



Respuestas del personal a las solicitudes de la Comisión

Staff responses to requests by the Commission

102^a Reunión de la CIAT - 102nd Meeting of the IATTC
2-6 de septiembre de 2024 – 2-6 September 2024
Ciudad de Panamá, Panama City, Panamá



P Guatemala: ¿El personal hizo algún ajuste de capacidad en su recomendación?

Q Guatemala: Did the staff make any capacity adjustments in their recommendation?

- La capacidad del 10 de mayo de 2024 fue un 3% superior al promedio de 2021-2023.
- Esto implicaría que serían necesarios 9 días de veda adicionales para mantener la mortalidad por pesca en el promedio de 2021-2023
- Sin embargo (ver lamina siguiente), el personal no recomienda ajustes

- The May 10 2024 capacity was 3% higher than the 2021-2023 average
- This would imply that an additional 9 days closure would be required to keep the fishing mortality at the 2021-2023 average
- However (see next slide), the staff does not recommend any adjustments

P Guatemala: ¿El personal hizo algún ajuste de capacidad en su recomendación?

Q Guatemala: Did the staff make any capacity adjustments in their recommendation?

- No se necesitaron ajustes de capacidad:
 - § La F actual para el BET está por debajo de F_{RMS} , por lo que no es necesario aumentar la veda para el BET.
 - § La evaluación exploratoria del YFT no se consideró suficientemente fiable para el asesoramiento de ordenación, aunque no indica necesidades inmediatas para cambiar la ordenación.
 - § Los indicadores no muestran necesidades inmediatas de cambiar la ordenación.
- Por las razones anteriores, no se recomienda modificar la ordenación actual.

- Capacity adjustments were not needed:
 - § Current F for BET is below F_{MSY} , so there is no need to increase the closure for BET
 - § The exploratory assessment for YFT was not considered reliable enough for management advice. Although, it does not indicate immediate needs to change management
 - § Also, YFT Indicators do not show immediate needs to change management
- For the above reasons, adjusting the current management is not recommended

P Ecuador: Reducción de la veda de 1 a 3 días

Q Ecuador: Reduce closure by 1-3 days

- SBR ponderado por el modelo al final de la proyección a 10 años
- Veda actual: 0.270
- 3 días menos de veda: 0.267
- Apertura = $365 - 72 = 293$
- $3 / 293 = 1\%$
- Nota: $3 / 72 = 4\%$
- Sin embargo, el personal no recomienda cambios en las medidas de ordenación.

- Model weighted SBR (spawning biomass ratio) at the end of the 10-year projection
- Current closure: 0.270
- 3 less days closure: 0.267
- Opening = $365 - 72 = 293$
- $3 / 293 = 1\%$
- Note: $3 / 72 = 4\%$
- However, the staff does not recommend changes in the management measures.

P Ecuador: Reducción de la veda de 1 a 3 días

Q Ecuador: Reduce closure by 1-3 days

- Si se contara con una evaluación del YFT, y BET fuera la especie con la ordenación más estricta requerida, y el UIB no estuviera en vigor, entonces, según la definición actual de los puntos de referencia, 3 días menos de veda tendrían un impacto menor en SPR (es decir, no causarían que la población de BET rebasara los puntos de referencia límite u objetivo).
- Dado que no existe una evaluación del YFT, no se recomienda reducir los días de veda.
- Se desconoce la influencia del UIB en el impacto de los días de veda para BET.

- If there was a YFT assessment, and BET was the species with the required most restricted management, and the IVT was not in force, then under the current definition of the reference points, 3 days less closure would have a small impact on the SPR (i.e. not cause the BET stock to exceed the limit or target reference points)
- Since there is no YFT assessment, then reducing the days of closure is not recommended
- The influence of the IVT on the impact of the days of closure for BET is unknown.

P Ecuador: Reducción de la veda de 1 a 3 días

Q Ecuador: Reduce closure by 1-3 days

- La relación entre la combinación actual de medidas de ordenación y F es incierta y no está claro cómo influirían los cambios en las medidas de ordenación en la F

- The relationship between the current mixture of management measures and F is uncertain and it is unclear how changes in the management measures would influence F

US: Muestreo tradicional en puerto vs PRM: aspectos logísticos – Traditional port-sampling vs EMP: logistical aspects

Muestreo tradicional en puerto (MTP):

- Estimación de composición de captura a nivel de la flota.
- Cualquier embarcación - cualquier tipo de lance
- Muestreadores son personal de las oficinas de campo.
- Tienen responsabilidades adicionales (por ejemplo: programa de observadores).

Programa Reforzado de Monitoreo (PRM):

- Colección de datos para estimación de captura a nivel de viaje.
- Algunos buques – lances OBJ
- Muestreadores dedicados.
- Un muestreo más extensivo es necesario para obtener estimaciones de captura de BET por viaje.

Traditional port-sampling (TPS):

- Data collection for fleet-level catch estimation.
- Any vessel – any set type
- Samplers are field office staff
- They have additional responsibilities (e.g. observer program).

Enhanced Monitoring Program (EMP):

- Data collection for trip-level catch estimation.
- Certain vessels – OBJ sets
- Dedicated samplers.
- More extensive sampling is required to obtain reliable trip-level BET estimates.

Comparación de logísticas de muestreo para un viaje - Comparison of sampling logistics for a trip

Ejemplo – Example: Manta	MTP - TPS	PRM - EMP
No. Muestreadores – No. Samplers	2	12
Típico No. bodegas OBJ – Typical No. OBJ wells	1 - 2	8
Típicas horas por bodega – Typical hours per well	1-2 h	8-12 h

Investigación científica basada en datos del PRM - Scientific Research based on EMP data

- Comparación con estimaciones del observador a nivel de bodega para comprender mejor patrones presentados.
- Una comparación preliminar muestra una correlación positiva, pero también mucha variabilidad.
- Parte de la variabilidad puede estar relacionada a factores específicos de los buques.
- En el futuro, la investigación buscará comprender estos patrones mediante el desarrollo de un modelo estadístico que incluya variables operativas y otros factores.

- Comparison with observer estimates at well level to understand patterns.
- A preliminary comparison shows a positive correlation, but also lot of variability.
- Some of the variability may be related to vessel-specific factors.
- Working on understanding these patterns by developing statistical model that includes operational variables and other factors.

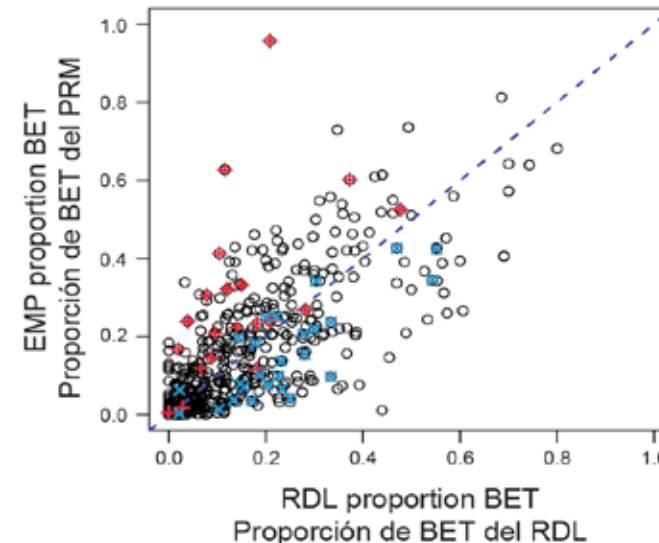
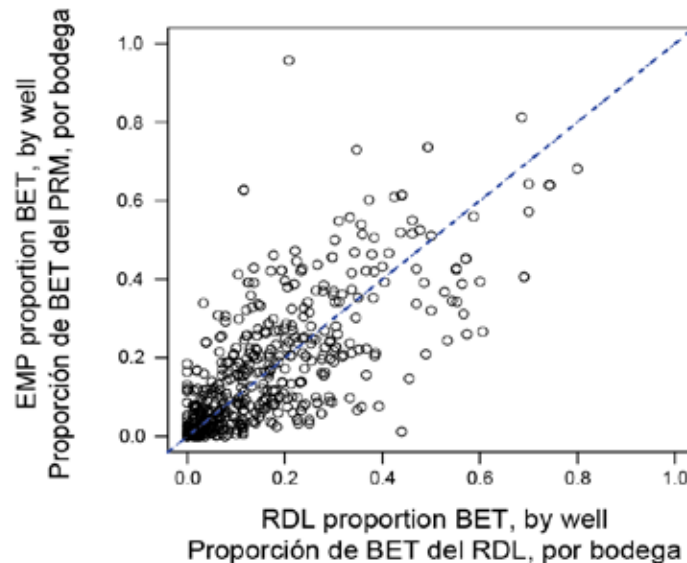
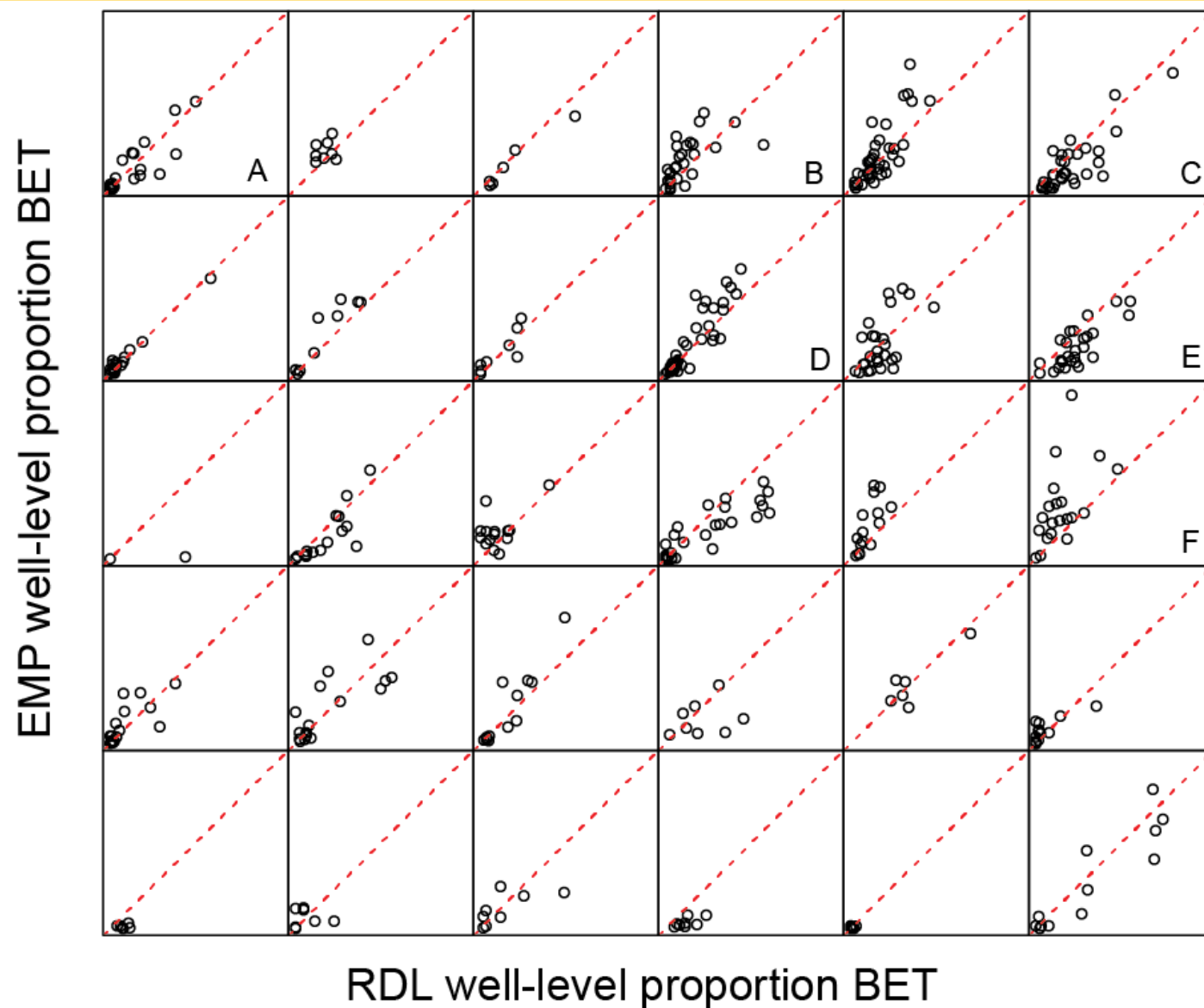
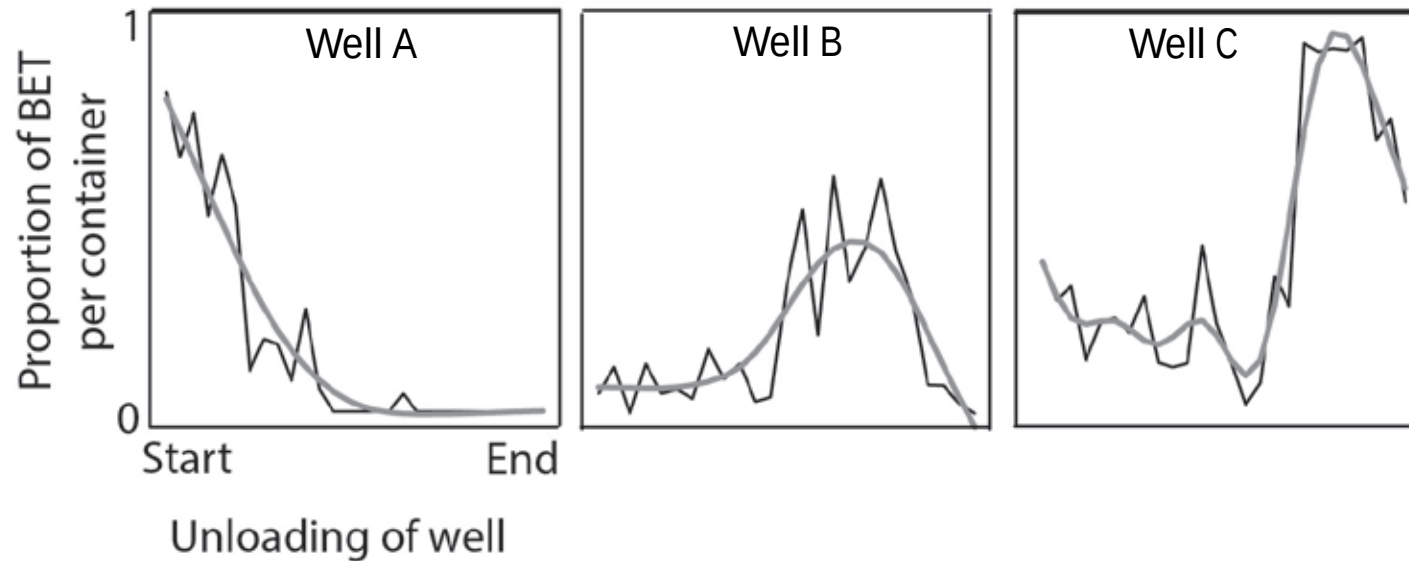


FIGURE A-1. Relationship between the RDL and EMP estimates of the proportion of BET per wells, by vessel. Each panel corresponds to the data of one vessel, each open black circle corresponds to the estimate for one well. The red dashed line is the 1-to-1 line. The letters in the lower-left corner of some panels correspond to trip-by-trip graphs shown in Figure A-2.





- En el estudio piloto del PRM se identificaron patrones en la composición de captura de BET dentro de la bodega durante la descarga de lances OBJ.
- Dado estos patrones, el muestreo extensivo de la bodega es necesario para obtener una estimación fiable de la capturas de BET a nivel de viaje.

- Within-well patterns in BET catch composition during unloading of OBJ-set wells were identified by EMP pilot study.
- Given such pattern, extensive sampling within a well is required need to obtain a reliable estimate of trip-level BET catch.

- Un alto nivel de variabilidad en la proporción de BET por bodega puede ocurrir entre las bodegas de un mismo viaje.
- Dada esta variabilidad, es necesario muestrear algunas bodegas de un mismo viaje para obtener estimaciones confiables de captura de BET a nivel viaje.

- A high level of variability in the proportion of BET per well can occur among wells of a single trip.
- Given such variability, many wells need to be sampled per trip to obtain a reliable estimate of trip-level BET catch.

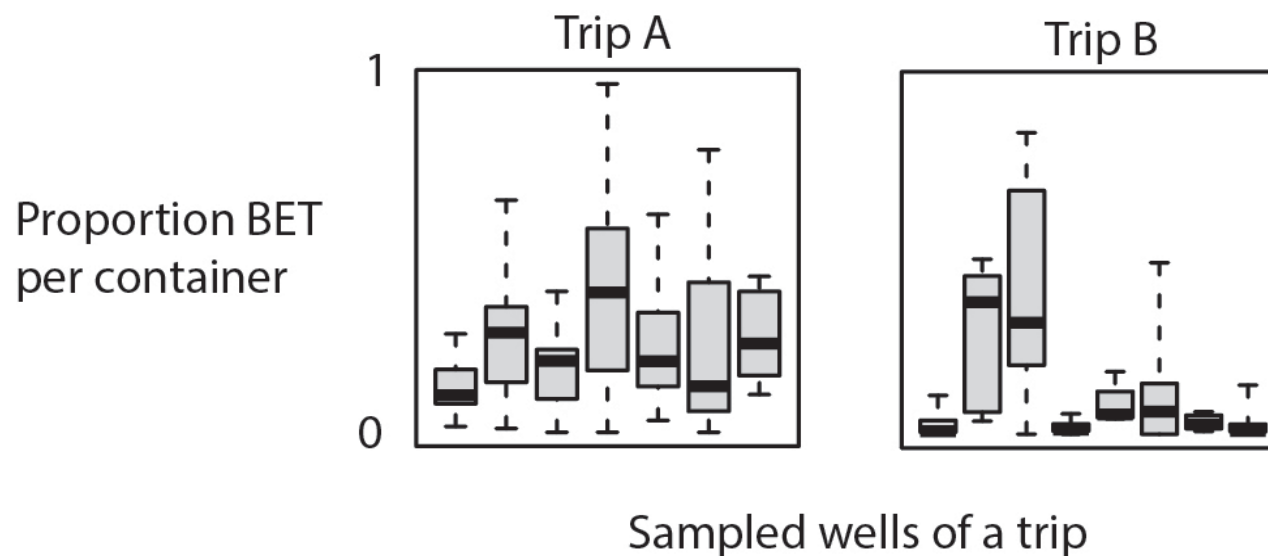
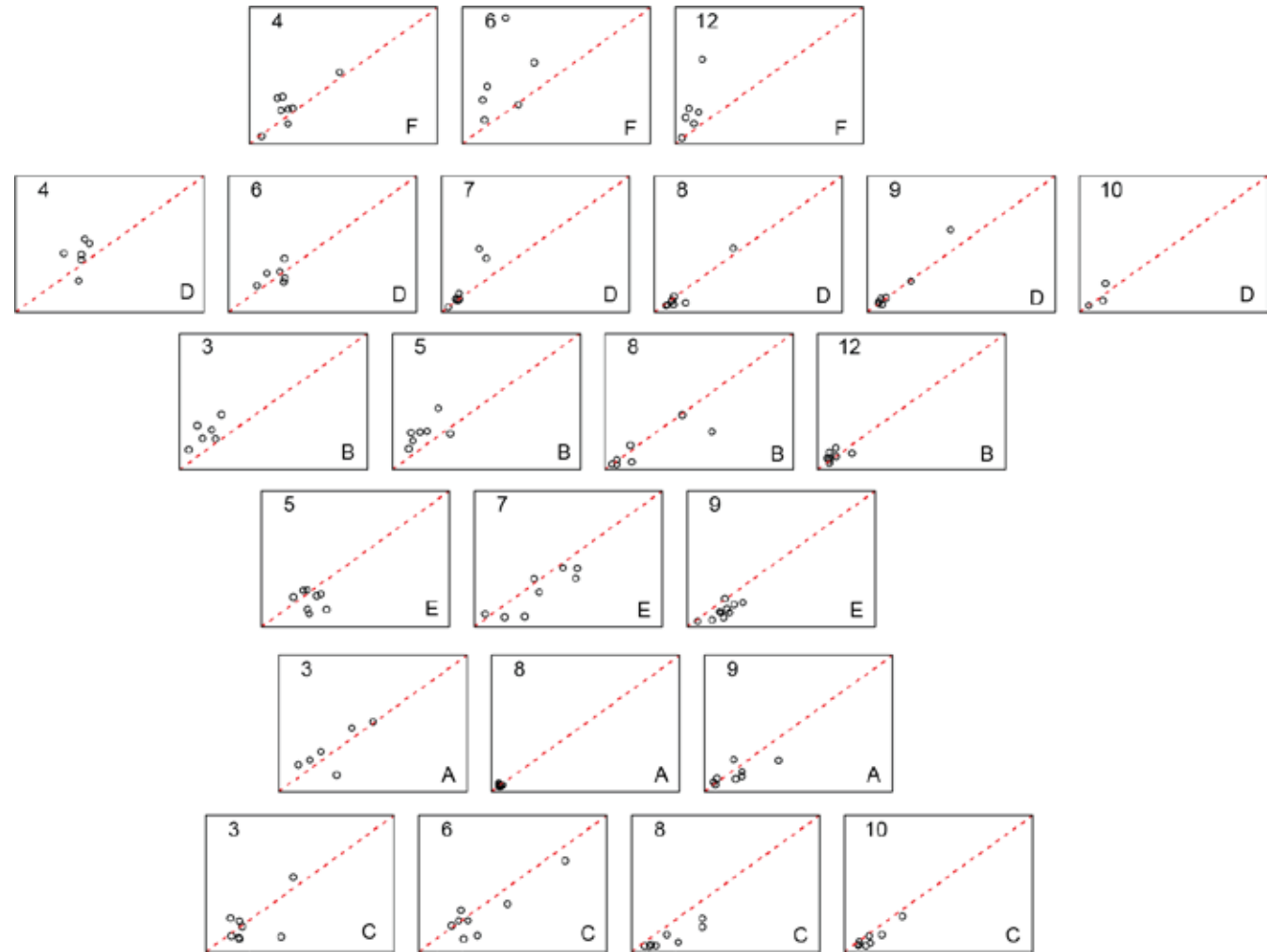


FIGURE A-2. Relationship between the RDL and EMP estimates of the proportion of BET per wells, by trip, for several of the vessels shown in Figure A-1. Each row corresponds to the data of one vessel; each panel of a row corresponds to the data of one trip for that vessel; and, each open black circle corresponds to the estimate for one well. The red dashed line is the 1-to-1 line. The letters in the lower-left corner of each panel indicate the corresponding vessel of Figure A-1.



TWN 1 - Datos de bitácora de palangre para índices de abundancia – resumen

Longline logbook data for indices of abundance – summary

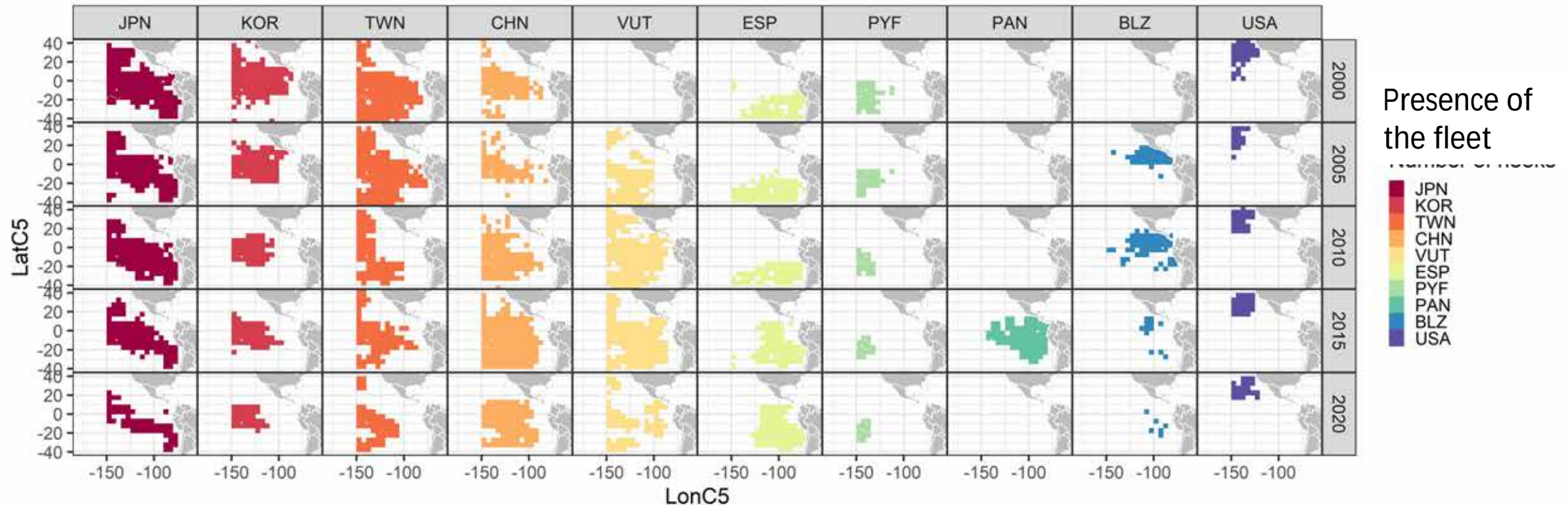
Activity	Opportunities	Challenges
Construct indices of abundance for bigeye and yellowfin tuna combining data from several fleets	• Good collaborative work of IATTC staff with CPC scientists • Successful attempt to analyse combined dataset in 2019 • Spatiotemporal models widely developed, including estimation of targetting effects and preferential sampling	• Data is available in restricted periods • Periods do not overlap • Data for four fleets available simultaneously only for one week (in 2019) • Data needs to be compared to understand best way to combine it (e.g. species targets, fishing strategies) • Spatiotemporal models need long computation time
Construct indices of abundance for other species (e.g. swordfish, blue shark)	• Good collaborative work of IATTC staff with national scientists	• Data not routinely submitted • Data formats vary • Data compilation is time-consuming • Some data access is limited

TWN 1 - Datos de palangre para índices de abundancia - cobertura espacial y temporal

Longline data for indices of abundance – spatial and temporal coverage

Effort of the industrial longline fleets

as reported by the provision of the data reporting resolution C-03-05



Stock assessment models start in 1975 (BET) or 1984 (YFT) : ideally historical data from those dates would be needed for combined indices

TWN 1 - Datos de bitácora de palangre para índices de abundancia – detalles

Longline logbook data for indices of abundance - details

CPC	DATA RESOLUTION	AVAILABILITY	RESTRICTION	CHALLENGES WITH THE DATA	OPPORTUNITIES	LATEST WORK DONE
Japan	Operational level set-by-set	MOUs: May 2023 March 2024 Jan 21 2019 – Feb 15 2019	Only available with presence of national scientist	The operation the fleet is contracting towards the western area, uncertainty in the indices is increasing rapidly in recent years	Good collaboration procedures with national scientists Good knowledge of the data by the scientific staff	Collaborative work planned for 2024-2025 Index used in BET benchmark assessment, and as indicators for BET and YFT Combined fleet index done in 2019
Japan	Aggegated 1 by 1 by month by vessel and HBF	MOU renewable annually 2020 to 2024	Only to be used for indices for BET and YFT	Idem	Idem	Used up to 2023 to build indices for YFT and BET
Korea	Operational level set-by-set catch and effort and length composition	Nov 08 2018 – May 17 2019,	Only available with presence of national scientist	The operation the fleet is restricted to western of EPO Need to compare with other fleets to be able to properly combine it in one spatiotemporal index	Good collaboration procedures with national scientists Some knowledge of the data by the scientific staff Potential Increase spatial coverage for indices for YFT and BET	Collaborative work in 2019-2022 Comparison with JPN is high resolution spatial scales Combined fleet GLM index for BET done in 2019
Korea	Aggregated 1 by 1 by month by vessel and HBF	MOU renewable annually from 2020 to 2022		Idem	Idem	Comparison with JPN for SWO, Index for S SWO assessment
China	Operational level set-by-set	Jan 20 2019 – May 17 2019 Access planned for Sept 2024 to 2025	In 2024-2025: Only available with presence of national scientist	Data collection starts in 2011, national scientists indicated that quality needs to be checked. Species composition different from other fleets in the same location	Fleet is expanding operation in EPO Collaborative work planned for 2024-2025 Potential Increase spatial coverage for indices for YFT and BET	Combined fleet GLM index for BET done in 2019
Chinese Taipei	Operational level set-by-set	Dez 27 2018 – May 17 2019		Size data not particularly reliable according to national scientists	Potential Increase spatial coverage for indices for YFT and BET	Combined fleet GLM index for BET done in 2019

TWN 1 - Datos de bitácora de palangre para índices de abundancia Longline logbook data for indices of abundance

CPC	DATA RESOLUTION	AVAILABILITY	RESTRICTION	CHALLENGES WITH THE DATA	OPPORTUNITIES	LATEST WORK DONE
Ecuador	Operational level set-by-set and length composition	By request from scientific staff in 2022	No restriction	Very limited distribution in space and time (only recent years) of fleet. Targets ALB and SWO	Ongoing collaborative work Ecuadorian team working to resolve issues with data and improve database	S SWO assessment (catch data)
Spain	Operational level set-by-set, VMS	By request from scientific staff in 2022	No restriction	Only data for SWO available. Other species need to be added. Number of hooks only recently added to the data collection.	Conversations with national scientists to improve data collection and access	Index for S SWO assessment (catch per set)
Chile	Operational level set-by-set	By request, from scientific staff in 2022	No restriction	Only data for SWO available. Restricted area of operation. Fleet targeted SWO and ceased operating in 2018.	Ongoing collaborative work for S EPO blue shark	Index for S SWO assessment
Other fleets (USA, PYF, VUT,PAN)	Only aggregated 5 by 5 by month, catch and effort data	Resolution C-03-05		Coarse resolution data cannot be used for indices of abundance		



Preguntas - Questions