NPFC-2020-SSC BFME01-WP01 (Rev. 1)

**SSC BFME 5-Year Rolling Work Plan, 2020-2024**

Participants will review and revise the Work Plan of the SSC BF-ME drafted intersessionally. Participants will finalize the draft five-year rolling work plan (i.e. 2020-2024) for submission to the SC05 meeting in accordance with the SC decision to develop five-year rolling research and work plans from 2020 onwards.

In general, the goals of this Work Plan are to move towards a quantitative assessment of North Pacific Armorhead and Splendid Alfonsino, maintain and improve the current quantitative approach to Sablefish, and to formalize a process for evaluation of Significant and Adverse Impacts (SAI) to Vulnerable Marine Ecosystems (VME).

Priority list

1. NPA and SA: Develop catch and CPUE time series for commercial fisheries
2. NPA: Review survey
3. SA: Conduct comprehensive stock assessment and provide management advice
4. NPA, SA and Sablefish: Develop and Implement harvest control rule
5. Sablefish: Evaluate historical harvest relative to trip limits and update trip limits if necessary
6. Sablefish and VME: Conduct trade-off analysis between commercial fishing and VME protection
7. VME: Collect and share fishing footprint data
8. VME: Develop a process for establishing quantitative definitions of VMEs
9. VME: Develop standardized approach to SAI determination

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| ITEM | SSC BFME01 (2020) | SSC BFME02 (2021) | SSC BFME03 (2022) | SSC BFME04 (2023) | SSC BFME05 (2024) |
| North Pacific Armorhead |   |   |   |   |   |
| Assess and monitor status of stock | Update catch data for NPA | Update catch data and CPUE index for NPA | Update catch data and CPUE index for NPA | Update catch data and CPUE index for NPA | Update catch data and CPUE index for NPA |
|   | Develop CPUE index for NPA |
|   | Review results of NPA monitoring surveys | Review results of NPA monitoring surveys | Review results of NPA monitoring surveys | Review results of NPA monitoring surveys | Review results of NPA monitoring surveys |
|   | Complete review of data requirements to assess and monitor status of NPA and identify gaps | Integrate CPUE index and NPA surveys (acoustic and pre-fishery) into preliminary stock assessment or simulation approach using DLM tools | Update status of stock | Update status of stock | Update status of stock |
|   | Conduct acoustic survey and research | Review acoustic survey and research |  |  |  |
|   |  | Conduct analysis of historical patterns in NPA recruitment and oceanography; Identify and conduct additional research on NPA | Identify and conduct additional research on NPA | Identify and conduct additional research on NPA | Identify and conduct additional research on NPA |
|   | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice |
| Conserve stock |  | Develop conservation objective(s) |   |   |   |
|   | Develop work plan and TORs to implement adaptive management | Implement adaptive management |   |   |   |
|   |  | Refine harvest control rule if needed | Assess HCR against stock assessment | Refine HCR and implement | Update data and implement HCR |
| Splendid alfonsino |   |   |   |   |   |
| Assess and monitor status of stock | Update catch data for SA | Update catch data and CPUE index for SA | Update catch data and CPUE index for SA | Update catch data and CPUE index for SA | Update catch data and CPUE index for SA |
|   | Develop CPUE index for SA |
|   | Review data requirements to assess and monitor status of SA and identify gaps | Develop monitoring plan for SA | Implement monitoring plan for SA | Conduct monitoring plan for SA | Conduct monitoring plan for SA |
|   |  | Conduct comprehensive stock assessment or data limited approach | Update comprehensive stock assessment or data limited approach, and provide management advice | Update comprehensive stock assessment or data limited approach, and provide management advice | Update comprehensive stock assessment or data limited approach, and provide management advice |
|   | Report on efforts by other RFMO's to assess SA stock |   |   |   |   |
|   | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice |
| Conserve stock |  | Develop conservation objective(s);Define and implement harvest control rule | Update data and implement HCR | Update data and implement HCR | Update data and implement HCR |
|   |   |   |   |   |   |
| Sablefish |   |   |   |   |   |
| Assess and monitor status of stock | Update catch data and CPUE index | Update catch data and CPUE index | Update catch data and CPUE index | Update catch data and CPUE index | Update catch data and CPUE index |
|   |
|   | Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish | Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish | Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish | Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish | Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish |
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| Conserve stock | Evaluate harvest relative to trip limits and historical catches | Evaluate catch limits relative to stock status | Evaluate catch limits relative to stock status | Evaluate catch limits relative to stock status | Evaluate catch limits relative to stock status |
|  |  | Summarize harvest control rules and stock status |  |  |  |
| Other research | Update analysis of tagging data - coastwide | Conduct analysis of sablefish associations with VME (intersessional) |   |   |   |
|   |   | Conduct trade-off analysis for Sablefish fishing and VME protection (intersessional) |   |   |   |
|   |   |   |   |   |   |
| Vulnerable marine ecosystems |   |   |   |   |   |
| Defining and Identifying VMEs | Approval of VME Indicator ID guide for observers |  |  |   |   |
|   |  | Map the distribution of VME indicator taxa (model, kernel density estimates, observation data);Determine a quantitative definition of VMEs | Review and apply quantitative definition of VMEs |  |  |
| Identifying and defining SAI's |  | Determine data requirements and resolution for SAI assessment;Apply the standardized approach for SAI assessments and conduct integrated SAI assessment | Conduct integrated SAI assessment | Conduct integrated SAI assessment | Conduct integrated SAI assessment |
|   | Continue development of standardized approach and encounter rules for SAI assessments |
| Quantifying interactions between fisheries and VMEs | Map and share the data to define footprint of fisheries and effort within these footprints | Update spatially explicit fishing effort data | Update spatially explicit fishing effort data | Update spatially explicit fishing effort data | Update spatially explicit fishing effort data |
|   | Develop timely reporting and action protocol when VME sites or recovering sites are identified | Implement timely reporting and action protocol when VME sites or recovering sites are identified |   |   |   |
|   | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice | Review fisheries observer program data collection for adequacy to produce data streams to support management advice |
| Conserving VMEs |   | Develop management objectives for recovering VME sites | Periodic review of VME management | Periodic review of VME management | Periodic review of VME management |
|   |  | Refine the exploratory fishing protocol and consider banning exploratory fishing in VME closed areas |   |   |   |
|   | Review and refine the encounter protocol if necessary | Review and refine the encounter protocol if necessary |   |   |   |
| Other ecosystem components |   |   |   |   |   |
|   | Develop combined bycatch taxa list for observers in NW Pacific Ocean | Approval of fish ID guide for scientific observers in the NW Pacific Ocean |   |   |   |
|   | Task development of fish ID guide for scientific observers in the NW Pacific Ocean |   |   |   |