

# Report of the Scientific Committee

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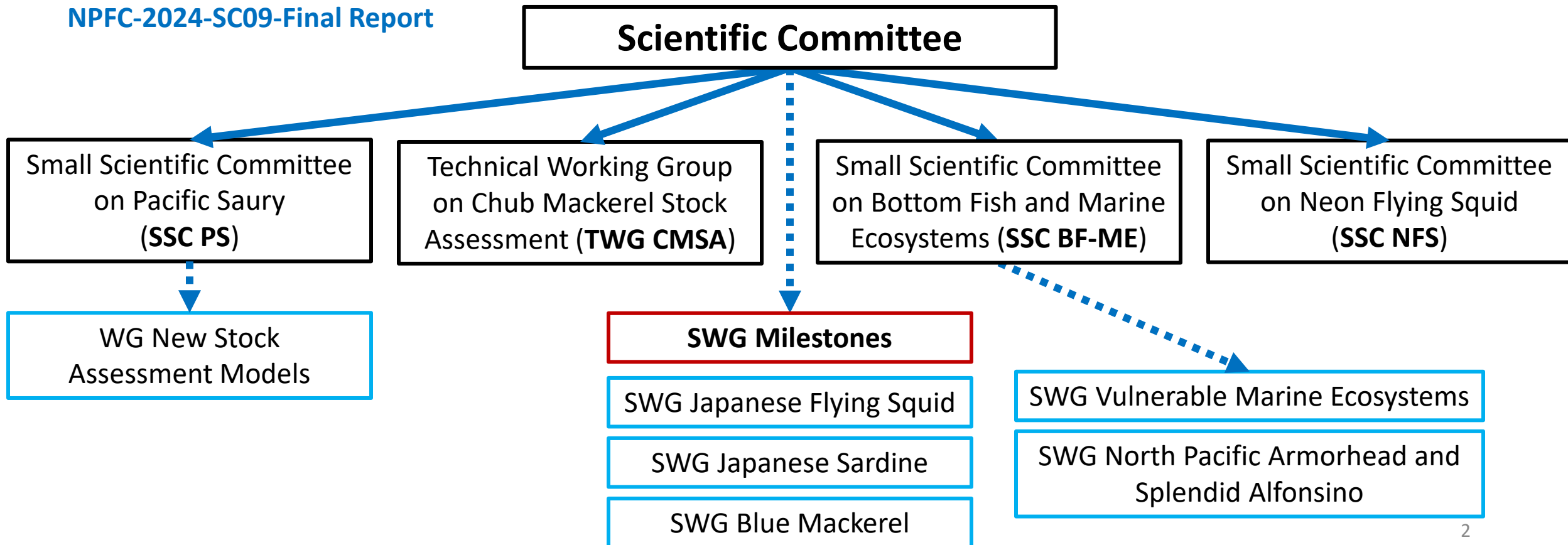


9<sup>th</sup> Commission Meeting  
24-27 March 2025, Osaka



## 2024 Scientific Committee structure

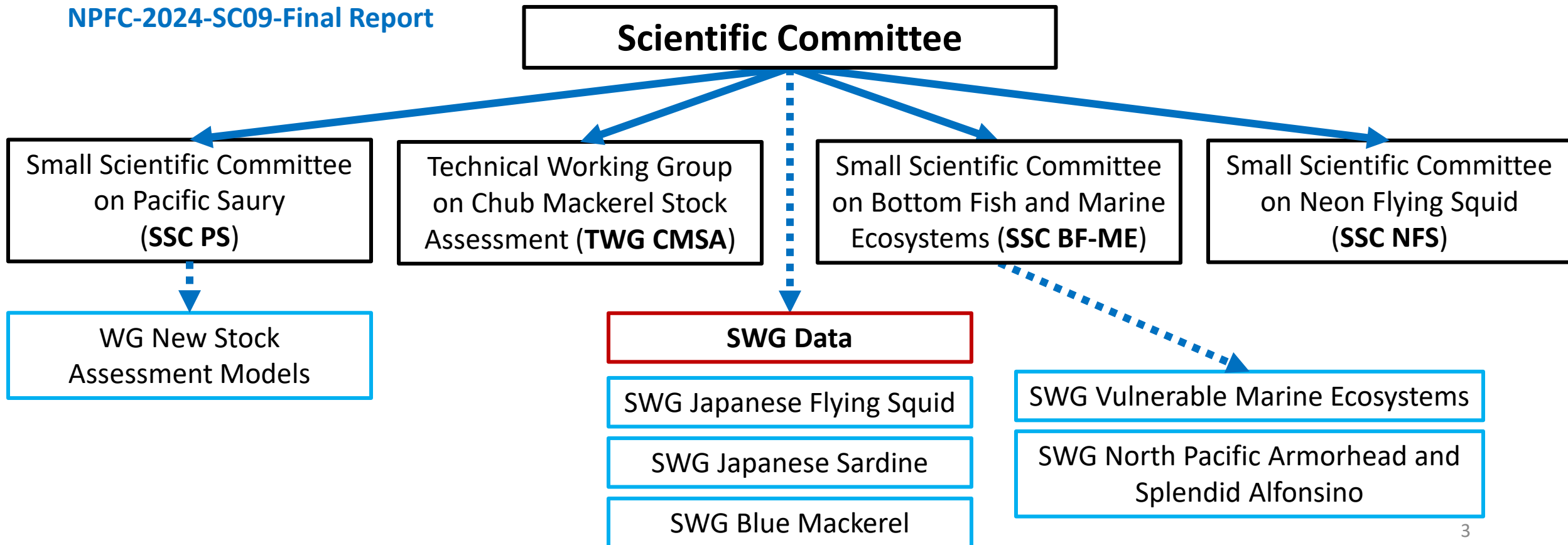
NPFC-2024-SC09-Final Report





## 2025 Scientific Committee structure

NPFC-2024-SC09-Final Report







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## 2024-25 Scientific Committee meetings

- 17-20 July: Technical Working Group on Chub Mackerel Stock Assessment (**TWG CMSA-09**)
- 22-23 August: Small Scientific Committee on Neon Flying Squid (**SSC NFS-01**)
- 26-29 August: Small Scientific Committee on Pacific Saury (**SSC PS-13**)
- 9-11 December: Small Scientific Committee on Bottom Fish & Marine Ecosystems (**SSC BFME-05**)
- 11-13, 15 December: Small Scientific Committee on Pacific Saury (**SSC PS-14**)
- 17-20 December: Scientific Committee (**SC-09**)
- 28 February, 1, 3, 4 March: TWG on Chub Mackerel Stock Assessment (**TWG CMSA-10**)



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## 2024-25 Intersessional Scientific Committee meetings

- Intersessional meetings of **SSC PS** and **TWG CMSA**
- Informal intersessional meetings of 7 Small Working Groups (SWGs):
  - Milestones (**SWG Milestones**)
  - New Stock Assessment Models (**WG NSAM**)
  - North Pacific Armorhead and Splendid Alfonsino (**SWG NPA-SA**)
  - Vulnerable Marine Ecosystems (**SWG VME**)
  - Japanese Flying Squid (**SWG JFS**)
  - Japanese Sardine (**SWG JS**)
  - Blue Mackerel (**SWG BM**)



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### **All formal meetings were either virtual or hybrid:**

- intersessional meetings were via WebEx
- thoughtful, cooperative, and productive participation

### **Members:**

- Canada, China, European Union, Japan, Republic of Korea, Russian Federation, Chinese Taipei, USA, Vanuatu

### **Observers:**

- DSCC, FAO, NPAFC, PICES, The Pew Charitable Trusts, The Ocean Foundation, WWF

### **Invited experts:**

- Dr. Larry Jacobson (Pacific Saury stock assessment), Dr. Joel Rice (Chub Mackerel stock assessment), Dr. Rujia Bi (Neon Flying Squid stock assessment), and Dr. Maite Pons and Dr. Ricardo Amoroso (splendid Alfonsino stock assessment)

### **Secretariat:**

- Kept us on track with rules of procedure, meeting arrangements, preparing reports, and much more

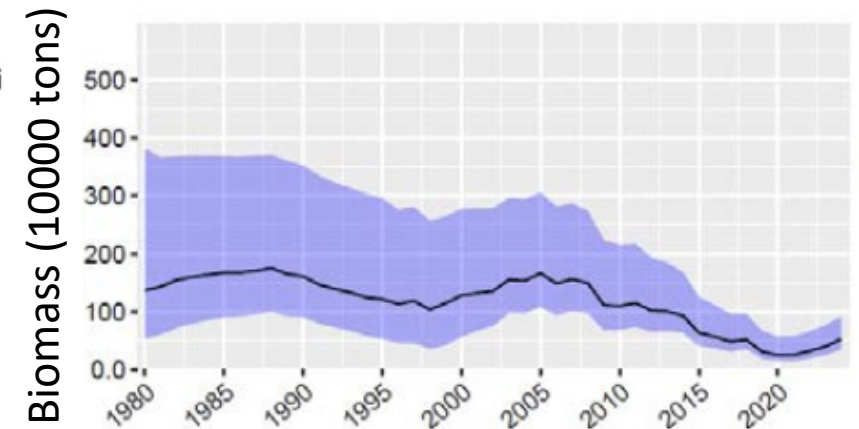
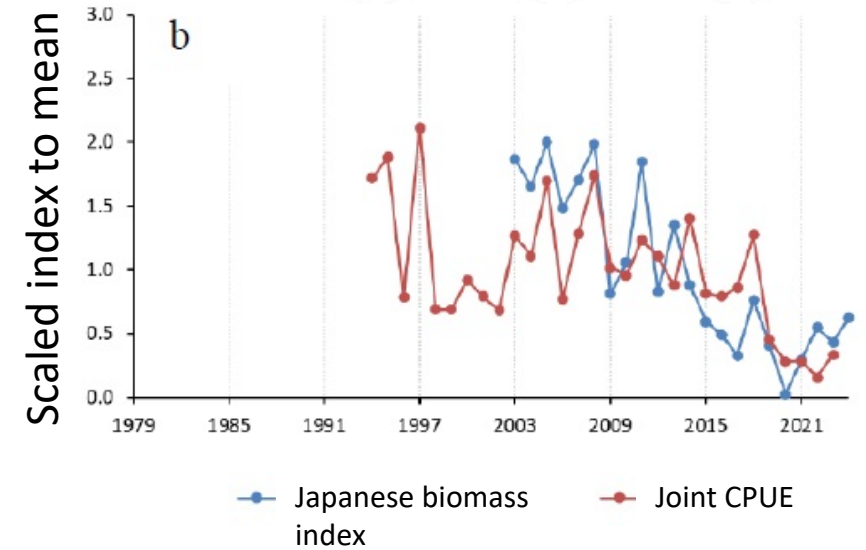
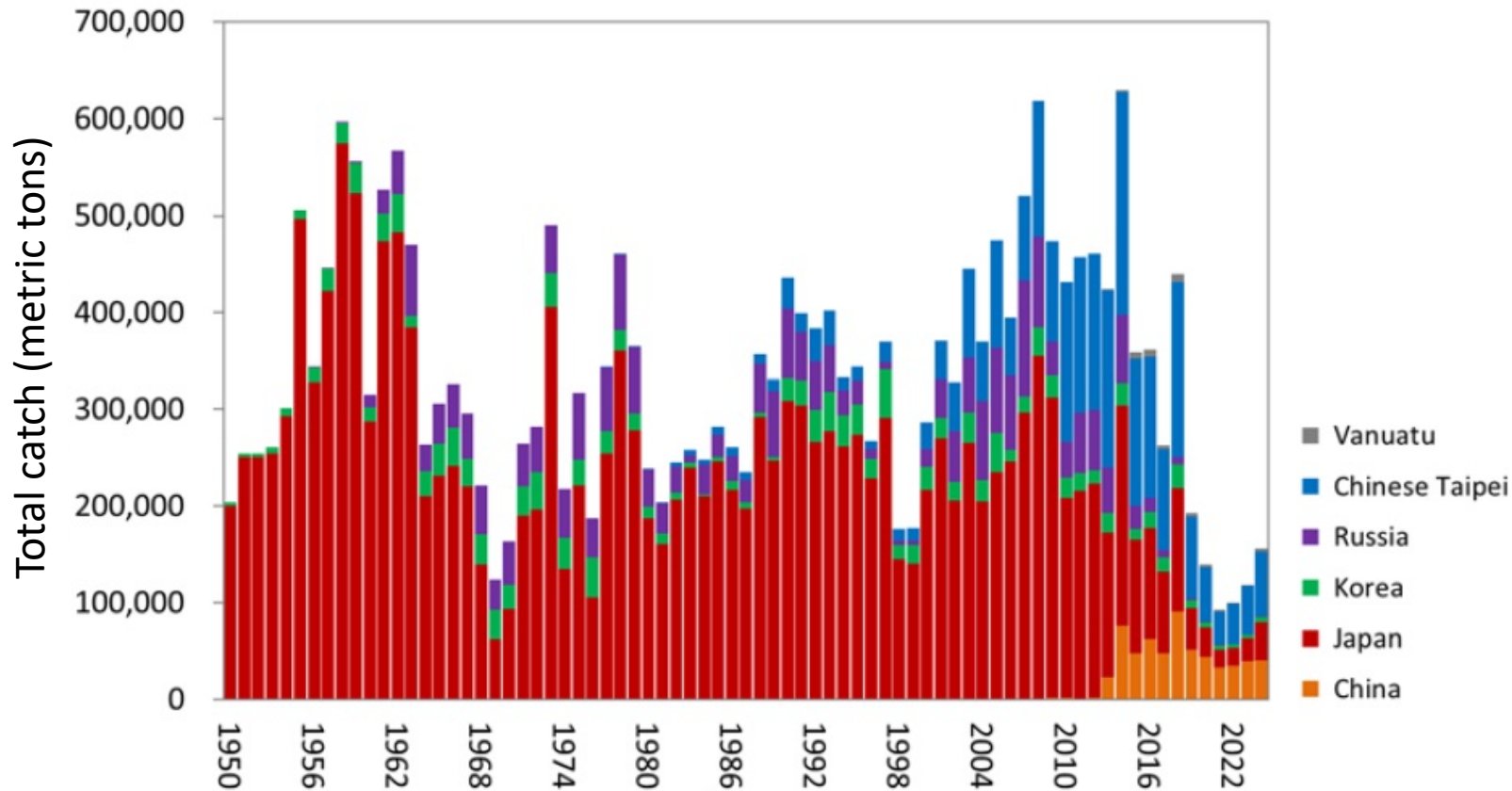


# Small Scientific Committee on Pacific Saury (SSC PS)

Chair: Dr. Toshihide Kitakado (Japan)

## Pacific saury catches, Japanese biomass index, joint CPUE and biomass

NPFC-2024-SSC PS14-Final Report, Annex D

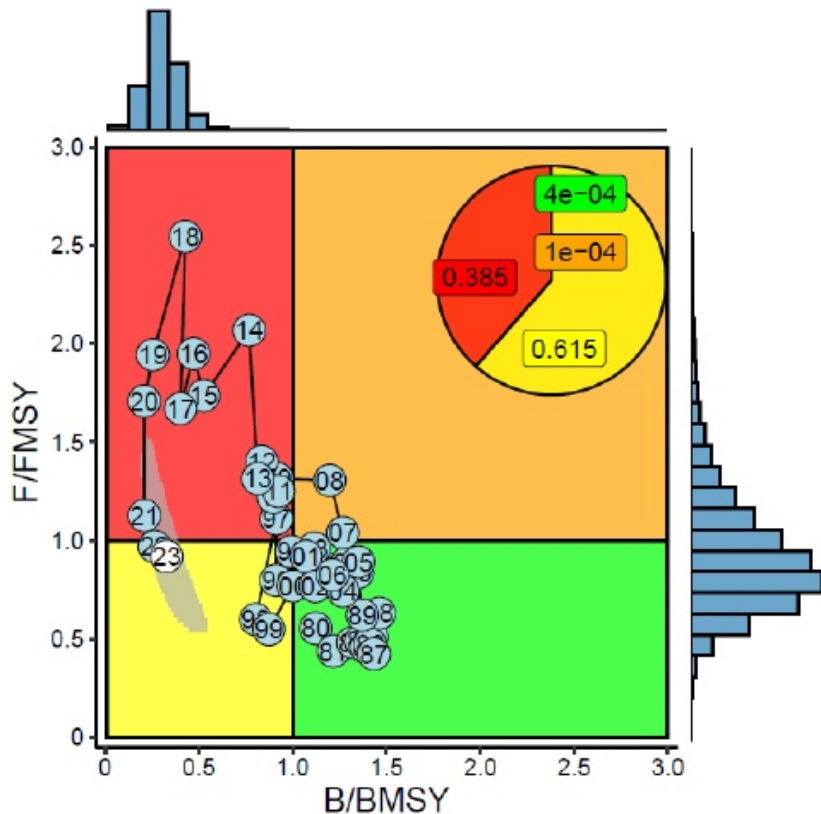




## Key 2024-25 stock assessment results – 2024 Kobe plot

NPFC-2024-SSC PS14-IP13

NPFC-2024-SSC PS14-Final Report, Annex D



### Comments on Status

- Agreement in Bayesian state-space production model (BSSPM) trends from China, Japan, and Chinese Taipei
- Best available understanding of biomass and population dynamics
- High likelihood of overfishing and stock being overfished
- Although biomass may have increased modestly during 2020-2024, the stock biomass remains at low levels
- Development of new age-structured stock assessment models and management procedures are in progress





# Small Scientific Committee on Pacific Saury (SSC PS)

Chair: Dr. Toshihide Kitakado (Japan)



## Key 2024-25 stock assessment outcomes

NPFC-2024-SSC PS13-Final Report

NPFC-2024-SSC PS14-Final Report

### Distribution South-North:

- China, Korea, CT, Vanuatu: catch distribution was further north than in the same period of 2023
- Russia: Fishing grounds shifted to the South

### Distribution East-West:

- China, Japan, Korea, Russia, Vanuatu: shifted to the west

### Increasing trend, but values remain below historical levels:

- Japanese biomass survey
- Members' catch
- Members' nominal CPUE



## Small Scientific Committee on Pacific Saury (SSC PS)

Chair: Dr. Toshihide Kitakado (Japan)



# Key 2024-25 future stock assessment model activities

NPFC-2024-SSC PS13-Final Report

NPFC-2024-SSC PS14-Final Report

- The Working Group on New Stock Assessment Models (WG NSAM) will continue developing an age structured model - Stock Synthesis 3 (SS3) model
- Members recognized the importance of improving the stock assessment model by understanding:
  - environmental factors and seasonal patterns and their influence on Pacific saury habitats
  - spatial dynamics under changing environments
  - how climate change and ecosystem variables affect stock assessment and fishery management



## Small Scientific Committee on Pacific Saury (SSC PS)

Chair: Dr. Toshihide Kitakado (Japan)



# Key 2024-25 stock assessment requests and recommendations

NPFC-2024-SSC PS13-Final Report

NPFC-2024-SSC PS14-Final Report

## Data requests:

- Members report Pacific saury catch separately by gear-type in their annual reporting.
- Biological and other data to assess the Pacific saury stock and provide appropriate management advice.

## Biomass survey:

- SC appreciates Japan for conducting its biomass survey in 2024 and planning it in 2025.
- SSC PS encouraged other Members to complement the Japanese biomass survey and provide useful information for better understanding the Pacific saury stock.

## Application of HCR to set a TAC in 2025:

- $TAC_{2025} = (B_{2024} * F_{MSY} * (B_{2024} / B_{MSY})) = 75,741 \text{ mt.}$
- With adopted HCR, the TAC is constrained to change by no more than 10% from one year to the next:  
the constrained  $TAC_{2025}$  is thus  $0.9 \times 225,000 = \mathbf{202,500 \text{ mt.}}$



# Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA)

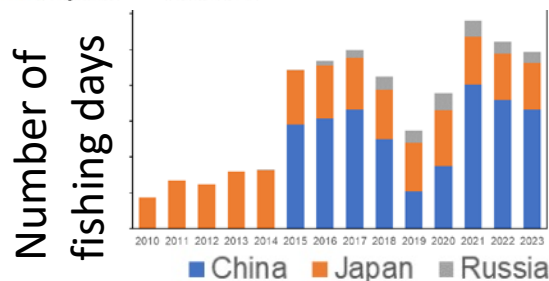
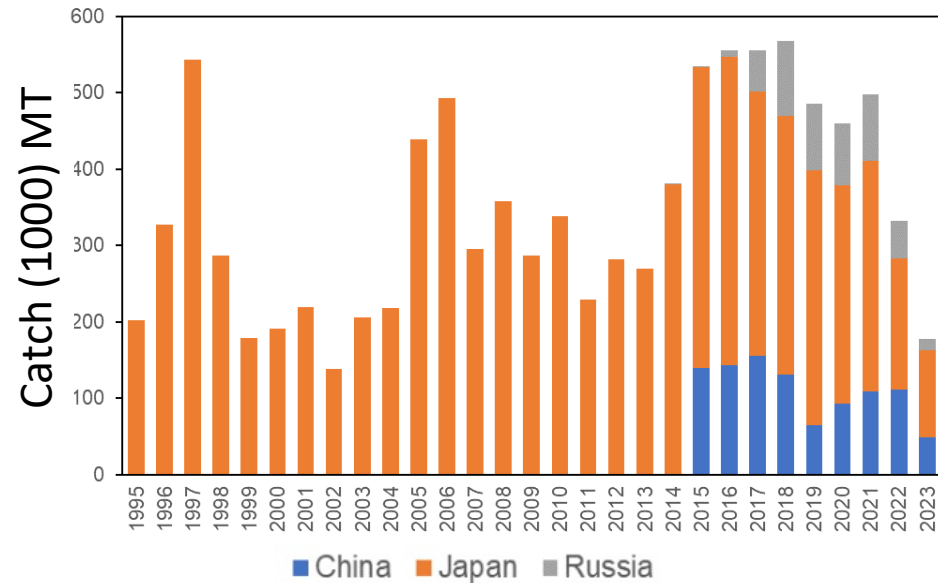
Chair: Dr. Kazuhiro Oshima (Japan)



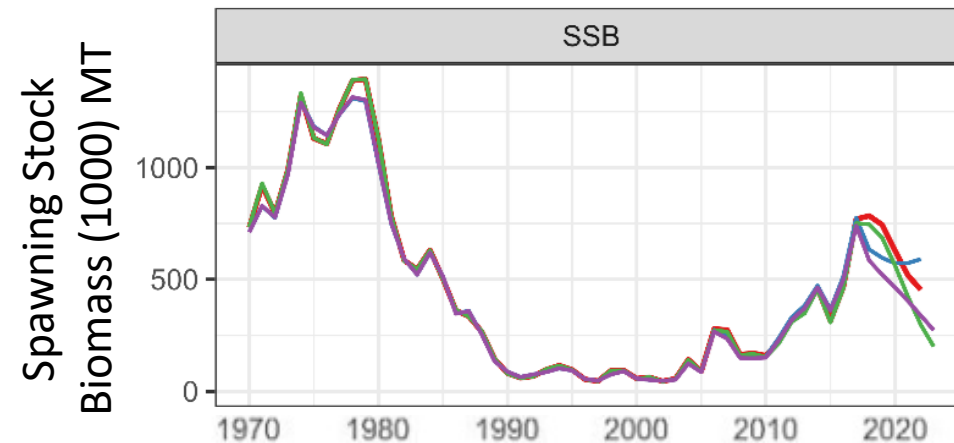
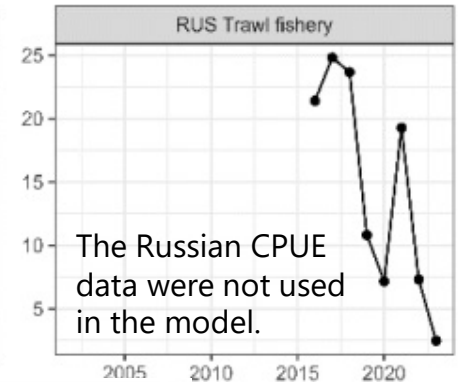
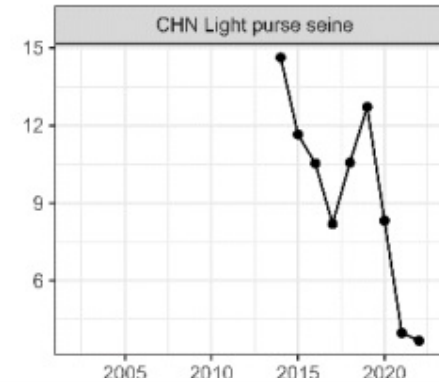
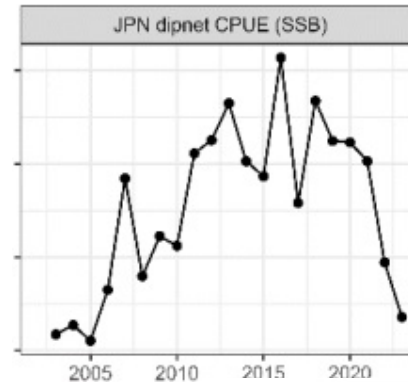
## Time series of chub mackerel (and blue mackerel) catch, and effort, CPUE, and biomass

### Species Summary for Chub Mackerel (Annex E)

#### NPFC-2023-SC09-Final Report



Absolute value  
(standardized CPUE)







## Key 2024-25 stock assessment

NPFC-2024-TWG CMSA08-Final Report

NPFC-2024-TWG CMSA09-Final Report

NPFC-2023-SC09-Final Report, Annex 9 - Executive summary of stock assessment report for chub mackerel

- **TWG CMSA recommends** that the Commission note the status of the chub mackerel stock and management advice provided in paragraphs 37 - 42 of TWG CMSA09:
  - large changes in biological parameters over the time period of the model
  - biomass-based MSY reference points are highly sensitive to model configuration
  - does not recommend the use of commonly-used MSY-related or SPR-related reference points for management advice because they are uncertain and potentially misleading



# Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA)

Chair: Dr. Kazuhiro Oshima (Japan)



## Key 2024-25 stock assessment

NPFC-2024-TWG CMSA08-Final Report

NPFC-2024-TWG CMSA09-Final Report

NPFC-2024-SC09-Final Report, Annex P - Stock assessment report for chub mackerel

- TWG CMSA provides information of current estimates of chub mackerel SSB and F (average 2020-2022) relative to the minimum, 25th, 50th, 75th and maximum value of the SSB and F values over the entire time period (1970-2022) and the most recent 7 years (2016-2022). See Table 6 on page 214 6 of **NPFC-2024-SC09-Final Report**(Annex P).
- Projections based on the most recent seven years' biological data showed that  $F_{cur}$  leads to future decline of SSB and it is necessary to reduce current fishing mortality (Annex F of **NPFC-2024-TWG CMSA09-Final Report**)



# Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA)

Chair: Dr. Kazuhiro Oshima (Japan)



## Key 2024-25 stock assessment outcomes

NPFC-2024-SC09-Final Report

NPFC-2024-TWG CMSA10-Final Report

- Discrepancies between input data and the footprint data were discovered in December 2024
- The effect(s) of those input data discrepancies on the output of the stock assessment was uncertain
- SC endorsed the stock assessment executive summary and report ([Annex P of NPFC-2024-SC09-Final Report](#)) because it was the best available scientific information for Chub Mackerel
- TWG CMSA10 investigated the source of these discrepancies and is developing QA/QC measures to prevent future recurrence.
- Preliminary analysis suggests the discrepancies in input data have low effect on model output



# Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA)

Chair: Dr. Kazuhiro Oshima (Japan)



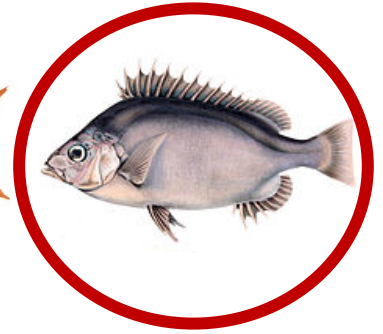
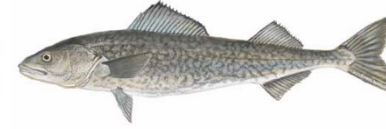
## Key 2024-25 stock assessment recommendations

NPFC-2024-SC09-Final Report

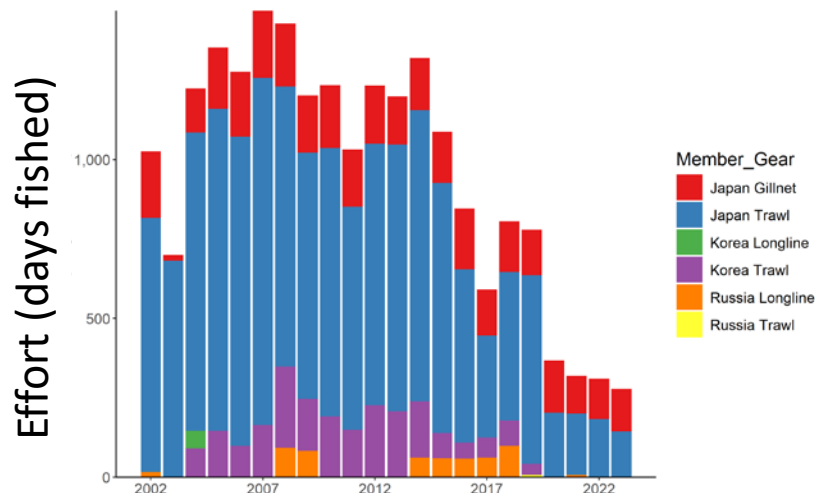
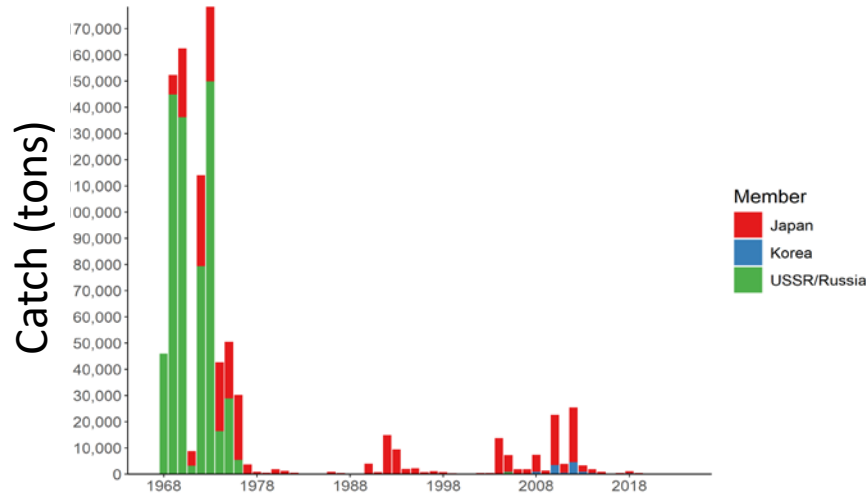
NPFC-2024-TWG CMSA10-Final Report

- Projections showed that  $F_{cur}$  leads to future decline of SSB and it is necessary to reduce current fishing mortality (Annex F of [NPFC-2024-TWG CMSA09-Final Report](#))
- SC09 endorsed TWG CMSA's recommendation to reduce current fishing mortality.





## Time series of NPA Catch and Effort



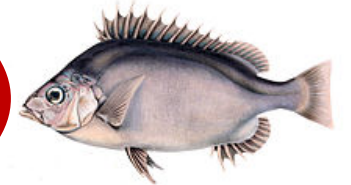
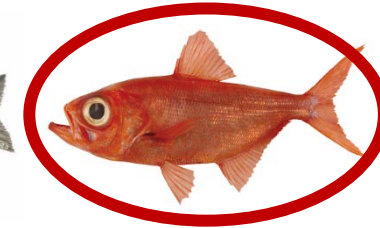
## Comments on Status

- Catch was higher in 2023 (148 MT) than in 2022 (34.1 MT) but remains at a low level relative to historical values
- No indication of strong recruitment
- Effort remained low (1 gillnet, 1 trawl)
- Fishers have avoided NPA since 2019 so the catch may not reflect stock status



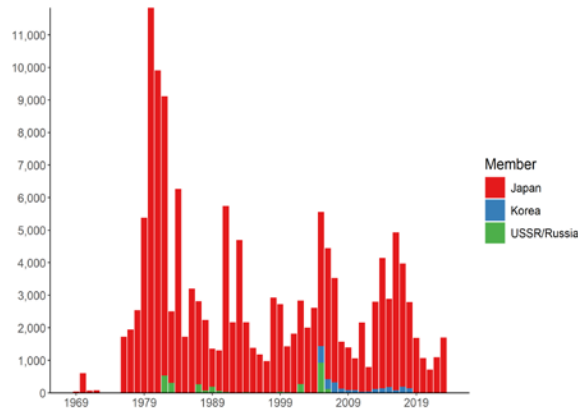
# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BF-ME)

Chair: Dr. Chris Rooper (Canada)

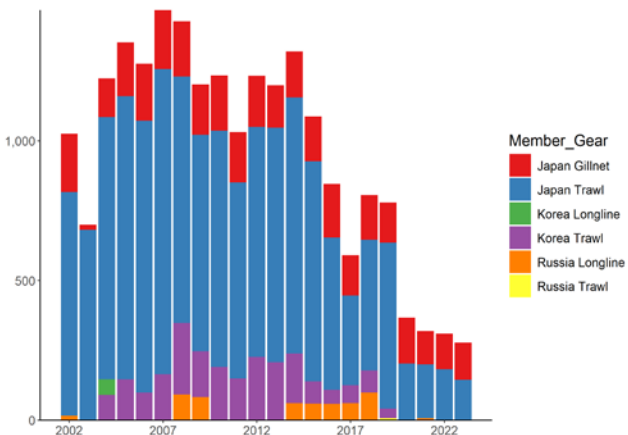


## Time Series of SA Catch, Effort and Analyses

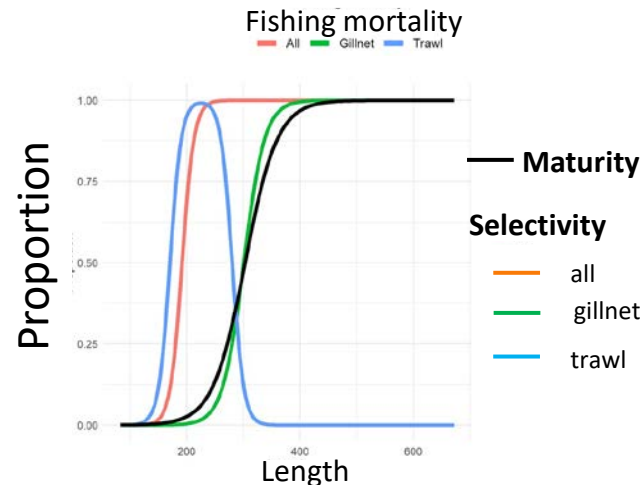
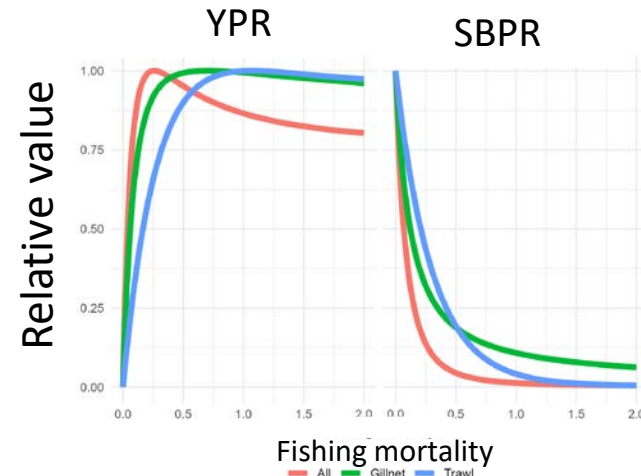
Catch (tons)



Effort (days fished)



## Per recruit analyses



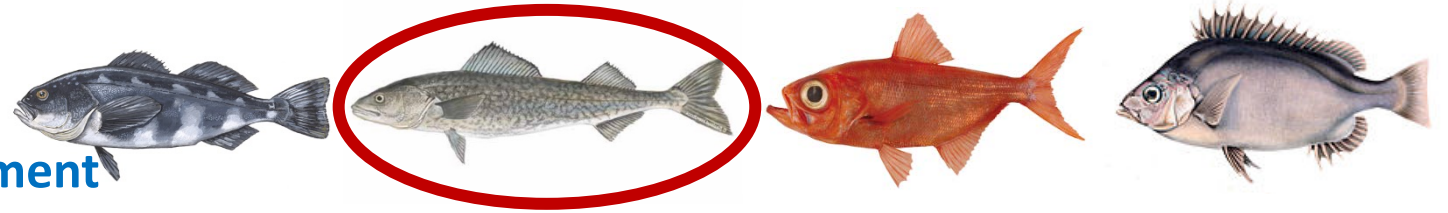
## Comments on Status

- Total catch in 2023 was around 1,701 MT but remains at low levels relative to historical values.
- High likelihood that growth overfishing is occurring (harvest before the size that maximizes YPR)
- Splendid Alfonsino are being captured before they are mature, likely reducing the spawning potential
- Caveat - Trawl fishery has dome shaped selectivity which may make the analyses pessimistic about the status of the stock

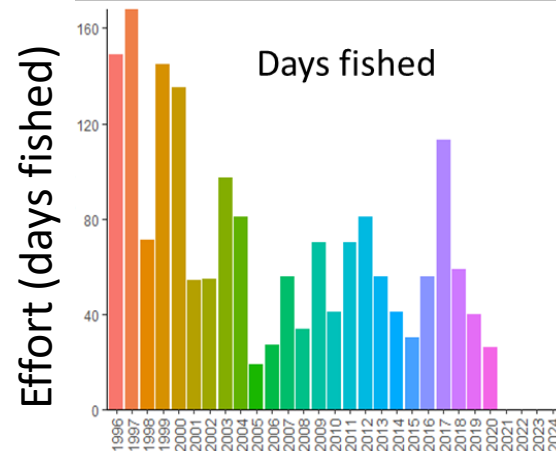
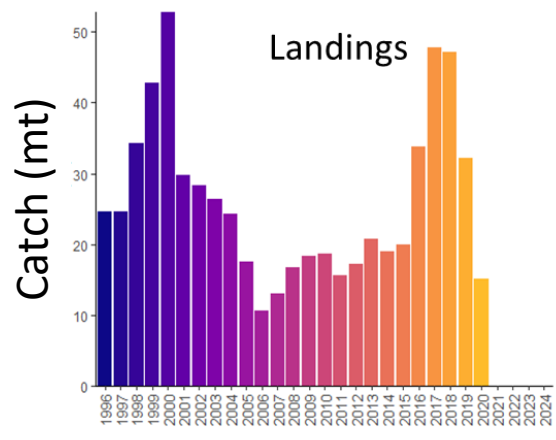


# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BF-ME)

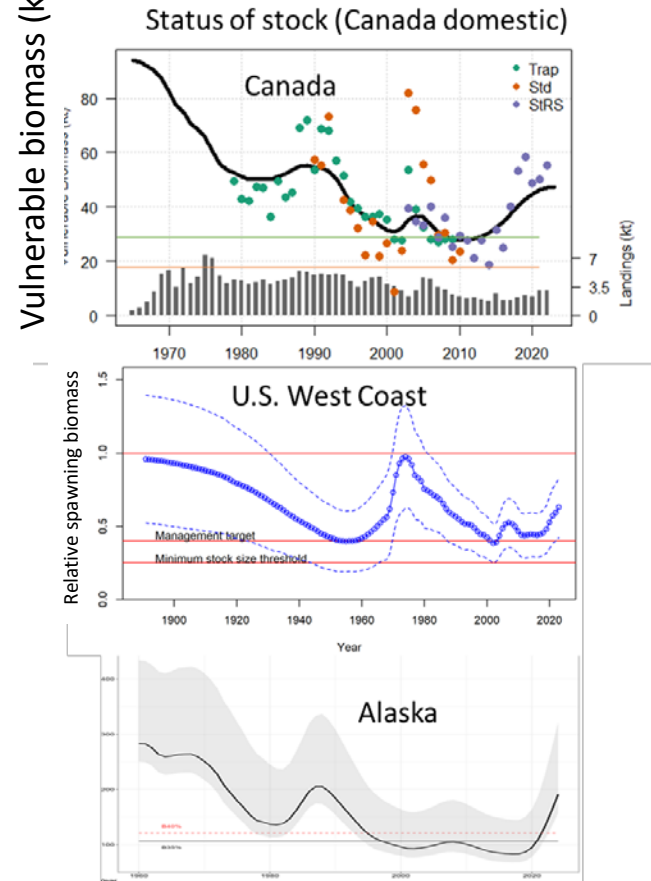
Chair: Dr. Chris Rooper (Canada)



## Time Series of Sablefish Catch, Effort, Assessment



## Domestic Assessment



## Comments on Status

- Fish stock is healthy
- No Convention Area fishing since 2020
- Not economically profitable
- Likely no fishing in 2025



# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BFME)

Chair: Dr. Chris Rooper (Canada)

## Key activities / analyses

NPFC-2024-SSC BFME05-Final Report, NPFC-2024-SSC BFME05-WP15, NPFC-2024-SSC BFME05-WP18  
NPFC-2024-SC09-Final Report, including Annex T



- **Japan presented a study on the impact of mesh size change on catch size composition of splendid alfonsino (NPFC-2024-SSC BFME05-WP15).**
  - The analysis found no clear relationship between the mesh changes and mean fork-length of SA over time, but there was significant year-to-year variation in length frequencies.
- **Proposed Temporal and spatial closures on the Emperor Seamounts (NPFC-2024-SSC BFME05-WP18).**
  - SC09 discussed a USA proposal for temporal and spatial closures to ensure that additional scientific work is completed before authorizing continued bottom fishing activities.





# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BFME)

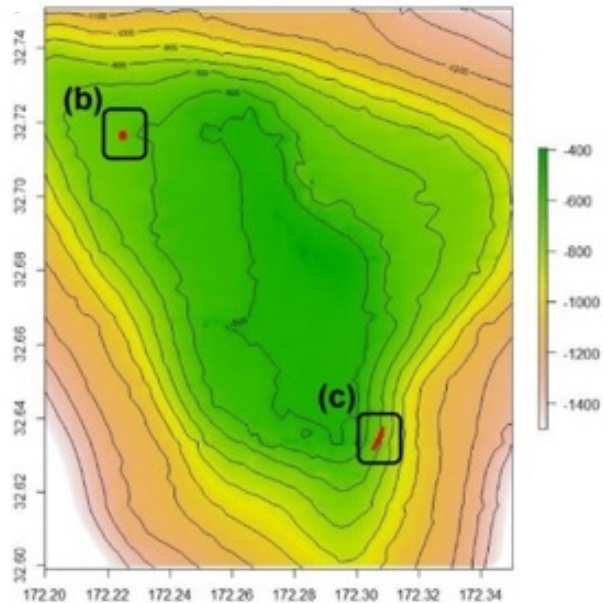
Chair: Dr. Chris Rooper (Canada)



## Key outcomes - VMEs

NPFC-2023-SSC BFME04-Final Report, NPFC-2023-SSC BFME04-IP03,  
NPFC-2023-SC08-Final Report; NPFC-2024-SSC BFME05-WP11 (Rev. 1)

### Yuryaku Seamount



**Two new potential VME sites identified by Japan on Yuryaku Seamount.**

- Northwestern part of Yuryaku Seamount
- Southeastern part of Yuryaku Seamount

The SSC BF-ME appreciated Japan's ongoing research for identifying VMEs in the Emperor Seamounts

The SC advises the Commission to designate these two areas as VMEs and adopt appropriate measures for their protection.

**(see proposed revision to CMM 2024-05)**

Northwestern part of Yuryaku Seamount	32-42.75 N 172-12.90 E	32-42.75 N 172-13.65 E
	32-43.50 N 172-13.65 E	32-43.50 N 172-12.90 E
Southeastern part of Yuryaku Seamount	32-37.80 N 172-18.00 E	32-37.80 N 172-18.60 E
	32-38.40 N 172-18.60 E	32-38.40 N 172-18.00 E



# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BFME)

Chair: Dr. Chris Rooper (Canada)

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## Key outcomes - VMEs

NPFC-2024-SSC BFME05-Final Report, NPFC-2024-SSC BFME05-WP10, NPFC-2024-SSC BFME05-OP03  
NPFC-2024-SC09-Final Report, including Annex S



- Japan and Canada developed a translation table for VME indicator corals between common and scientific names
  - CMM 2024-05 and CMM 2024-06 were updated to refer to this translation table.
- SSC BF-ME discussed a USA proposal to close all of Yuryaku Seamount to bottom-contact fishing.
- SSC BF-ME also discussed broader temporary closures in the Emperor Seamounts for the protection of VMEs and prevention of SAIs, in addition to the two new proposed closures on Yuryaku Seamount.



# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BFME)

Chair: Dr. Chris Rooper (Canada)

## Key outcomes – VMEs/SAIs

NPFC-2024-SSC BFME05-Final Report

NPFC-2024-SC09-Final Report



### SAI impacts on VMEs

- impact assessments of Members' bottom fishing activities on VMEs have not been updated to consider cumulative impacts or more recent scientific information and management considerations
- scientific literature highlights the likely presence of VMEs in areas subject to current or potential fishing effort on the Emperor Seamounts.

### Recommendation for updated assessments of SAIs on VMEs

- SC recommended that the Commission request Members with current or anticipated bottom fishing in the Convention Area to provide updated assessments on bottom fishing activities' SAIs on VMEs and submit them for review by the SC at or before SC11.
- The SSC BF-ME recommended that the SC review the updated impact assessments and recommend whether additional management measures will be required to prevent SAIs on VMEs.



# Small Scientific Committee on Bottom Fish & Marine Ecosystems (SSC BFME)

Chair: Dr. Chris Rooper (Canada)



## Key Recommendations

NPFC-2024-SSC BFME05-Final Report, NPFC-2024-SSC BFME05-WP08(Rev1), NPFC-2024-SSC BFME05-WP09(Rev1)

NPFC-2024-SSC BFME05-WP18

NPFC-2024-SC09-Final Report, including Appendix R and Appendix S

### **Life history-based analyses on the stock status of SA suggests:**

- High likelihood that growth overfishing is occurring
- Splendid Alfonsino are being captured before they are mature, likely reducing the spawning potential
- Caveat - Trawl fishery has dome-shaped selectivity so analyses may be pessimistic about the SA stock status

### **SSC BF-ME discussed potential for Temporary Closures to Support NPA and SA Recovery**

- Some Members suggested that the NPA and SA fisheries, as well as any fisheries that take NPA and SA as bycatch, should be temporarily closed to allow these stocks time for recovery.

### **Recommend revising CMM 2024-05 and CMM 2024-06**

- SSC BFME recommends endorsing proposed revisions to CMM 2024-05 and CMM 2024-06, including the two new proposed VMEs areas on Yuryaku Seamount and reference to the translation tables for coral VME indicator taxa.





# Small Scientific Committee on Neon Flying Squid (SSC NFS)

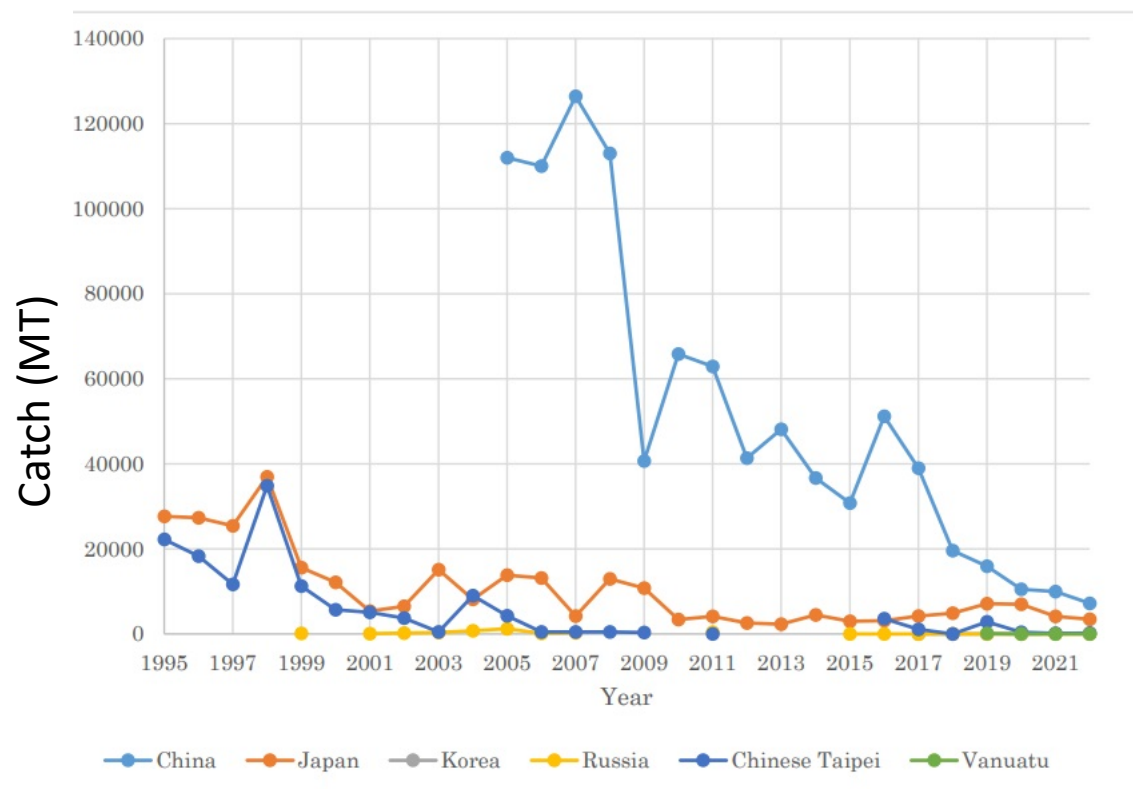
Chair: Dr. Luoliang Xu (China)



## Key Outcomes

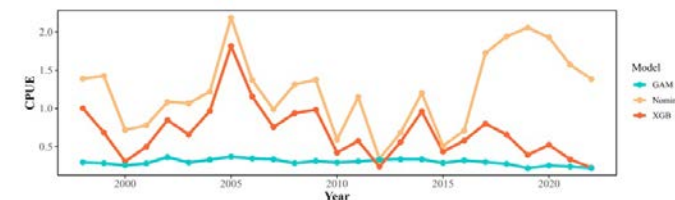
NPFC-2024-SSC NFS01-Final Report, NPFC-2024-SSC NFS01-WP05(Rev1)

NPFC-2024-SC09-Final Report

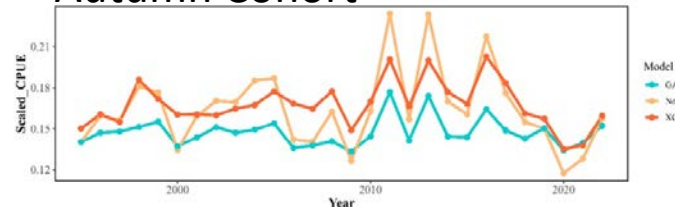


## Standardized CPUE

### Winter-spring Cohort

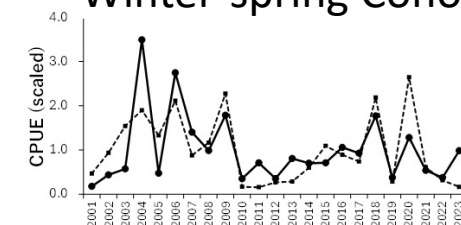


### Autumn Cohort

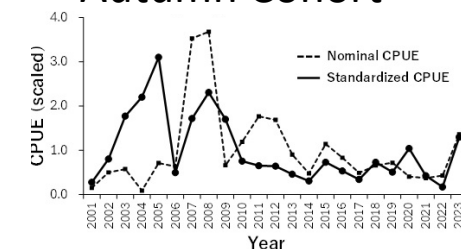


Japan

### Winter-spring Cohort



### Autumn Cohort



China



# Small Scientific Committee on Neon Flying Squid (SSC NFS)

Chair: Dr. Luoliang Xu (China)



## Key Outcomes

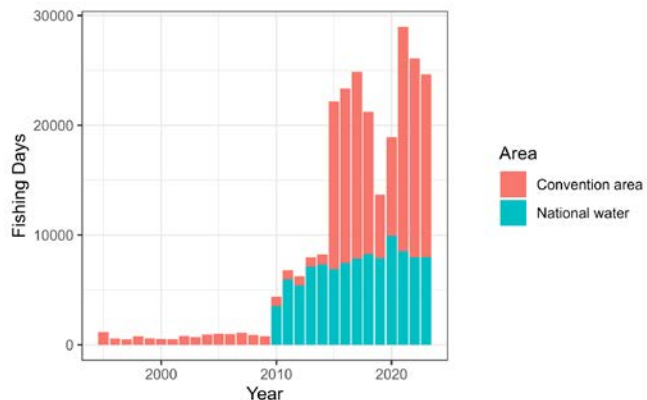
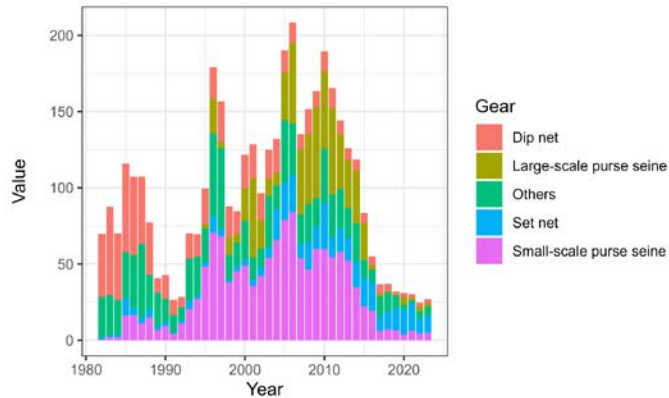
NPFC-2024-SSC NFS01-Final Report, NPFC-2024-SSC NFS01-WP05(Rev1)  
NPFC-2024-SC09-Final Report

- SC endorsed SSC NFS ● Terms of Reference (TOR), ● 5-year rolling Workplan,
  - CPUE Standardization Protocol, ● Stock Assessment Protocol, ● Recommendation to hire an external expert.
- The SC recommended that the Commission consider making the neon flying squid maps available on the NPFC website, at a spatial resolution of  $1^{\circ} \times 1^{\circ}$  and a monthly temporal resolution, with access restricted to NPFC Members only.
- China's fishery-independent biology information will be provided to support NFS stock assessment work.
  - The SSC NFS suggested that Japan and China coordinate surveys to provide a fishery-independent abundance index for future stock assessment.
- Japan presented a preliminary application of the stochastic surplus production model in continuous time (SPiCT) to the autumn and winter-spring cohorts for demonstration purposes ([NPFC-2024-SSC NFS01-WP12](#)).<sup>26</sup>

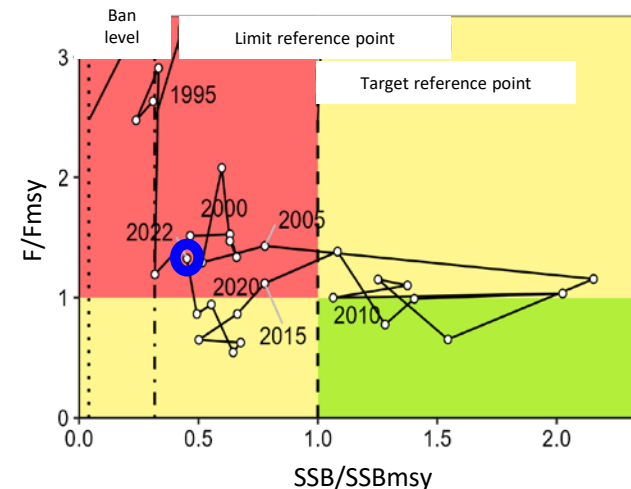
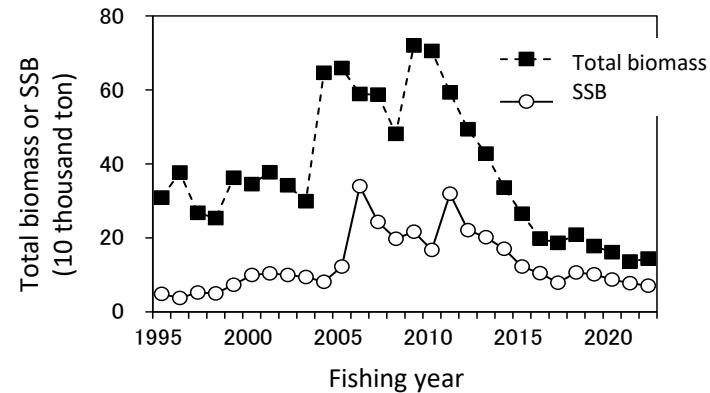


## Blue mackerel

### Convention Area



### Japanese Stock Assessment



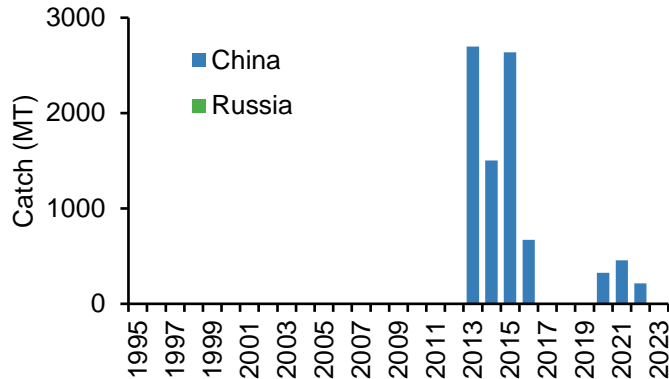
### Comments on Status

- Spawning stock biomass (SSB) is below  $SSB_{MSY}$
- Fishing mortality (F) is above  $F_{MSY}$
- Japanese catches are from its national waters
- Chinese and Russian catches are based on estimations
- Japan's stock assessment was observed and discussed by the SC
- The SC did not endorse the assessment

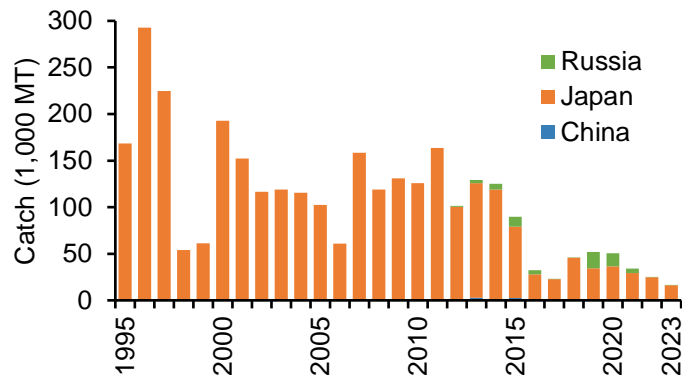


## Japanese flying squid

### Catch in the CA

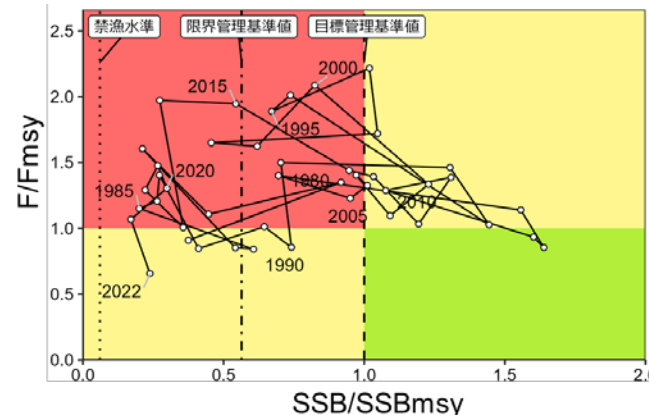
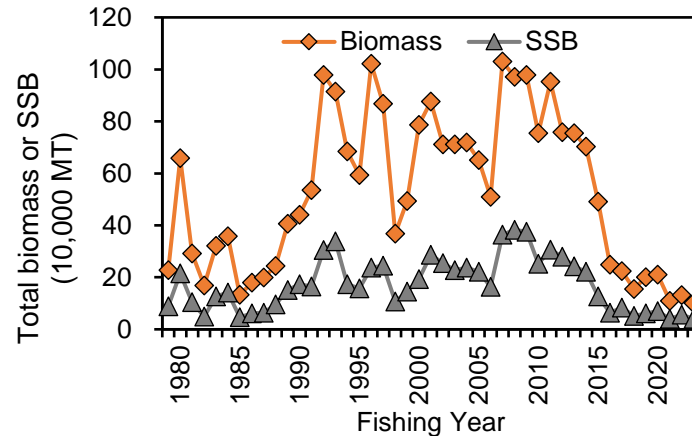


### Catch in the NW and CA



### Japanese Stock Assessment

Status of stock (Japan domestic)



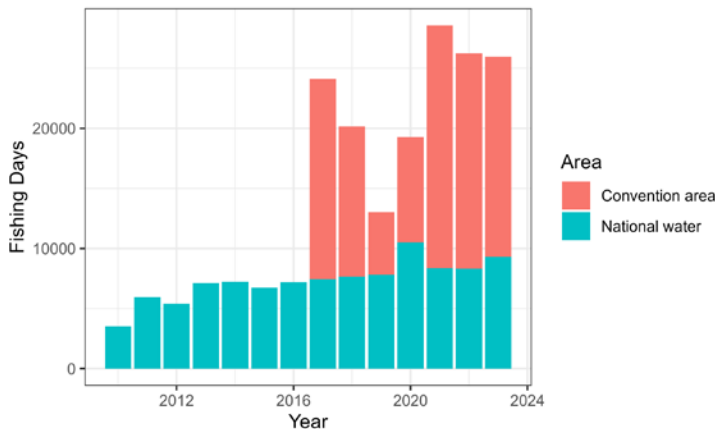
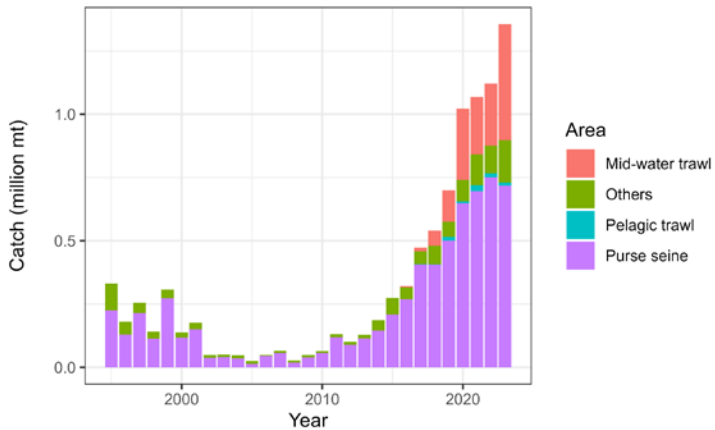
### Comments on Status

- In the Japanese domestic stock assessment of the winter spawning stock JFS, SSB was lower than  $SSB_{MSY}$ , and  $F$  was lower than  $F_{MSY}$  in 2022
- There was no catch in the CA in 2023
- The majority of catches come from Japanese and Russian national waters.
- Japan's stock assessment was observed and discussed by the SC
- The SC did not endorse the assessment

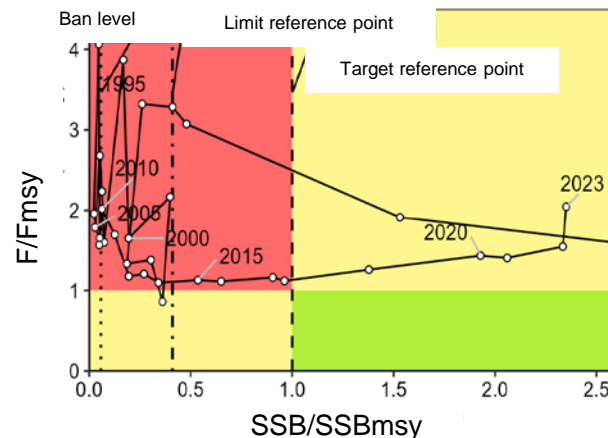
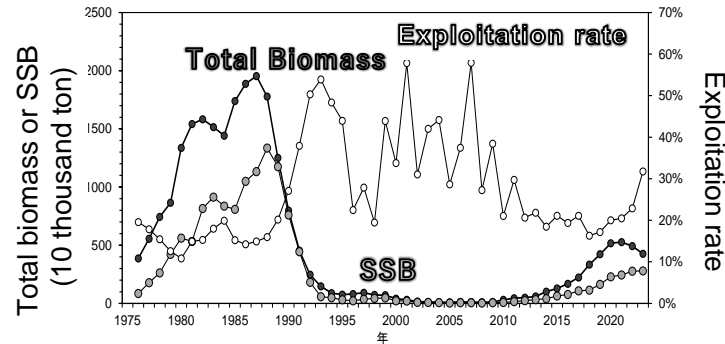


## Japanese sardine

### Convention Area



### Japanese Stock Assessment



### Comments on Status

- Spawning Stock Biomass (SSB) is above  $SSB_{MSY}$
- Fishing mortality (F) is above  $F_{MSY}$
- Japanese catch and most of Russia's catch are from their national waters.
- Chinese catch is from the CA
- Japan's stock assessment was observed and discussed by the SC
- The SC did not endorse the assessment





## Scientific Committee (SC)

Chair: Dr. Janelle Curtis (Canada)

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# Key outcomes – Performance review

NPFC-2024-SC09-WP01 (Rev. 6)

NPFC-2025-COM09-IP09

- The SC, SSC PS, SSC BF-ME, SSC NFS, and TWG CMSA reviewed the Performance Review recommendations and provided comments on SC-related recommendations.
- The SC's progress on addressing the NPFC Performance Review Panel's recommendations, as well as the SC's ongoing and future activities, are described in [NPFC-2024-SC09-WP01 \(Rev. 6\)](#) and summarized in the SC's 2024-2028 workplan.



## Scientific Committee (SC)

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# Key Outcomes - Climate change

**NPFC-2024-SC09-OP01, NPFC-2024-SC09-OP02, NPFC-2024-SC09-OP03, NPFC-2024-SC09-OP04, NPFC-2024-SC09-OP10, NPFC-2024-SC09-Final Report**

- Dr. Joel Rice (consultant with Deep Sea Fisheries Project, FAO) presented a report on strategic pathways for the incorporation of climate change into the NPFC's fisheries management. (**NPFC-2024-SC09-OP01**).
- Dr. Tom Carruthers (The Ocean Foundation) presented tools for incorporating climate change considerations into scientific advice. (**NPFC-2024-SC09-OP02, NPFC-2024-SC09-OP03**).
- Ms. Raiana McKinney (The Pew Charitable Trusts) presented a review of recent literature highlighting that harvest strategies are an effective adaptation tool for managing stocks under changing climate conditions (**NPFC-2024-SC09-OP04**).
- Dr. Kathryn Berry (PICES' Basin-scale Events to Coastal Impacts (BECI) Project), updated SC on BECI's aim to help NPFC use climate and ocean science in their decision-making (**NPFC-2024-SC09-OP10**).



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## Key outcomes – Observer program – Guidance to the TCC

### NPFC-2024-SC09-Final Report

- The Commission requested SC to provide guidance to the TCC on the level of observer coverage needed on fishing vessels and the kinds of data needed to achieve the scientific objectives of a regional observer program.
- The SC agreed that one of the scientific objectives of an observer program could be to assess the impacts of fishing activities on fisheries resources and species belonging to the same ecosystem or dependent upon or associated with the target stocks.
- The SC agreed that it is too early provide scientifically defensible input on the kinds of data that need to be collected and the level of observer coverage.
- The SC agreed to continue to discuss data needs and data gaps that could be filled by a regional observer program and inform the TCC about progress in these developments.
- Korea requested observer training opportunities onboard Japanese trawl vessels in the Emperor Seamounts.



## Scientific Committee (SC)

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# Key outcomes – Observer program – 6 questions from TCC

NPFC-2024-SC09-Final Report, NPFC-2024-SC09-WP04(Rev4), NPFC-2025-TCC08-IP03 Annex B

- The SC responded to 6 questions about a regional observer program (ROP) from the TCC chair ([NPFC-2024-SC09-WP04 \(Rev. 4\)](#), [NPFC-2025-TCC08-IP03 Annex B](#))
  - What data is currently being collected by observers in NPFC fisheries, which fisheries, and how?
  - Are there different needs for the different fisheries regarding data collection?
  - What new data would the SC prioritize/need from a ROP?
  - What new data would be nice to have (i.e. not needed/priority)?
  - Whether this data could be collected through electronic monitoring (EM)?
  - Whether the observer needs to be a scientist, or can data be collected by a non-scientist?



## Scientific Committee (SC)

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# Key outcomes – Observer program – 6 questions from TCC

NPFC-2024-SC09-Final Report, NPFC-2024-SC09-WP04 (Rev. 4), NPFC-2025-TCC08-IP03 Annex B

### Pacific saury (SSC PS):

- (2) primary fishery is with stick-held dipnets, **(3) precise size data, (4) environmental conditions,** (5) feasibility of EM needs assessment, (6) training is needed

### Chub mackerel (TWG CMSA):

- (2) needs do not differ among fisheries, **(3) fishing effort, biological information, and ratio of chub and blue mackerels, (4) environmental conditions,** (5) feasibility of EM needs assessment and fishers need training, (6) training is needed

### North Pacific armorhead, splendid alfonsino, sablefish, and skilfish (SSC BFME):

- (2) yes – see Annex 5 of CMMs 2024-05 and 2024-06, **(3) all data needs are being met, (4) none,** (5) feasibility of EM needs assessment, (6) training is needed

### Neon flying squid (SSC NFS):

- (2) yes, **(3) catch, age and size, catch composition, and effort, (4) environmental conditions,** (5) feasibility of EM needs assessment, (6) training is needed





## Key recommendations and outcomes - Data Management System

NPFC-2024-SC09-Final Report

NPFC-2024-SC09-WP03, NPFC-2024-SC09-WP06, NPFC-2024-SC09-IP01, (NPFC-2023-SC08-IP13 (Rev. 1))

- SC provided feedback on the SC-related data management system ([NPFC-2024-SC09-IP01](#)).
- SC agreed to work intersessionally towards finalizing the biological data provision templates ([NPFC-2023-SC08-IP13 \(Rev. 1\)](#)) and using them starting in the 2026 operational year.
- SC endorsed the data inventory policy and data inventory table structure proposed by the Secretariat ([NPFC-2024-SC09-WP03](#)).
- SC endorsed the development of a database to manage and archive scientific data, as proposed by the Secretariat ([NPFC-2024-SC09-WP06](#)), noting that it would facilitate more efficient management and use of scientific data for scientific analyses.
- SC established SWG Data to provide guidance to the Secretariat on database development.



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# Key recommendations and outcomes - Data Sharing

NPFC-2024-SC09-Final Report

NPFC-2024-SC09-WP07 (Rev. 2)

- The Secretariat and the SC proposed revisions to the Regulations for Management of Scientific Data and Information to align them with the revisions to the NPFC Data Sharing and Data Security Protocol that were adopted by the Commission at its 8<sup>th</sup> meeting. ([NPFC-2024-SC09-WP07 \(Rev. 2\)](#))
- The Secretariat has successfully applied for the GitHub Nonprofit Plan.
  - Currently, the Repository supports the TWG CMSA, SSC BF-ME (SWG NPA-SA, SWG VME), and SSC NFS.
- Members agreed to share data for scientific activities in accordance with the agreed SC Research Plan and SC Work Plan, including work plans specific to TWG CMSA, SSC PS, SSC BF-ME, and SSC NFS .
  - The SC tasked the Secretariat to send an official call for data to Members.
- The SC agreed to share existing biological data from the fisheries catch in the Convention Area and the adjacent EEZs with the Secretariat.



**Scientific Committee (SC)**  
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## Key proposed scientific projects for 2024-25 – Capacity Building

Annex Y, NPFC-2023-SC08-WP01 (Rev. 1), <https://collaboration.npfc.int/node/187>

NPFC-2024-SC09-Final Report

- **Dr. Jhen Hsu (Chinese Taipei)** – Nanaimo, British Columbia, Canada (January 2024)
  - 5-day ICES training course on advanced stock assessment with R Template Model Builder (RTMB).
  - Shared RTMB training course materials on the NPFC collaboration website (<https://collaboration.npfc.int/node/187>).
- SC09 1 day workshop on application of openMSE software (<https://openmse.com/>)
- **Dr. Libin Dai (China)** – Vancouver, British Columbia, Canada (February 2025)
  - Collaborated with Blue Matter Science to:
    1. Fit surplus production models (SPiCT) to both winter-spring and autumn cohorts of Neon flying squid.
    2. Developed and conditioned an age-structured openMSE operating model (autumn cohort only).
    3. Developed catch- and effort-based HCRs to compare the performance of output versus input controls.
    4. Evaluated management trade-offs by conducting closed-loop simulations using the OpenMSE package. <sup>37</sup>



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# Key proposed scientific projects for 2025-26 – SC Fund and SPF

NPFC-2024-SC09-WP09(Rev2)

NPFC-2024-SC09-Final Report, Annex AA

## SC Fund

- SC Meeting costs: e.g. TWG CMSA11, SSC NFS02, SSC BFME06, SSC PS16, SC10
- Invited experts to support stock assessment and modeling (e.g. for TWG CMSA, SSC PS, WG NSAM, SSC NFS)
- SC representative at PICES 2025 Annual meeting in Yokohama
- PICES/ICES/FAO International Symposium on Small Pelagic Fish and Forage Communities (May 2026, Mexico)

## EU Voluntary contribution

- SC database development

## China Voluntary contribution

- WG NSAM01 meeting costs

## Special Projects Fund

- invited expert to support a stock assessment of NPA and improve the assessment of SA



## Scientific Committee (SC)

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# Key outcomes and recommendations - Collaboration with PICES

NPFC-2024-SC09-OP06, NPFC-2024-SC09-OP10

NPFC-2024-SC09-Final Report

- NPFC – PICES Framework for Enhanced Scientific Collaboration in the North Pacific for 2025–2029
  - The SC endorsed the proposed renewal and recommended that the Commission adopt it.
- NPFC representation on:
  - the PICES Working Group on Ecology of Seamounts (WG 47)
  - the joint PICES/ICES Working Group on Small Pelagic Fish (WG 43)
  - the joint PICES/ICES Working Group on Sustainable Pelagic Forage Communities (WG 53)
    - SC endorsed the invitation to co-sponsor the PICES/ICES/FAO International Symposium, entitled “Navigating Changes in Small Pelagic Fish and Forage Communities: Climate, Ecosystems, and Sustainable Fisheries,” on May 4–8, 2026, in La Paz, Mexico ([NPFC-2024-SC09-OP06](#)).
- The SC re-affirmed its support for the development and implementation of the BECI project, which will provide valuable information for the SC’s analyses, including those related to climate change ([NPFC-2024-SC09-OP10](#)).





## Scientific Committee (SC)

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# Key Outcomes and recommendation – Collaboration with FAO

NPFC-2024-SC09-OP08

NPFC-2024-SC09-Final Report

- The Deep-Sea Fisheries (DSF) Project has been working on the application of the precautionary approach to deep-sea fisheries, engagement with deep-sea fishing industry, assessing data-limited deep-sea stocks, assessing impacts of deep-sea fisheries on deepwater sharks, VME identification methods, support for observers, RFMO websites and outreach messaging, new technologies, and climate change work.
- The Deep-Sea Fisheries (DSF) Project requested deep-sea fishing effort data at 1° latitude by 1° longitude resolution, to develop a global map of spatial bottom fishing effort ([NPFC-2024-SC09-OP08](#)).
  - The SC endorsed this request and asked Members to consult with data owners on whether the NPFC could share the requested data with the DSF Project in the aggregated form that was previously prepared by SC.
- The DSF Project held a symposium on Applying the Ecosystem Approach to Fisheries Management in ABNJ from 11–13 March 2025 that included a discussion of how research surveys and fisheries could answer questions about the effects on associated/dependent species.
  - The SC was represented at this symposium.



## Scientific Committee (SC)

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# Key Outcomes and recommendation – Collaboration with FAO

NPFC-2024-SC09-OP05

NPFC-2024-SC09-Final Report

- The DSF Project (FAO) presented an overview of preliminary identification keys for deepwater sharks and a review of deepwater shark species known or likely to occur within the NPFC Convention Area ([NPFC-2024-SC09-OP05](#)). The DSF Project is also working on a new style of digital identification key with enhanced usability. FAO will produce a pelagic shark identification key in 2025.
- The SC expressed its appreciation for the preliminary identification keys and interest in collaborating with the DSF Project on a new style of digital identification key.





## Scientific Committee (SC)

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## Key outcomes – Collaboration with NPAFC

NPFC-2024-SC09-OP09 including Appendix 1 and Appendix 2

NPFC-2024-SC09-Final Report

- The NPAFC proposed to co-host a joint workshop on interaction between fisheries and anadromous fish in the North Pacific high seas as a collaboration between the NPFC and NPAFC.
  - The SC endorsed the scientific elements of the proposal.
- The SC had no feedback on the Terms of Reference for an NPAFC/NPFC Data Sharing Platform.

## Key outcomes – Partnership with FIRMS

NPFC-2024-SC09-OP11

NPFC-2024-SC09-Final Report

- FIRMS provided an update on its partnership with NPFC and support for the FAO SOFIA Status of Stocks Index (SoSI) biennial updates.



## Scientific Committee (SC)

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# Key recommendations – 2024-2028 research and work plans

NPFC-2024-SC09-WP16(Rev1), NPFC-2024-SC09-WP17(Rev1)

NPFC-2024-SC09-Final Report

- Endorse SC's 2024-2028 rolling 5-year research plan.
- Endorse SC's 2024-2028 rolling 5-year work plan.
- Agree to share data for scientific activities in accordance with the SC Research Plan and SC Work Plan.
- Provide guidance on how the SC should provide advice for priority species for which collaborative work towards an NPFC stock assessment is not currently being conducted – i.e. species for which one member is leading the stock assessment.
- Consider adoption of the SC09 report.



## Key recommendations – SC Meeting Time and Location

### NPFC-2024-SC09-Final Report

Consider SC's suggested meeting schedule for 2025-26:

- The SC's subsidiary bodies will hold informal WebEx meetings to check progress and plan intersessional work, when needed.
- Members are invited to consider hosting scientific meetings in the 2026 operational year and inform the Secretariat, preferably by summer 2025.
- SC is considering a ½ day side-event for capacity-building on 10 December

### Yantai, China (Hybrid)

- **SSC NFS02:** 8-10 July
- **WG NSAM01:** 11-13 July
- **TWG CMSA011:** 15-18 July

### Virtual (WebEx)

- **SSC PS15:** 1-5 September

### Nagoya, Japan (Hybrid)

- **SSC BF-ME06:** 8-10 December
- **SSC PS16:** 11-14 December
- **SC010:** 16-19 December

### Virtual (WebEx)

- **TWG CMSA12:** early 2026
- **SSC NFS03:** early 2026





**Scientific Committee (SC)**  
Chair: Dr. Janelle Curtis (Canada)

## 10-year anniversary

NPFC-2024-SC09-Final Report







**Scientific Committee (SC)**  
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## SC09 meeting participants

Tokyo, Japan



**Comments? Questions? Suggestions?**