Scientific data through Port Monitoring

Current status of scientific data collected through Port Monitoring

18TH REGIONAL TUNA DATA WORKSHOP (TDW-18)

8-12 APRIL 2024, NOUMEA, NEW CALEDONIA

Scientific data through Port Monitoring

What, How and Why ?

What has been done ?

A history lesson on data collected so far …

Not only useful for science !

Examples of uses in national compliance

Where to from here ?

Transition from forms to ER and EM

A broader Port Monitoring data collection regime

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What ?

Port Sampling data

- *Individual fish lengths and weights at the trip level*
- *Target: sample 20% of trips / year*

Unloadings/Transhipment data

- *Total trip catch by species*
- *Number and Measured weight for LL*
- *(Product destination also collected)*
- *Target 100% coverage*

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How ?

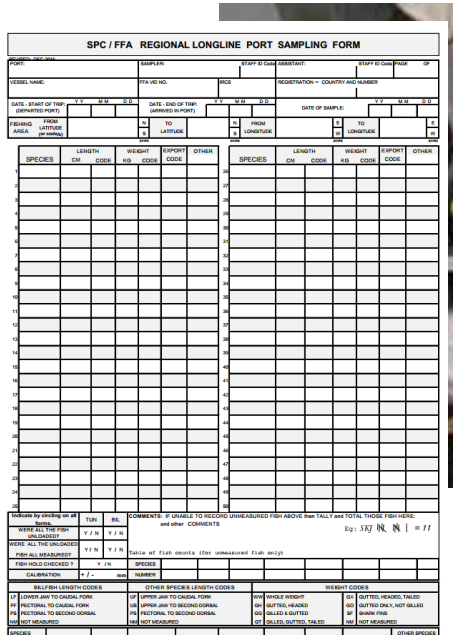
Port Sampling data

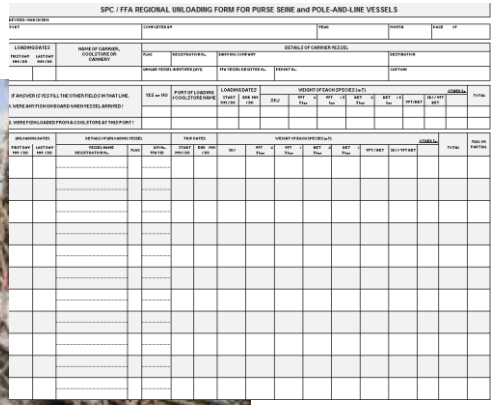
- *Regional SPC/FFA Data Collection forms*
- *Transitioning to E-Reporting (OnShore)*

Unloadings/Transhipment data

- *Regional SPC/FFA Data Collection forms*
- *Potential for E-Reporting* and E-Monitoring*

* OnShore in use


SPC / FFA REGIONAL LONGLINE PORT SAMPLING FORM


SPC / FFA REGIONAL UNLOADING FORM FOR PURSE SEINE and POLE-AND-LINE VESSELS

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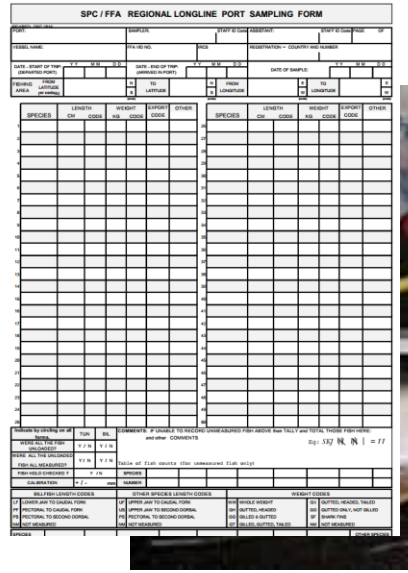
Why ?

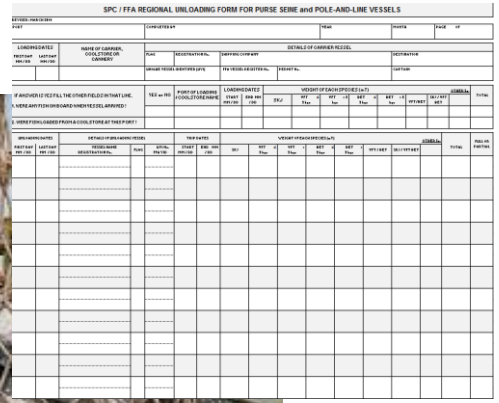


Port Sampling data

- *SIZE DATA - Direct input for stock assessments*
- *Best opportunity to obtain size data of retained catch*
- *Independent data to check logs/unloads*

Unloadings/Transhipment data

- *Used to adjust logbook declarations*
  [LL measured weight → logbooks]
- *Used to verify logbook species catch*
  Ensures accuracy of data for assessments



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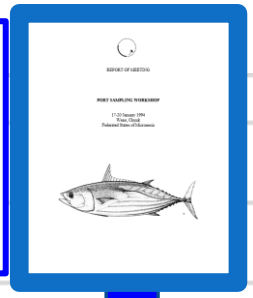
Trends in Longline Port sampling data

Regional Port Sampling Workshop (1994)



Annual # of Length samples by tuna species

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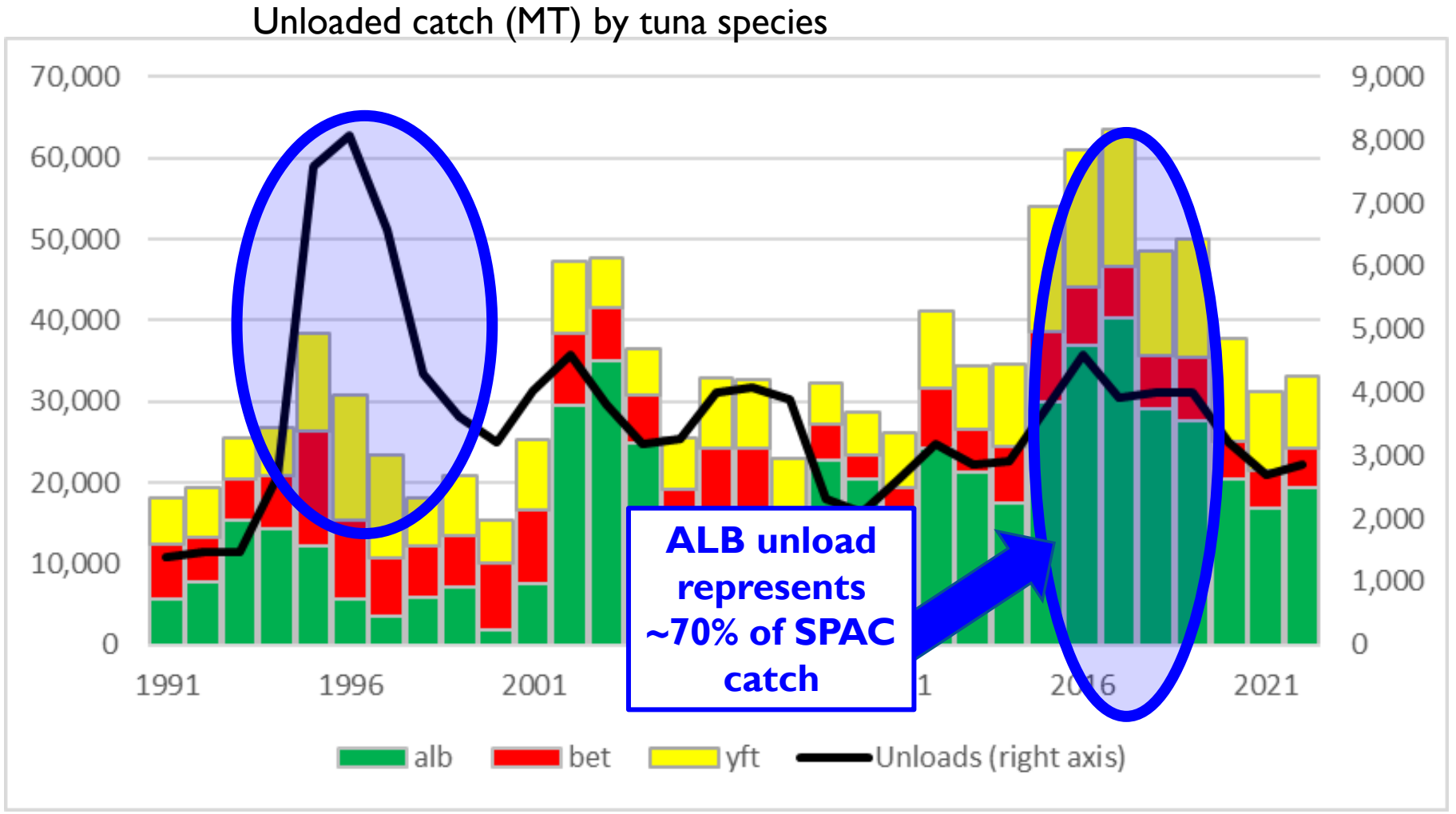
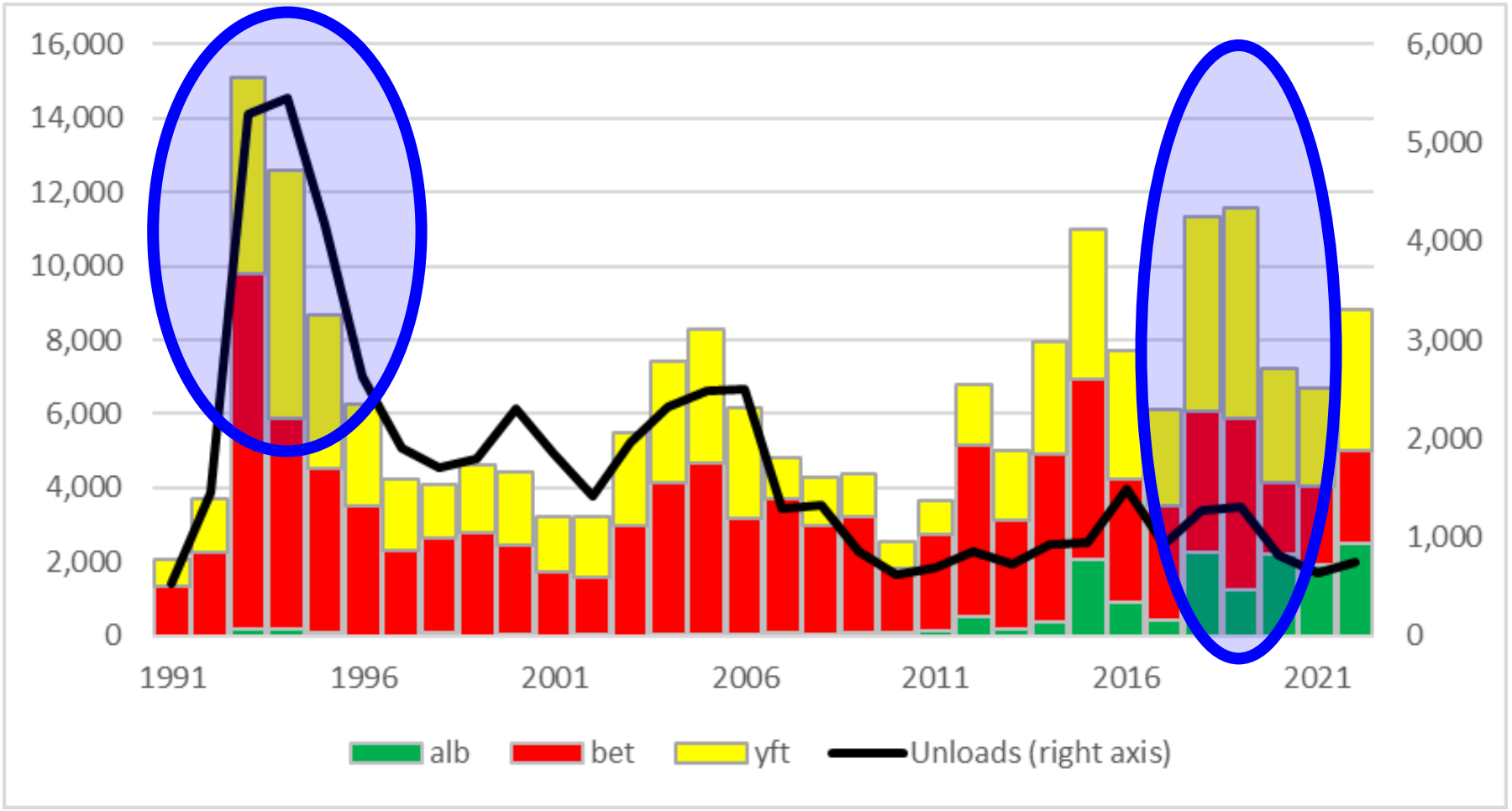
Trends in Longline Unloadings data



Trends in Longline Unloadings data (tropical)



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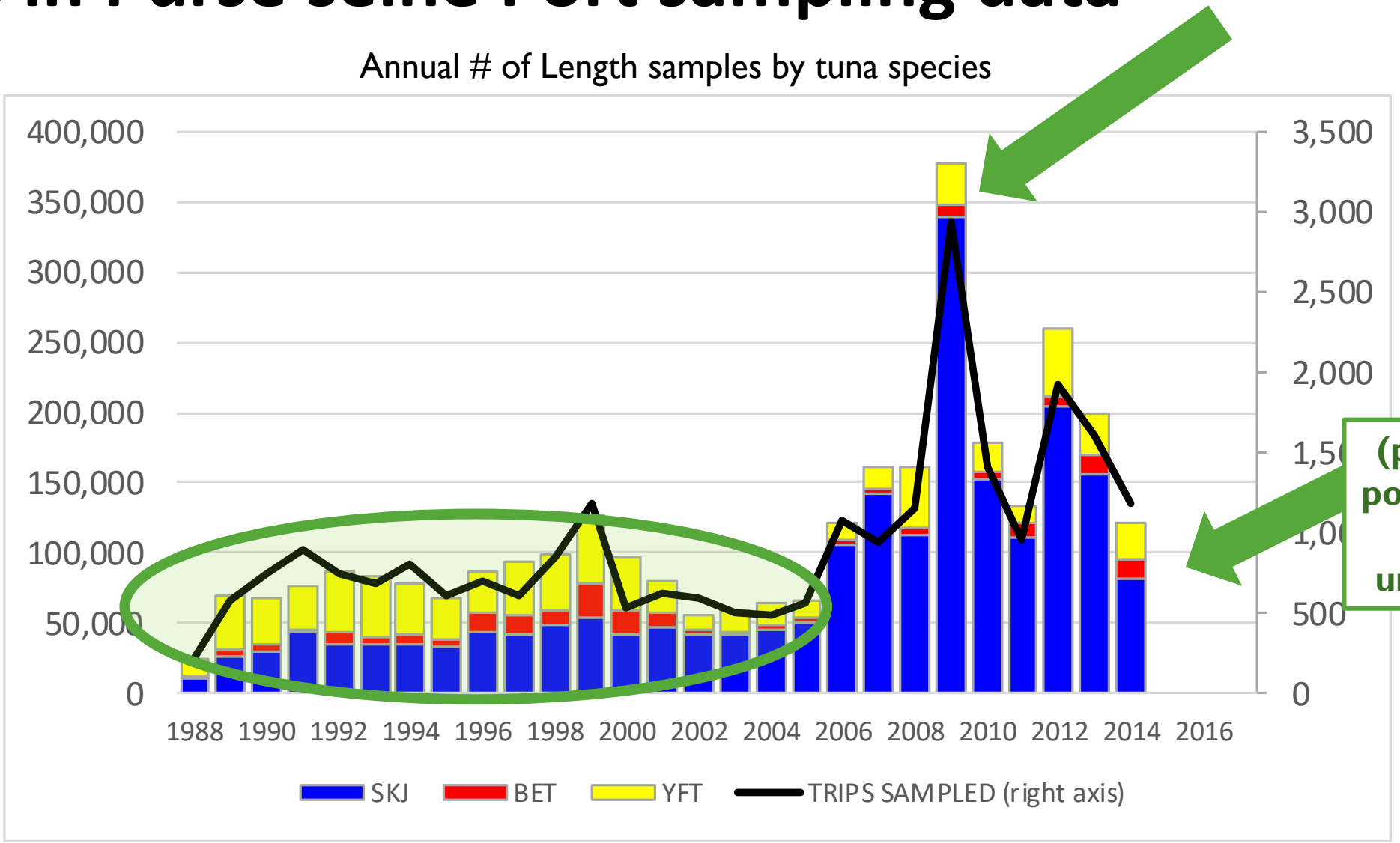
Trends in Purse seine Port sampling data



(purse seine port sampling no longer undertaken)

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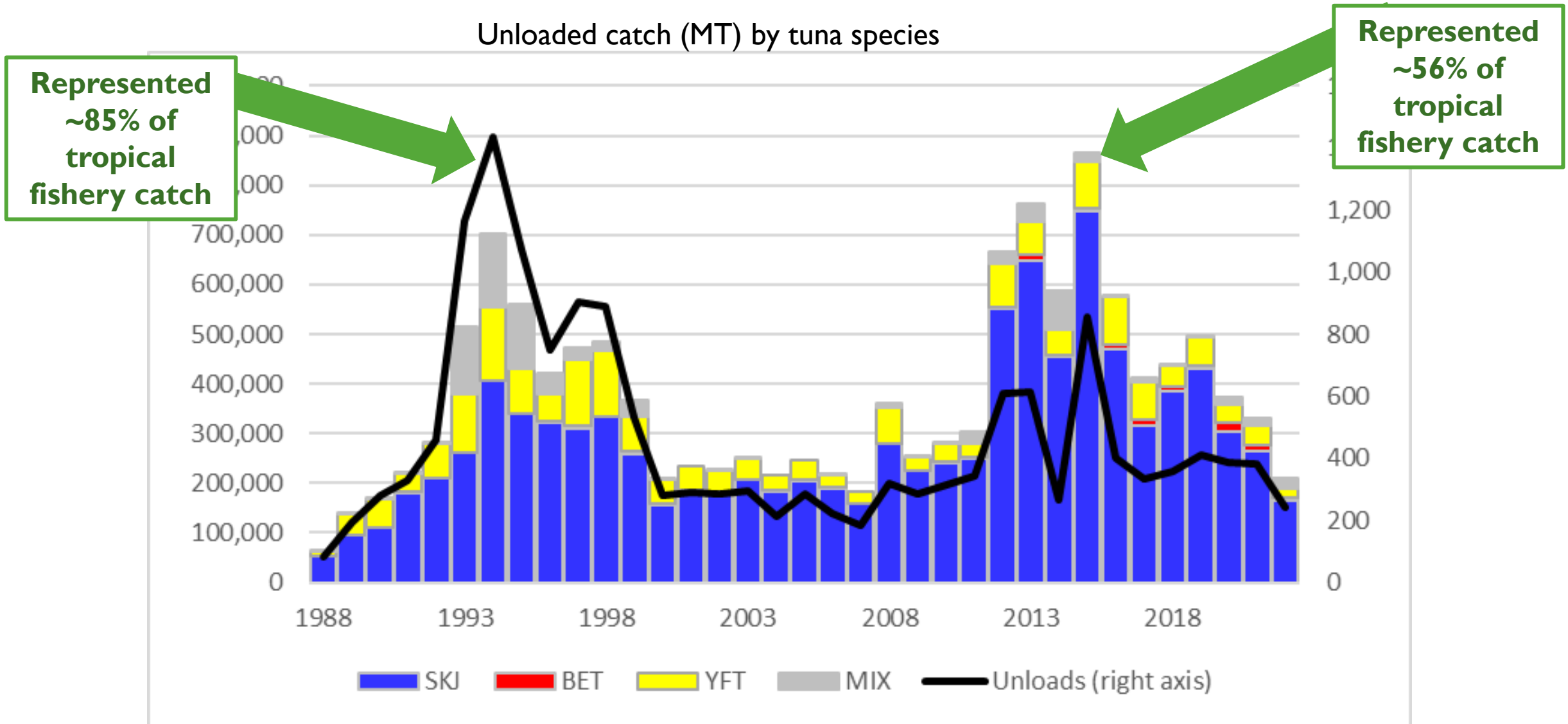
Trends in Purse seine Unloadings/transhipment data



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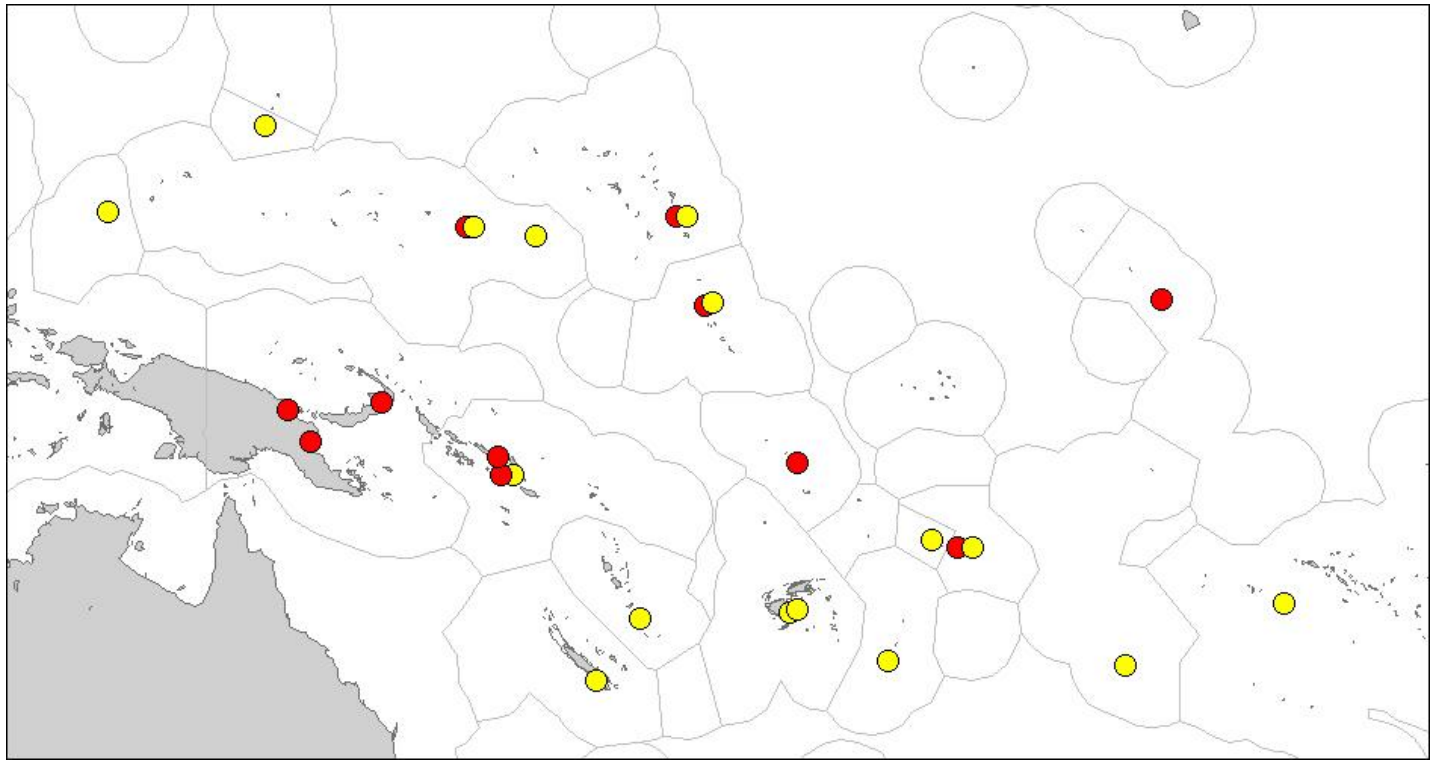
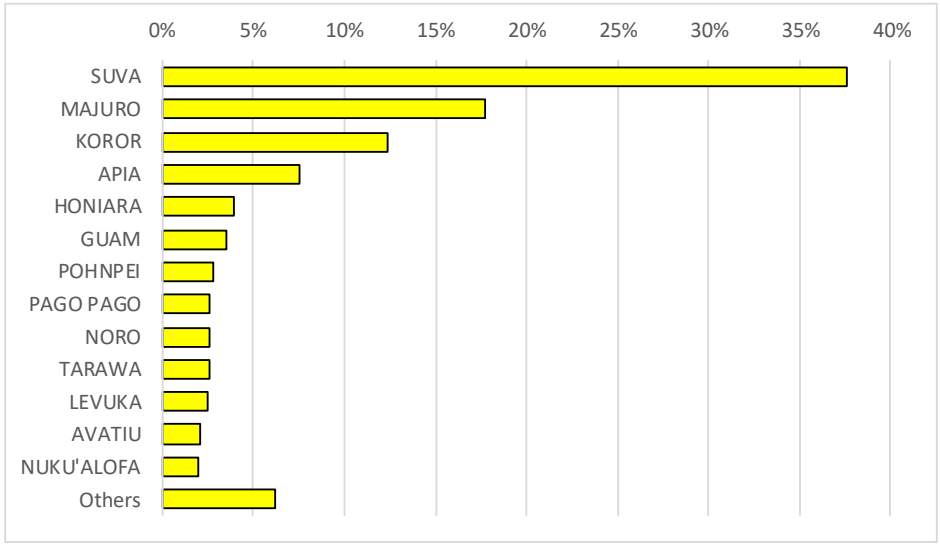
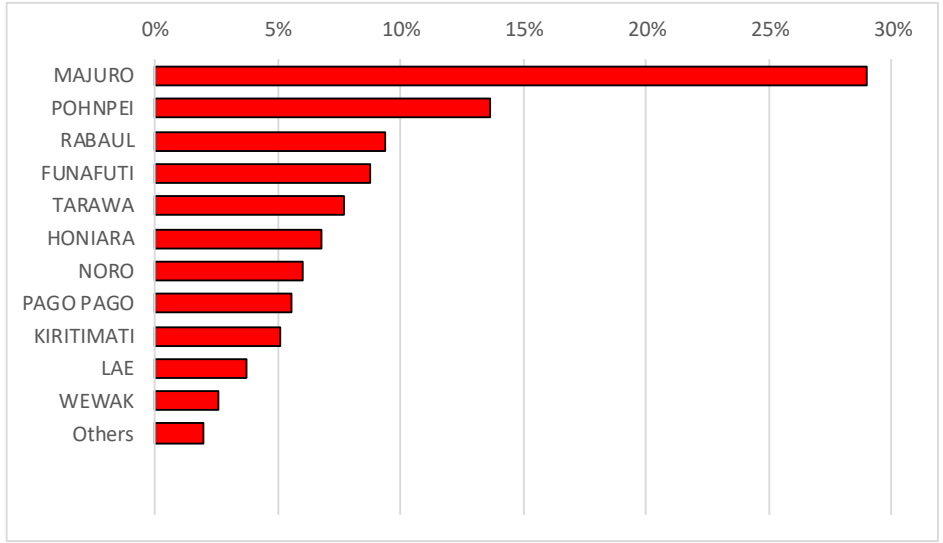
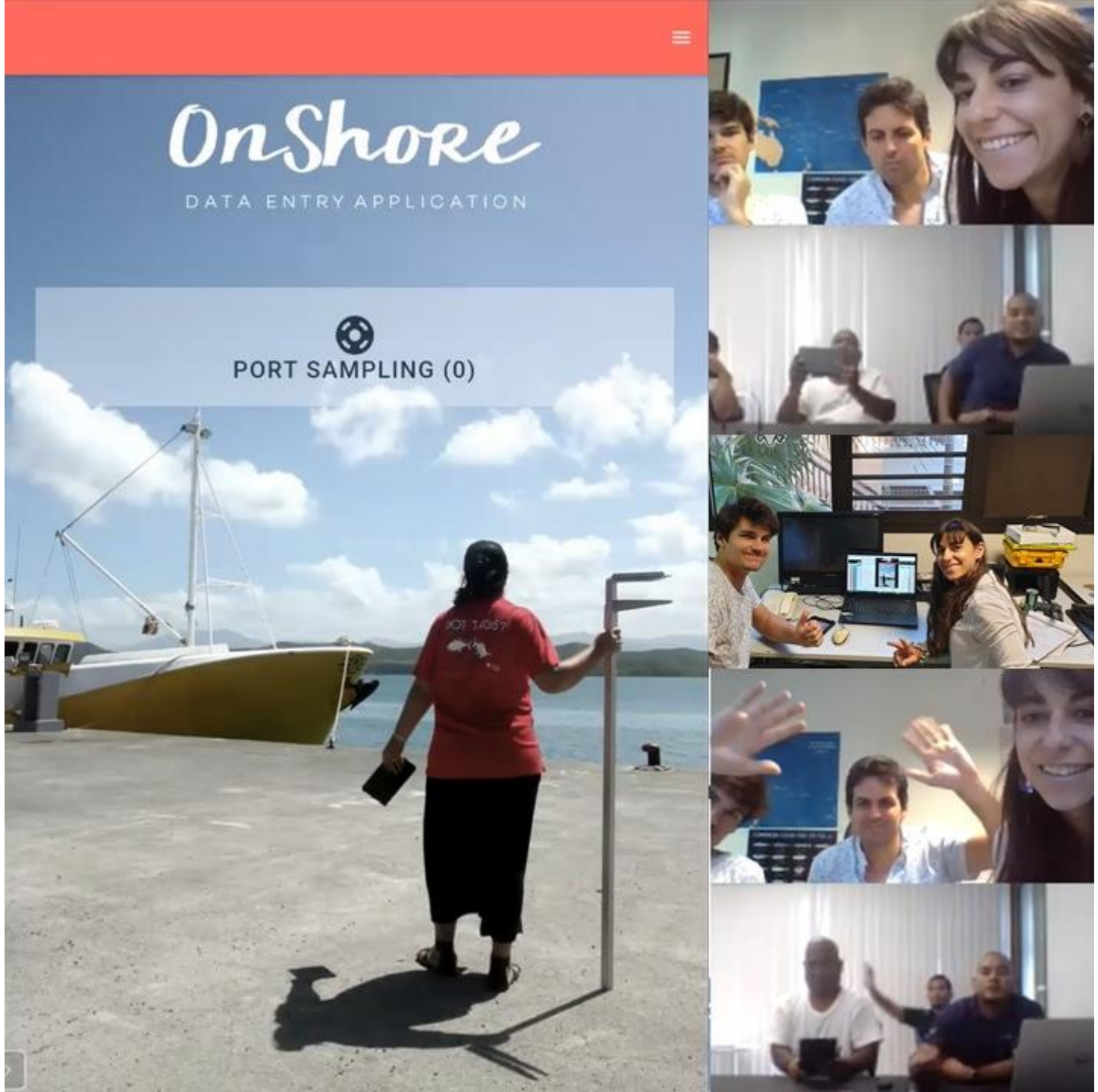
Key ports



Key unload ports for LL (yellow) and PS (red) ports based on recent activity







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7:28 50%

OnShore
SPC - FAME
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About this app

SPC / OFP mobile application to collect tuna fisheries port sampling data

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Ret Country Port	Nbr Sampling	Nbr Samples	Ports - Avg Length
FJ	**94**	**22,296**	**97.12**
SUVA	94	22,296	97.12
FM	**381**	**31,723**	**120.20**
KOSRAE	29		
POHNPEI	252	22,349	118.96
YAP	100	9,374	123.17
MH	**604**	**89,785**	**115.57**
NC	**58**	**978**	**117.40**
Noumea	58	978	117.40
PF	**636**	**39,477**	**105.02**
PG	**8**	**298**	**52.94**
Vidar port	8	298	52.94
PH	**146**	**1,690**	**71.25**
GENERAL SANTOS	146	1,690	71.25
TO	**572**	**132,479**	**85.61**
Nuku'alofa	572	132,479	85.61
VU	**60**	**26,583**	**94.10**
Port Vila	60	26,583	94.10
WS	**7**	**1,282**	**94.28**
APIA	7	1,282	94.28
Total	**2,566**	**346,591**	**100.41**

Instance Source
Search
FJ
FM
MH
OFP
PF
PG
PH
TO
VU
WS

Flag
Search
(Blank)
AN
AS
AU
BN
BS

Year
2018
2022

Species Cat
BIL
BRD
INV
MAM
OTH
RAY
SHK
TTX
TUN

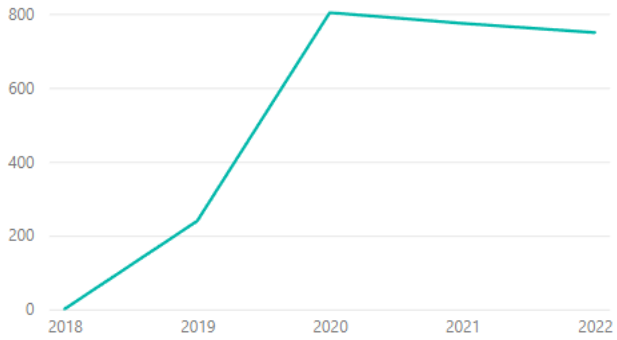
Species Code
ALB
BAU
BET
BFT
BKJ
BLT
BUK
DOT
FRI

Ports - Nbr Sampling and First G...

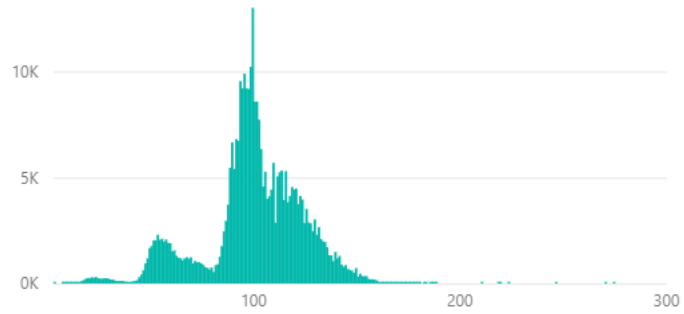
Ports - Nbr Catch by Flag

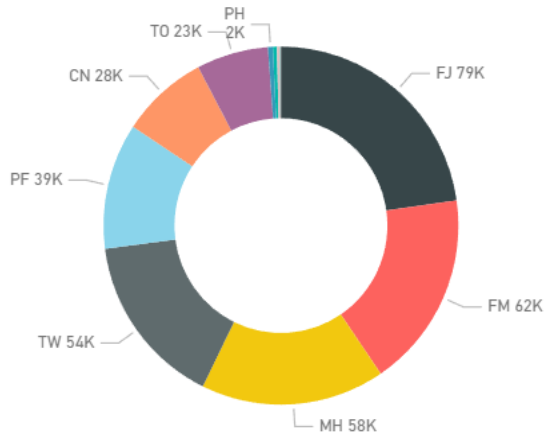
Flag FJ FM MH TW PF CN TO PH WS NC

Ports - Nbr Sampling by Year



Ports - Nbr Catch by Length





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Assist in National Compliance…

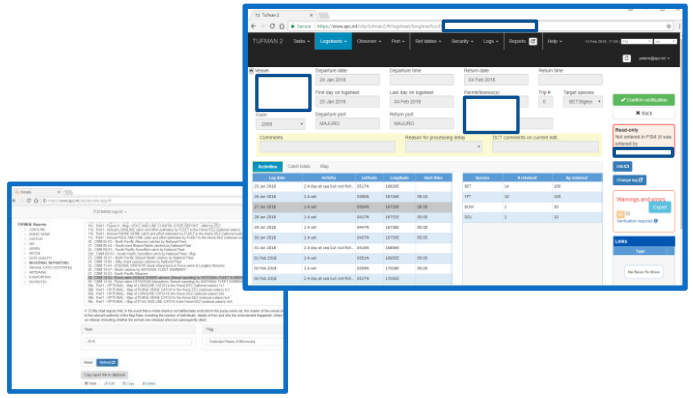
EXAMPLE : Using UNLOADINGS to verify Longline LOGBOOKS

% of trips : Logbook under-reporting by >= 10%			
Tuna	ALB	BET	YFT
21%	8%	33%	41%

Under- / Over-reporting (Unload vs Logbook - %)			
TUNA	ALB	BET	YFT
5%	0%	19%	17%

Ramifications for under-reporting and mis-reporting…

Tools to assist member countries …



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Assist in National Compliance…

UNDER-REPORTING
Yellowfin tuna !

Vessel	DEPARTURE		RETURN		BIGEYE TUNA			YELLOWFIN TUNA			BET + YFT		
	DATE	PORT	DATE	PORT	LOG	PORT	UNLOAD	LOG	PORT	UNLOAD	LOG	PORT	UNLOAD
VICTORY 707	25/02/2016	MAJURO	13/03/2016	MAJURO	108	112	110	109	126	123	217	238	233

TUFMAN 2 Report
imported into EXCEL
[Longline catch in number]

EXAMPLE : Using UNLOADINGS and PORT SAMPLING data to verify Longline LOGBOOKS

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Assist in National Compliance…

Vessel	DEPARTURE		RETURN		BIGEYE TUNA			YELLOWFIN TUNA			BET + YFT		
	DATE	PORT	DATE	PORT	LOG	PORT	UNLOAD	LOG	PORT	UNLOAD	LOG	PORT	UNLOAD
VICTORY 713	13/03/2016	MAJURO	27/03/2016	MAJURO	44	62	60	68	50	52	112	112	112

MIS-REPORTING Bigeye tuna as Yellowfin tuna !!

TUFMAN 2 Report imported into EXCEL [Longline catch in number]

EXAMPLE : Using UNLOADINGS and PORT SAMPLING data to verify Longline LOGBOOKS

Where to from here…

Are all science needs satisfied ?

- If not → DCC

Transition to E-Reporting and E-Monitoring

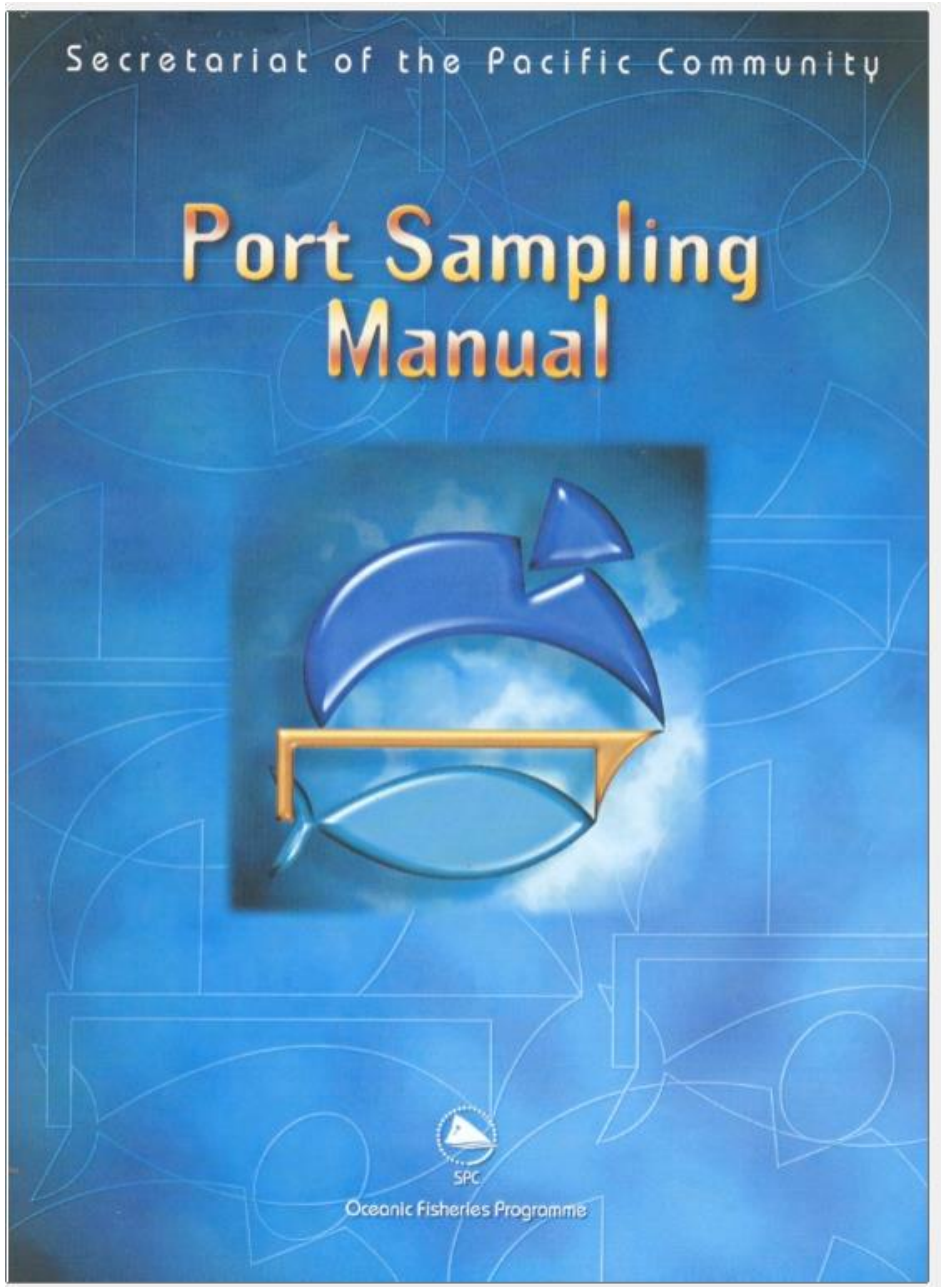
- Efficiencies, remove human error wherever possible
- ER for port sampling, but perhaps ER and EM for unloadings ?

Continual effort to address gaps in coverage and data quality

- Comprehensive, standardised DQC systems (e.g. Tufman 2 and DORADO tool)
- Use “alerts” rather than “reports” to identify issues

Data collected for science is also useful for compliance, management, etc.

- Verifying catch, monitoring = reduction in IUU, issue of trend of HS transshipments



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PORT SAMPLING LONGLINE VESSELS

Aim:

- For longline fresh sashimi vessels: The aim of the sampler is to identify and to record the length measurements of every fish that is unloaded and, where possible, to enumerate all other fish that are not presented for unloading.
- For longline freezer vessels: The aim of the sampler is to identify and to record the length measurements of 150 randomly sampled fish that come from an identified time–area strata.

FRESH SASHIMI GRADE VESSELS – SAMPLING PROTOCOL

- Every fish onboard should be recorded. This should be done by measuring every fish that is unloaded and by counting any other fish that is not presented for unloading or is retained onboard. Samplers need to go onboard the vessel every time to confirm if any fish have been kept Onboard
- But be aware that sometimes they may unload fish for different markets at different times. You should be present for the entire unloading — even if it happens on separate days.
- Weight measurements should be collected in addition to length measurements. Do not collect weight measurements only.

FREEZER GRADE VESSELS – SAMPLING PROTOCOL

- Freezer grade vessels unload large numbers of tuna and so measuring every fish is difficult.
- Randomly sample 150 fish from the 'block' of fish you have identified.
- Samplers should try to identify fish that were caught in the same 5° x 5° area and the same calendar month. In practice, this means identifying the fishing area and date of capture of the catch in each the hatches. Use the vessel's logsheet to identify the vessel's fishing area.

LESS THAN IDEAL WELL CHOICES

If you cannot find a hatch containing fish from the same 5° x 5° area and caught in the same month you can broaden your search to:

Choice	1st Choice	2nd choice	3rd choice	4th choice
Fishing area:	5° x 5°	5° x 10°	10° x 10°	10° x 20°
Fishing month	: 1 month	1 quarter		