working Group is interested in an external audit by a neutral third party to evaluate risk assessments and related management actions taken by the Director that differ from the Working Group’s recommendations. Additionally, members would like to see the approach to management actions be implemented on as fine a geographic scale as possible (i.e., actions at the statewide or management area level are too broad and have too large an impact on the fleet).

Available Data: While not exclusive to the 2019-20 RAMP, the Working Group highlighted the challenges with available data and how data gaps/limitations impacted risk assessment outcomes.

- There was ongoing concern and frustration expressed by the Working Group about data gaps and limited data analysis. This had large implications for the 2019-20 RAMP since the settlement dictated that whale concentration data was needed to avoid a full closure of the Central Management Area on April 1, 2020.
  - Appreciation was expressed to the industry for helping to support the collection of fishing dynamics data.
- Similar to the inconsistencies in objective criteria and trigger mentioned above, there was a lack of shared understanding on how available data would be applied to the RAMP. This resulted in inconsistent data interpretations and a lack of agreement on how some data sources should be considered in risk assessments.

---

1 Risk assessments are available online: [https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries](https://wildlife.ca.gov/Conservation/Marine/Whale-Safe-Fisheries)
● There was a lack of agreement on how data sets should be applied or considered across geographic areas. Also, the spatial context of risk assessments varied based on what data was available. For most of the season, the Management Areas were the focus of assessments, but district-level assessments were made in May and June based on available data. In addition, there was inconsistent use of qualitative data available throughout the season.

● Working Group members cited the challenges of interpreting data without a standardized survey design for both systematic and reconnaissance-type aerial and vessel surveys.

Moving forward, the Working Group supports the development and utilization of more comprehensive data sets that cover the full geographic extent of the fishery and reduce spatial and temporal gaps. A process to develop, review, and consider the new and existing data, both qualitative and quantitative, should be a priority. In addition, there is interest in expanding the risk factors to consider the economic impacts to the fishing industry (e.g., fishermen, markets, local community, etc.) and also economic impacts to non-fishing interests (e.g., whale watching, recreation, etc.).