NPFC-2023-SSC PS12-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 are invited to review the work plan during the SSC PS12 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. Further refine the catchability coefficient of the Japanese survey and characterize its variance
10. Continue exploring climate indices to explain impacts on Pacific saury stock productivity
11. Support any technical work on MSE under SWG MSE PS
12. Further evaluate the reason and the basis for the perception that total bycatch in all NPFC fisheries is low

[H] and [M] indicate high and medium priorities. Cells with “TBD” depend on the progress of data preparation and analytical works.

| **ITEM** | **2023** | **2024** | **2025** | **2026** | **2027** |
| --- | --- | --- | --- | --- | --- |
| **Regular update of inputs** |  |  |  |  |  |
| Update & improvement of biomass survey index | Continue regular review [H] 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 [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] |
| Update & improvement of CPUE indices | Continue review of outcomes of regular update and analytical works [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] |
| Development of joint CPUE index | Continue review of outcomes of regular update and analytical works [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] |
| **Regular update of the existing SA** |  |  |  |  |  |
| Routine update BSSPM as a benchmark | Continue review of outcomes of regular BSSPM update [H] 1) | Same as on the left [H] 1) | Same as on the left [H] 1) | Same as on the left [H]1) | Same as on the left [H]1) |
| Improvement and further investigation of BSSPM | Review any outcomes of improvements, inter alia in light of possible incorporation of environmental information [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] | Same as on the left [H] |
| **Toward age/size-structured models (ASSMs)** |  |  |  |  |  |
| Data inventory (CPUE and size/age in space and time) |  | Explore age-specific abundance indices or recruitment indices. Conditional age at length information.  Spatio-temporal variation of size composition. | TBD2) | TBD2) | TBD2) |
| Summarizing available information on PS biology |  | Update regularly, specifically maturity ogive and growth function | Continue | Continue | Continue |
| 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 |
| 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 |
|  |  |  |  |  |  |

1) As a backup method as well as an underlying assessment method used in a management procedure, it seems sensible to keep this as one of reference assessment models.

2) These items might be re-structured depending on the progress of preparation of data and biological information as well as the development of models.