NPFC-2021-SSC PS08-WP04

**Five-Year Work Plan of the Small Scientific Committee on Pacific Saury (SSC PS)**

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. Develop a longer-term roadmap for work related to Pacific saury stock assessment
11. Set biological reference points
12. Develop a timeframe for MSE process

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

| **ITEM** | **2021** | **2022** | **2023** | **2024** | **2025** |
| --- | --- | --- | --- | --- | --- |
| **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 | Continue regular review [H] of  1) survey plan  2) analytical work  3) any related issues | Continue regular review [H] of  1) survey plan  2) analytical work  3) any related issues | Continue regular review [H] of  1) survey plan  2) analytical work  3) any related issues | Continue regular review [H] of  1) survey plan  2) analytical work  3) any related issues |
| Update & improvement of CPUE indices | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] |
| Development of joint CPUE index | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] | Continue review of outcomes of regular update and analytical works [H] |
| **Regular update of the existing SA** |  |  |  |  |  |
| Routine update BSSPM as a benchmark | Continue review of outcomes of regular BSSPM update [M] | Continue review of outcomes of regular BSSPM update [M] | TBD1) | TBD1) | TBD1) |
| Improvement and further investigation of BSSPM | Review any outcomes of improvements (see Para 29 in TWG PSSA04 report)  [M] | Review any outcomes of improvements, inter alia in light of possible incorporation of environmental information  [H] | TBD1) | TBD1) | TBD1) |
| **Toward age/size-structured models (ASSMs)** |  |  |  |  |  |
| Data inventory (CPUE and size/age in space and time) | Finalize data for 2021 stock assessment with ASSMs [H] | Continue update of data for stock assessment with ASSMs [H] | TBD2) | TBD2) | TBD2) |
| Summarizing available information on PS biology | Finalize assumption for 2021 stock assessment with ASSMs [H] | Continue update of data for stock assessment with ASSMs [H] | TBD2) | TBD2) | TBD2) |
| Development of models | Review results of analyses by an agreed initial set of ASSMs [H] | Finalize models and results of analyses by ASSMs [H] | TBD2) | TBD2) | TBD2) |
| Uncertainty in models (possible link with OM grid under MSE) | Start investigation [M] | Finalize the procedure of assessing model uncertainty [H] | TBD2) | TBD2) | TBD2) |
| Examination of estimation performance and finalization of models | Review initial simulation works [H] | Finalize simulation works [H] | TBD2) | TBD2) | TBD2) |
| **Toward development of reference points** |  |  |  |  |  |
| Set biological reference points (limit and target) | Continue discussion and adoption [H] | Continue discussion and amend if necessary [H] | TBD | TBD |  |
| **Toward development of MSE (work formally starts in 2022)3)** |  |  |  |  |  |
| Development of management objectives |  |  |  |  |  |
| Definition of performance measures |  |  |  |  |  |
| Construction of OMs |  |  |  |  |  |
| Development of candidate MPs |  |  |  |  |  |
| Simulation performance tests |  |  |  |  |  |
| Comparison of MPs and finalize advice |  |  |  |  |  |

1) It depends on the progress of the age/size-structured models and discussion about how the BSSPM will be used for future assessment and management. 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.

3) More specific plans and timeline will be developed after the first WG MSE PS starts.