NPFC-2024-SSC PS14-WP01 (Rev. 1)

**Five-Year Work Plan of the SSC PS**

Abstract: The Five-Year Work Plan of the SSC PS has been updated by the SSC PS Chair. Members reviewed and updated the work plan during the SSC PS14 meeting.

Priority list:

1. Conduct a stock assessment update based on BSSPM analyses
2. Further investigate improvements to the BSSPM
3. Develop an age/size-structured model
4. Develop a list of plausible ranges for biological parameters
5. Develop databases to support age/size-structured models
6. Continue joint CPUE work to incorporate broader spatial and temporal coverage
7. Update the biomass estimate using the existing method (swept area method)
8. Develop spatio-temporal model for the biomass estimate
9. Continue exploring climate indices to explain impacts on Pacific saury stock productivity
10. Support any technical work on MSE under SWG MSE PS

| **ITEM** | **2024** | **2025** | **2026** | **2027** | **2028** | **Progress** |
| --- | --- | --- | --- | --- | --- | --- |
| **Regular update of inputs** |  |  |  |  |  |  |
| Update & improvement of biomass survey index | Continue regular review of  1) survey plan  2) analytical work  3) any related issues including experiments to produce absolute biomass index and additional surveys by other Members to increase coverage | Same as on the left | Same as on the left | Same as on the left | Same as on the left | Completed annually |
| Update & improvement of CPUE indices | Continue review of outcomes of regular update and analytical works | Same as on the left | Same as on the left | Same as on the left | Same as on the left | Completed annually |
| Development of joint CPUE index | Continue review of outcomes of regular update and analytical works | Same as on the left | Same as on the left | Same as on the left | Same as on the left | Completed annually |
| **Regular update of the existing SA** |  |  |  |  |  |  |
| Routine update BSSPM as a benchmark | Continue review of outcomes of regular BSSPM update 1) | Same as on the left | Same as on the left | Same as on the left | Same as on the left | Completed annually |
| Improvement and further investigation of BSSPM | Review any outcomes of improvements, inter alia in light of possible incorporation of environmental information and reduction of retrospective pattern | Same as on the left | Same as on the left | Same as on the left | Same as on the left | Completed annually |
| **Toward age/size-structured models (ASSMs)** |  |  |  |  |  |  |
| Data preparation/update | Explore age-specific abundance indices and recruitment indices. Conditional age at length information.  Spatio-temporal variation of size composition. | TBD2) | TBD2) | TBD2) | TBD2) | Completed annually |
| Summarizing available information on PS biology | Update regularly, specifically maturity ogive and growth function | Continue | Continue | Continue | Continue | Collaboration between modelers and biologists has been done well and it will continue for updates. |
| Development of models | Review preliminary models to be evaluated | Finalize development of a new stock assessment model | Test the age-structured model capabilities for Bayesian estimation, simulation testing and MSE work | External review |  | SS3 model was reviewed. WG NSAM will continue to work on the development of the SS3 model. |
| Uncertainty in models (possible link with OM grid under MSE) | Refine the plausible range of values of key biological parameters.  Refine assumptions about prior distributions and the ranges for model parameters. | Continue | Continue | Continue | Continue | On going with in the work on new stock assessment |
|  |  |  |  |  |  |  |
| **Other key matters** |  |  |  |  |  |  |
| Spatio-temporal modelling | Explore better modelling approaches to understand distribution patterns and produce more reliable indices, possibly including several key environmental variables | Continue | Continue | Continue | Continue | Modelling with VAST and sdmTMB has been conducted and the work to be continued |
| Climate impact assessment | Explore models for assessing climate impacts on distribution and productivity | Continue | Continue | Continue | Continue | Modelling has been conducted and the work to be continued |
| HCR |  | Evaluate the performance of the interim HCR in the presence of retrospective pattern | Continue |  |  | Start in 2025 |

1) Until any new stock assessment models other than the BSSPM are accomplished, the outcome will produce key inputs for the Harvest Control Rule (HCR).