Annual Catch Estimates

Reviewing the work

TDW18 : 08-12th April 2024, Nouméa, New-Caledonia.

Summary

- What are ACEs
- Requirements & area covered
- Purpose of ACEs
- ACE T2 interface & guidelines
- ACE tables (WCPFC web site)

Download material from
tinyurl.com/TDW2024

Annual Catch Estimates

What are they ?

Total catches (Mt)

- by species
- for your national fleets
- covering a calendar year

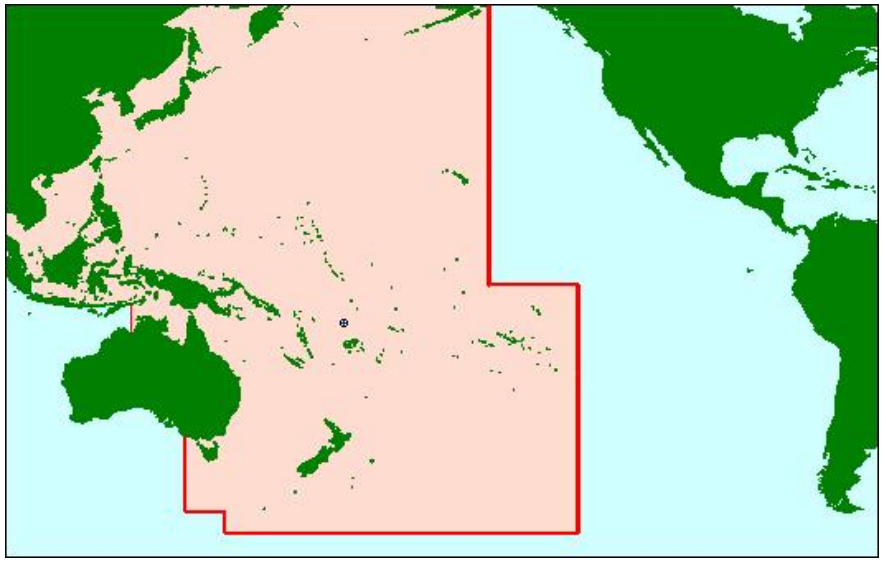
→ WCPFC reporting obligation

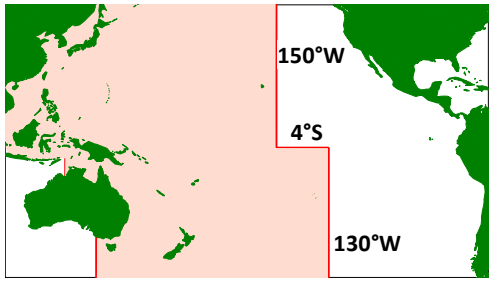
Annual Catch Estimates

WCPFC Essential Requirements (obligations)

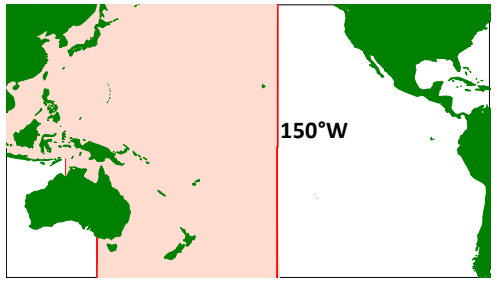
tinyurl.com/WCPFC-requirements

- Annual **catch** by **GEAR** and **SPECIES**
- No. of **ACTIVE Vessels** by size class
- Calendar **Year**
- **WCPFC CONVENTION AREA**
- **NATIONAL FLEET**
- The deadline **30th APRIL**
- Indication on how they were determined
- Estimates of DISCARDs required as well

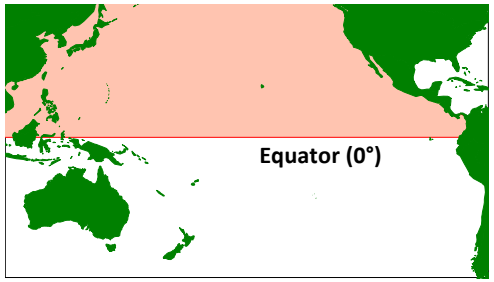




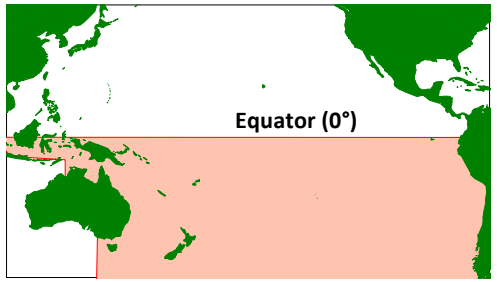
WCPFC Convention Area



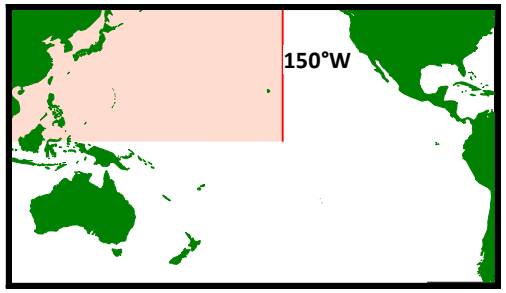
Western and Central Pacific Ocean (WCPO)



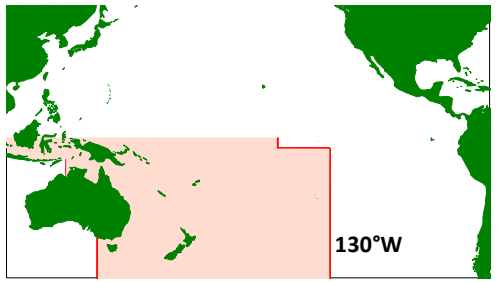
North Pacific Ocean



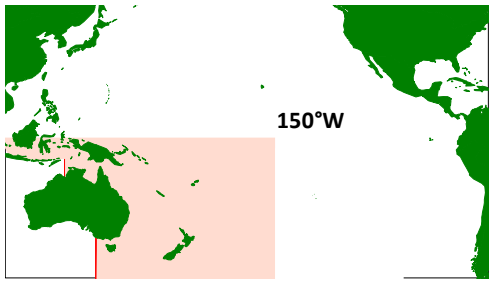
South Pacific Ocean



WCPFC Convention Area, north of the equator



WCPFC Convention Area, south of the equator



WCPO, south of the equator

Annual catch estimates must be provided for the **other areas** in some cases.

Annual Catch Estimates

Purpose

- Concise representation of **actual catch** (total removals)
- Snapshot comparison between years, fleets, gears, fisheries, etc. => indication of the **trends** over time
- Indication of level data collected in the tuna fishery
- Used to produce economic indicators (value of catch)
- Production of
  - ✓ WCPFC Tuna Fishery Yearbook
  - ✓ ACE Tables

Example 1

Pacific Community
Communauté du Pacifique

WCPFC
TUNA
FISHERIES
YEARBOOK

LONGLINE: NEW CALEDONIA

Table 15. Number of vessels active and catches (tonnes) for New Caledonian longliners

YEAR	VESSELS ACTIVE	ALBACORE		BIGEYE		YELLOWFIN		BLUE MARLIN		BLACK MARLIN		STRIPED MARLIN		SWORDFISH		BLUE SHARK	SILKY SHARK	OCEANIC WHITETIP	MAKO SHARK	OTHER	TOTAL
		CATCH	%	CATCH	%	CATCH	%	CATCH	%	CATCH	%	CATCH	%	CATCH	%	CATCH	CATCH	CATCH	CATCH	CATCH	CATCH
1983	1	12	21	1	2	9	16	8	14	3	5	21	38	2	4	...	...	...	...	...	56
1984	2	112	59	10	5	28	15	10	5	2	1	23	12	6	3	...	...	...	...	...	191
1985	3	131	33	17	4	133	33	19	5	24	6	71	18	6	1	...	...	...	...	...	401
1986	2	179	35	19	4	169	33	11	2	39	8	85	16	14	3	...	...	...	...	...	516
1987	3	563	42	37	3	502	37	30	2	95	7	100	7	17	1	...	...	...	...	...	1,344
1988	4	584	47	20	2	488	39	15	1	76	6	63	5	5	0	...	...	...	...	...	1,251
1989	4	566	51	27	2	278	25	24	2	82	7	123	11	7	1	...	...	...	...	...	1,107
1990	7	1,053	52	60	3	617	31	18	1	88	4	168	8	13	1	...	...	...	...	...	2,017
1991	6	909	53	60	3	567	33	9	1	91	5	75	4	15	1	...	...	...	...	...	1,726
1992	4	692	56	27	2	373	30	15	1	43	3	71	6	9	1	...	...	...	...	...	1,230
1993	4	755	54	106	8	433	31	15	1	48	3	40	3	9	1	...	...	...	...	...	1,406
1994	7	840	52	78	5	437	27	22	1	52	3	193	12	8	0	...	...	...	...	...	1,630
1995	8	332	23	103	7	839	59	14	1	31	2	89	6	10	1	...	...	...	...	...	1,418
1996	8	414	31	233	17	554	41	11	1	25	2	101	7	10	1	...	...	...	...	...	1,348
1997	9	277	26	234	22	466	43	8	1	23	2	60	6	9	1	...	...	...	...	...	1,077
1998	11	860	49	498	28	185	10	9	1	33	2	159	9	26	1	...	...	...	...	...	1,770
1999	13	690	39	553	31	373	21	15	1	37	2	91	5	17	1	...	...	...	...	...	1,776
2000	14	895	46	517	27	250	13	60	3	27	1	160	8	40	2	...	...	...	...	...	1,949
2001	18	1,020	50	128	6	570	28	62	3	28	1	165	8	41	2	...	...	...	*36*	...	2,050
2002	25	1,165	51	189	8	572	25	70	3	31	1	185	8	46	2	...	...	...	*20*	...	2,278
2003	28	1,111	46	142	6	754	32	73	3	33	1	193	8	48	2	...	...	...	*38*	...	2,392
2004	27	1,468	58	90	4	631	25	79	3	...	...	211	8	17	1	...	...	...	*34*	...	2,530
2005	23	1,590	70	76	3	448	20	21	1	28	1	74	3	12	1	...	...	...	*26*	...	2,275
2006	21	1,358	71	35	2	414	22	9	0	24	1	54	3	10	1	...	...	...	*14*	...	1,918
2007	23	1,324	69	53	3	393	21	11	1	35	2	63	3	19	1	...	...	...	*13*	...	1,911
2008	23	1,506	69	63	3	424	20	8	0	39	2	103	5	15	1	...	...	...	*14*	...	2,172
2009	21	1,649	69	51	2	487	21	9	0	34	1	71	3	7	0	*26*	*8*	*3*	*29*	...	2,374
2010	18	1,939	72	44	2	505	19	10	0	42	2	65	2	8	0	*56*	*10*	*0*	*28*	...	2,708
2011	19	1,736	66	41	2	585	22	23	1	55	2	76	3	10	0	*48*	*8*	*2*	*38*	...	2,623
2012	19	1,715	67	49	2	573	22	...	...	66	3	57	2	10	0	*48*	*8*	*2*	*38*	...	2,565
2013	17	1,732	71	51	2	531	22	...	...	53	2	51	2	9	0	*19*	*1*	...	*4*	...	2,451
2014	17	1,630	61	58	2	741	28	23	1	40	1	60	2	14	1	*91*	*1*	*6*	*18*	...	2,682
2015	17	1,583	53	63	2	852	28	21	1	35	1	58	2	9	0	*325*	*6*	*2*	*33*	6	2,993
2016	17	1,747	70	74	3	482	19	15	1	30	1	69	3	8	0	*16*	*10*	*1*	*1*	58	2,511
2017	16	1,734	66	48	2	559	21	34	1	65	2	77	3	22	1	*7*	*10*	*3*	*7*	42	2,608
2018	18	1,752	72	46	2	467	19	13	1	28	1	52	2	8	0	*6*	*2*	*3*	*24*	16	2,417
2019	19	2,011	65	40	1	678	22	15	0	29	1	84	3	24	1	*102*	*22*	*46*	*7*	22	3,080
2020	19	1,897	71	51	2	512	19	10	0	33	1	81	3	9	0	*49*	*2*	*2*	*0*	8	2,654

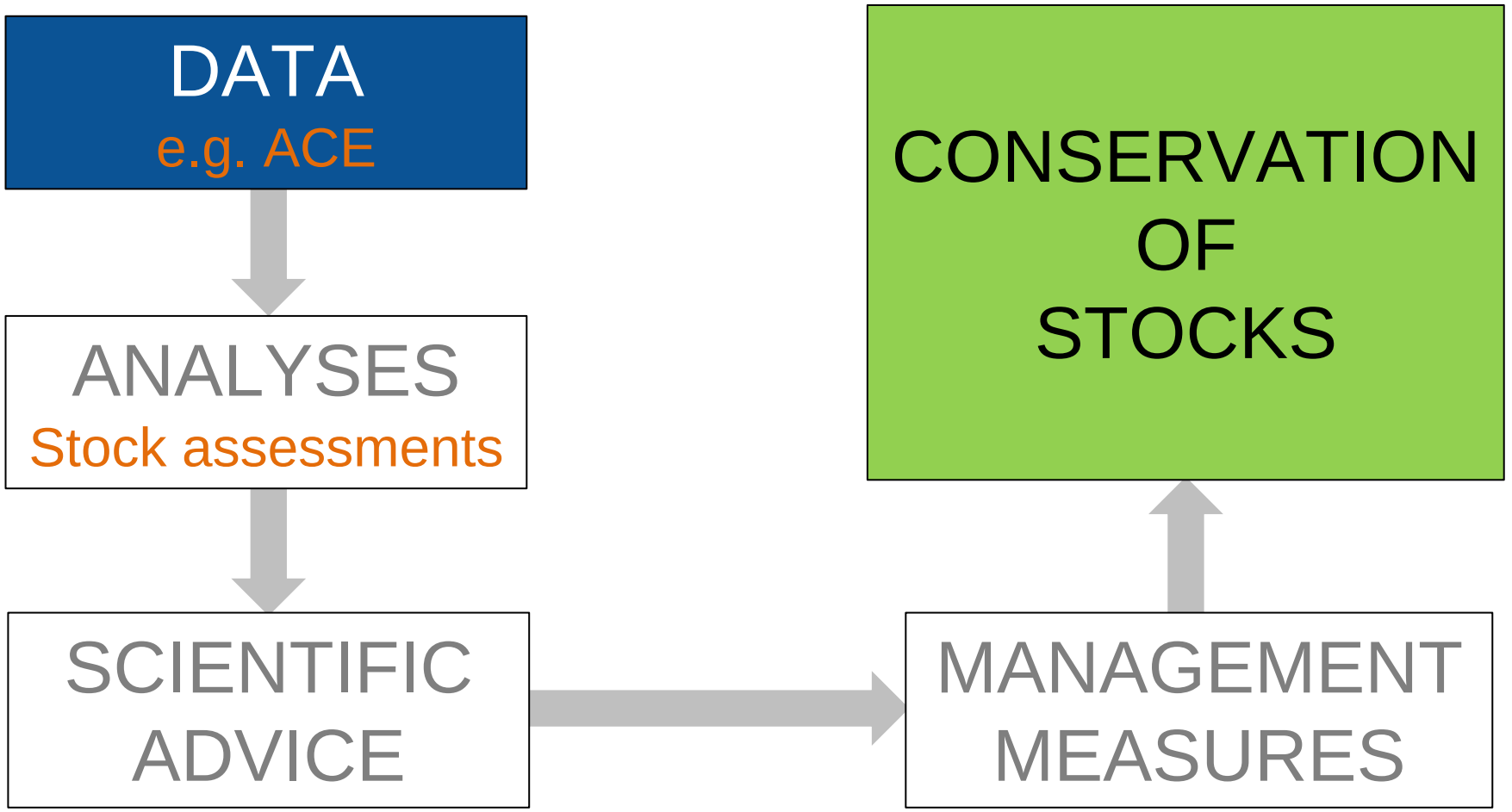
Example 2

WCPFC ACE TABLES

	A	B	C	D	E	F	G	H	I	J	K
1	WCPFC Key Species	2016		2017		2018		2019		2020	
2		MT	%	MT	%	MT	%	MT	%	MT	%
3	ALBACORE	1,747	70%	1,734	66%	1,752	72%	2,011	65%	1,897	71%
4	BIGEYE TUNA	74	3%	48	2%	46	2%	40	1%	51	2%
5	PACIFIC BLUEFIN TUNA	0	0%	1	0%	1	0%	1	0%	0	0%
6	SKIPJACK TUNA	58	2%	41	2%	15	1%	21	1%	8	0%
7	YELLOWFIN TUNA	482	19%	559	21%	467	19%	678	22%	512	19%
8	BLACK MARLIN	30	1%	65	2%	28	1%	29	1%	33	1%
9	BLUE MARLIN	15	1%	34	1%	13	1%	15	0%	10	0%
10	STRIPED MARLIN	69	3%	77	3%	52	2%	84	3%	81	3%
11	SWORDFISH	8	0%	22	1%	8	0%	24	1%	9	0%
12	BLUE SHARK	16	1%	7	0%	6	0%	102	3%	49	2%
13	SILKY SHARK	10	0%	10	0%	2	0%	22	1%	2	0%
14	HAMMERHEAD SHARKS	0	0%	0	0%	1	0%	0	0%	0	0%
15	MAKO SHARKS	1	0%	7	0%	24	1%	7	0%	0	0%
16	OCEANIC WHITETIP SHARK	1	0%	3	0%	3	0%	46	1%	2	0%
17	PORBEABLE / SALMON SHARK	0	0%	0	0%	0	0%	0	0%	0	0%
18	WHALE SHARK	0	0%	0	0%	0	0%	0	0%	0	0%
19	THRESHER SHARKS	0	0%	0	0%	0	0%	0	0%	1	0%
20	Total	2,511		2,608		2,418		3,080		2,655	

Annual Catch Estimates

Big picture

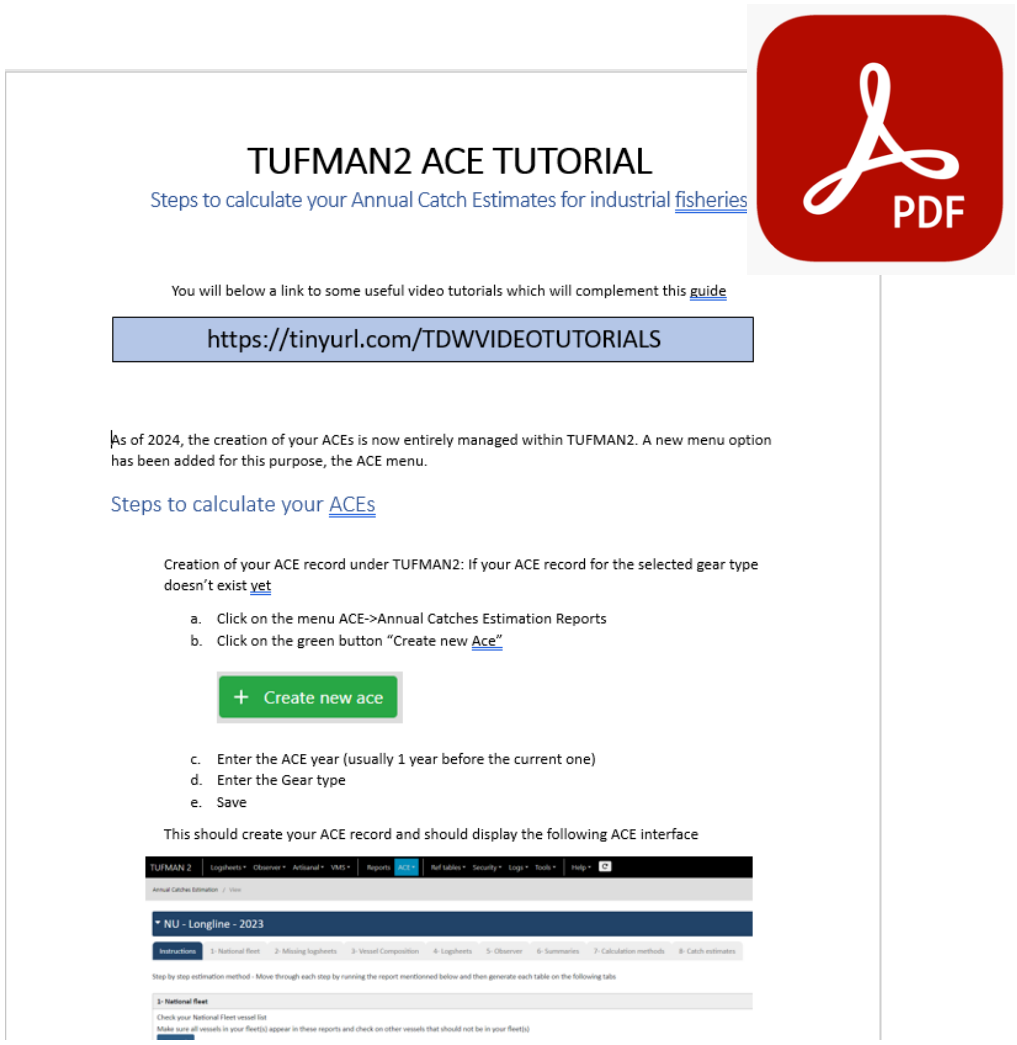


How do you estimate catch ?

- Workshop presentations / live demo
- ACE guidelines (*tutorial*)
- TDW video tutorials channel
- SPC assistance whenever needed

Download material from
tinyurl.com/TDW2024

ACE guidelines / tutorial



TUFMAN2 ACE TUTORIAL

Steps to calculate your Annual Catch Estimates for industrial fisheries

You will below a link to some useful video tutorials which will complement this guide

https://tinyurl.com/TDWVIDEOTUTORIALS

As of 2024, the creation of your ACEs is now entirely managed within TUFMAN2. A new menu option has been added for this purpose, the ACE menu.

Steps to calculate your ACEs

Creation of your ACE record under TUFMAN2: If your ACE record for the selected gear type doesn't exist yet

a. Click on the menu ACE->Annual Catches Estimation Reports
b. Click on the green button "Create new Ace"

+ Create new ace

c. Enter the ACE year (usually 1 year before the current one)
d. Enter the Gear type
e. Save

This should create your ACE record and should display the following ACE interface

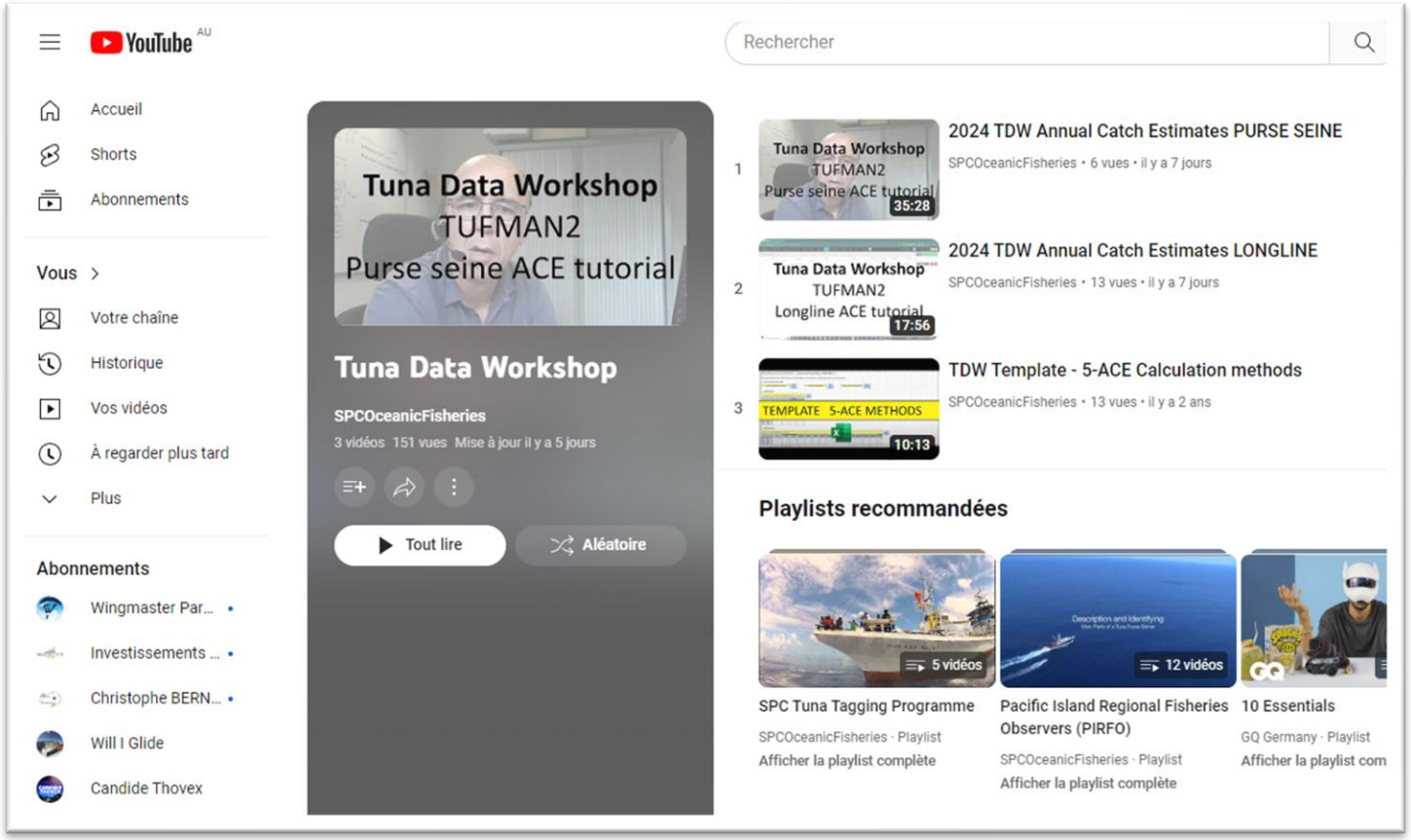
Download tutorial from
tinyurl.com/TDW2024

Tutorial video channel

YouTube

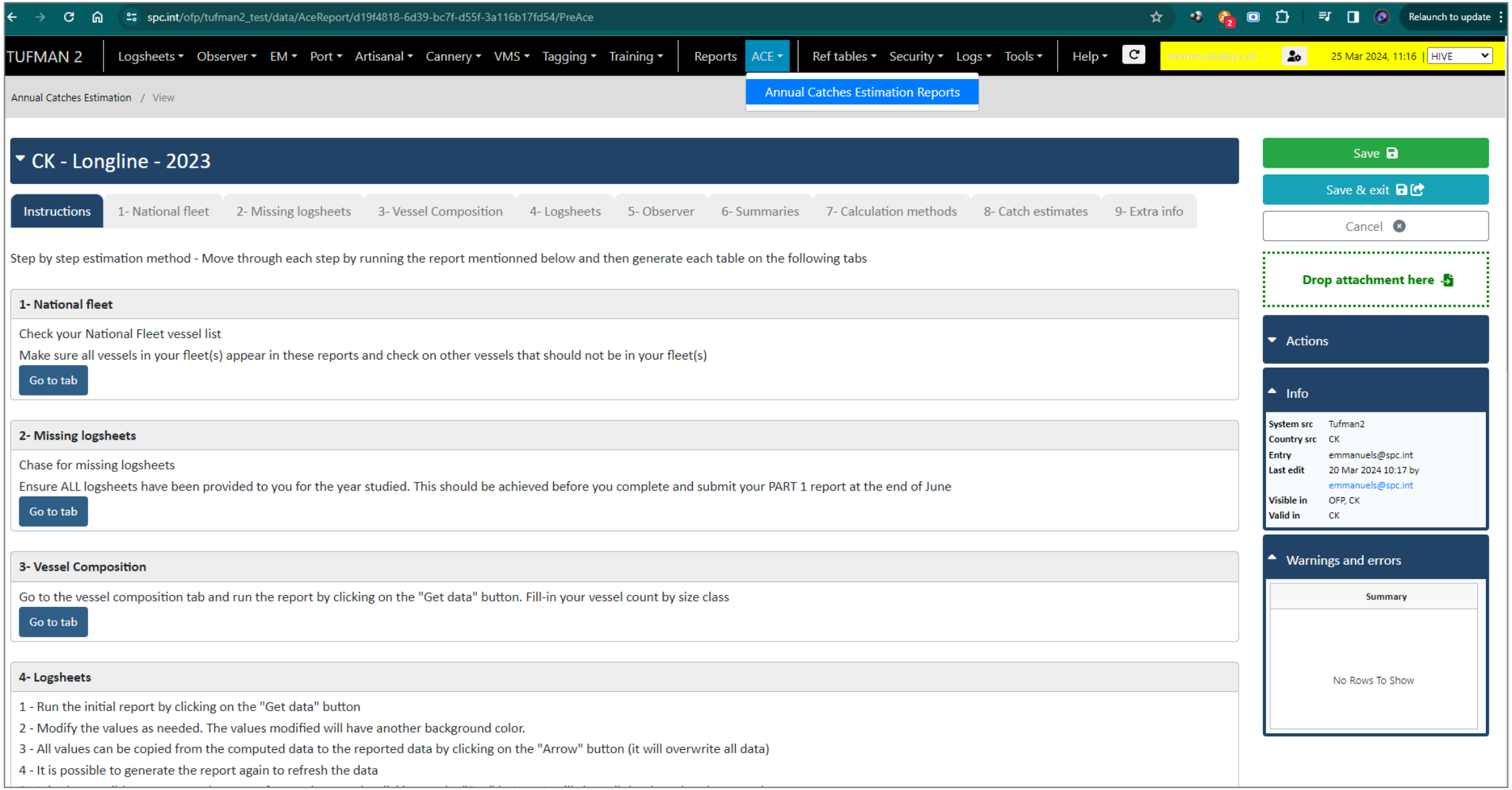
Pacific Community
Communauté du Pacifique

tinyurl.com/TDWVIDEOTUTORIALS



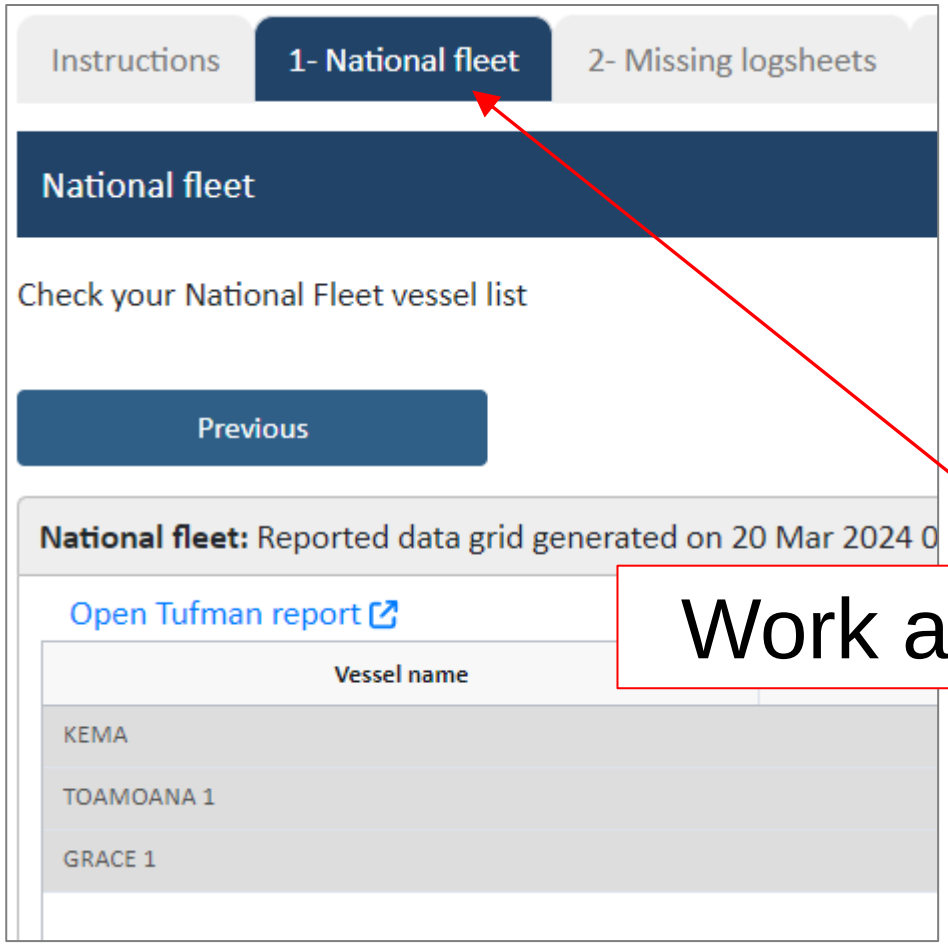
TUFMAN2 new ACE interface

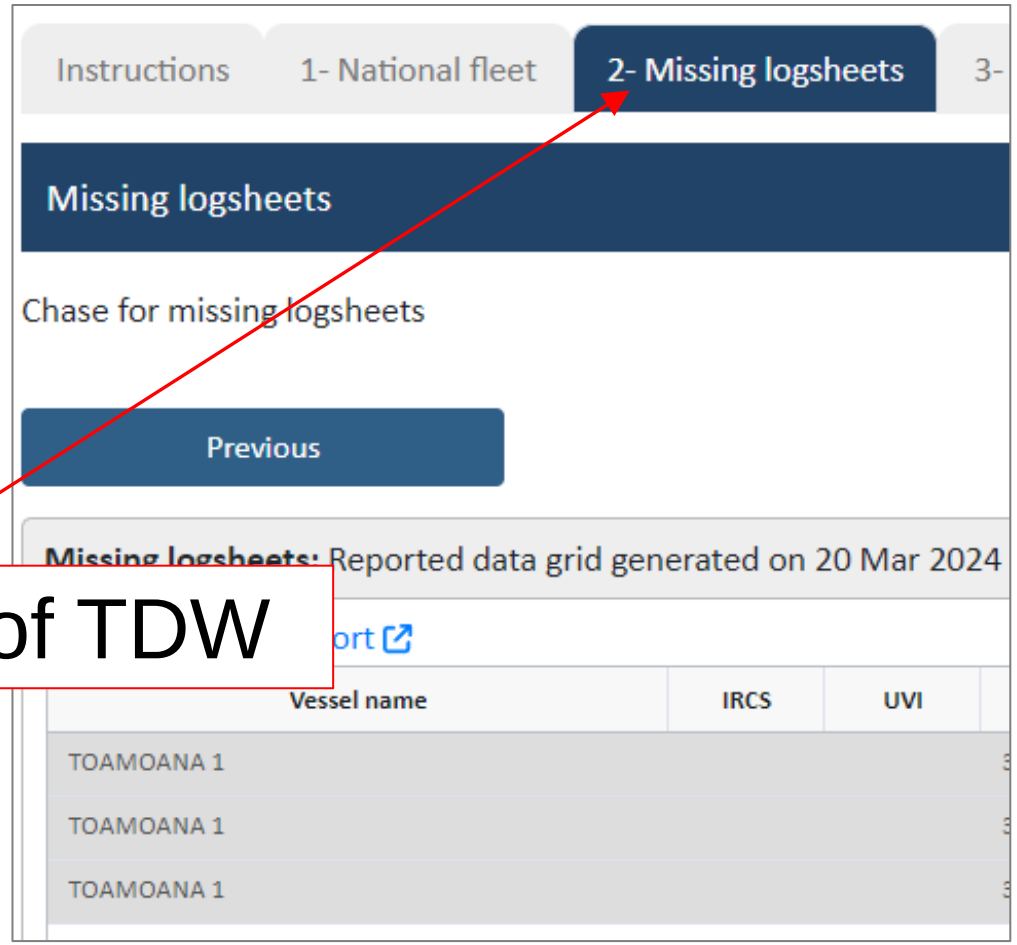
Pacific Community
Communauté du Pacifique



TUFMAN2 new ACE interface

Work ahead of TDW

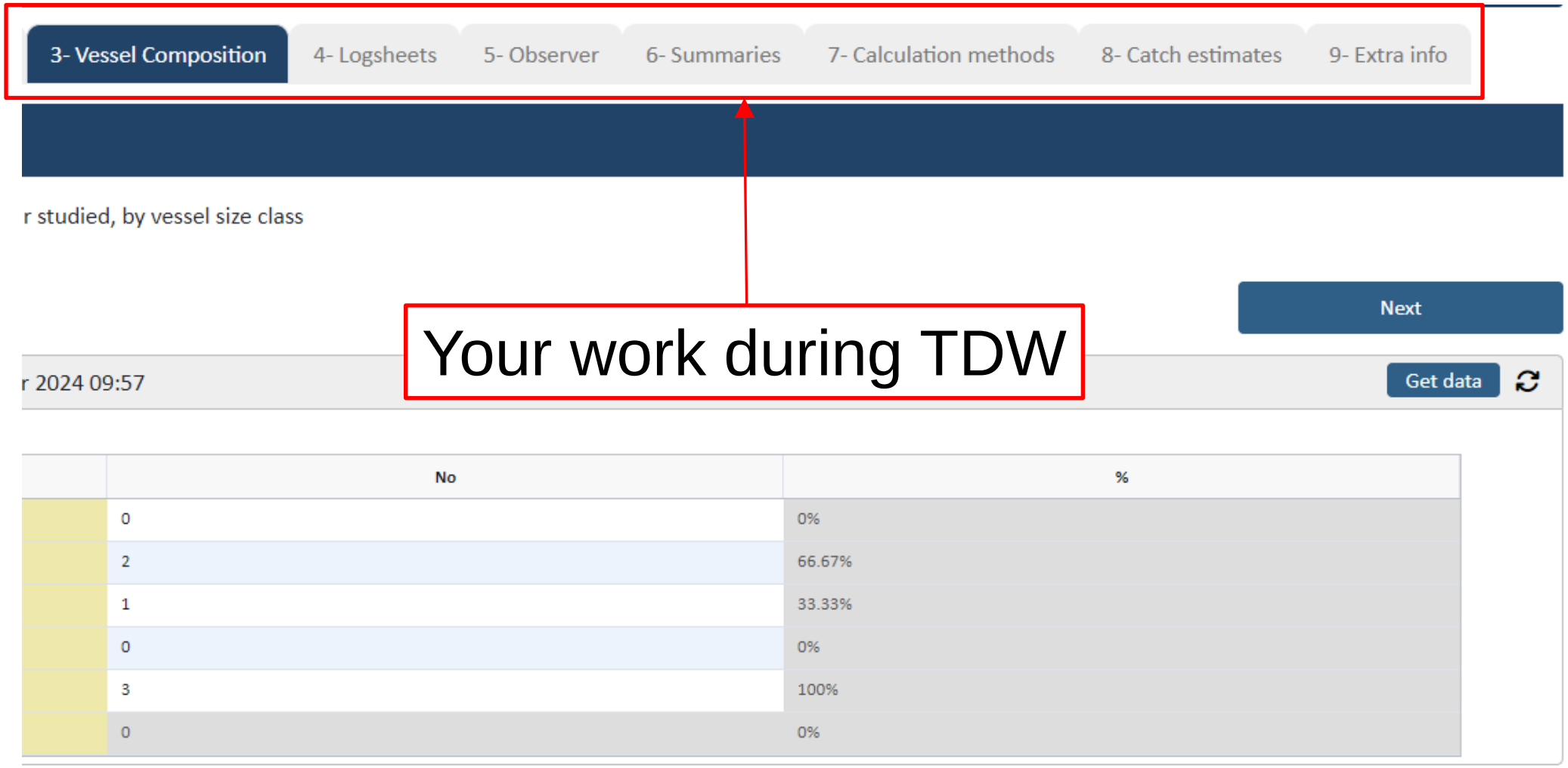




Work ahead of TDW

TUFMAN2 new ACE interface

Work during TDW



ACE Calculation Methods

Longline Observer Low coverage & SHARKS

- Low observer coverage -> over estimation of SHARKS
- Threshold for low coverage -> 20%
- Under 20% coverage -> LOGSHEET data used to estimates SHARK catch
- Over 20% -> Observer raised data used

ACE Calculation Methods

Longline Observer Low coverage & SHARKS

Pacific Community
Communauté du Pacifique

Instructions | 1- National fleet | 2- Missing logsheets | 3- Vessel Composition | 4- Logsheets | 5- Observer | 6- Summaries

Summaries

Longline observer coverage for part 1 reports. This is to allow countries to report against the 5% observer coverage requirement on longline vess

Method #1	observer kgs/TRIP raised to total trips
Method #2	observer kgs/DAY raised to total trips
Method #3	Logsheet trip estimate raised to total trips
Method #4	Method #2 estimate of tuna catch by species, applied to the Logsheet estimate of total tuna catch
Method #5	Logsheet estimate of discards, raised to total trips

Previous

Summaries: Reported dat

Open Tufman report

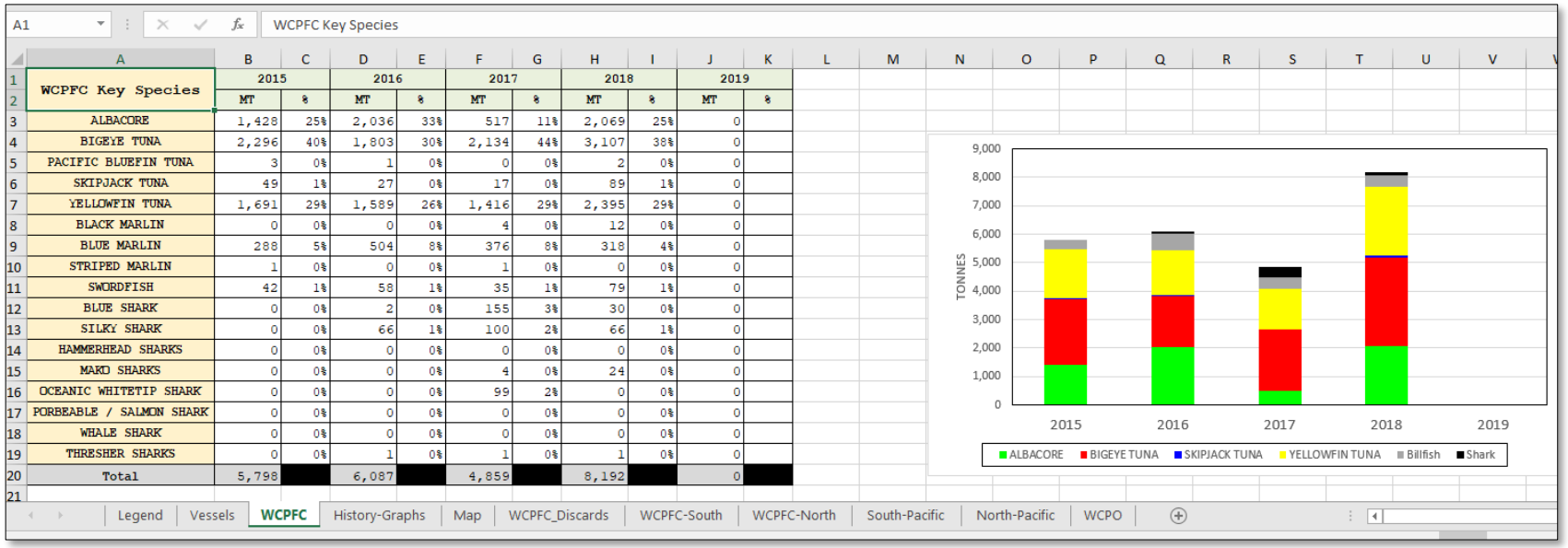
Total trips
Total fishing days
Observer trips
Observer fishing days
Observer (TRIPS) cov %
Observer (DAYS) cov %
Logbook cov %

Retained: Reported data grid

Category	Species	Method 1	Method 2	Method 3	Method 5	Recommended method	Selected method	Estimate
1. TUN	ALB	0	0	2189.3	0	3	Method 3 - Logsheet trip estimate raised to total trips	2189.3
1. TUN	BET	0	0	875.44	0	3	Method 3 - Logsheet trip estimate raised to total trips	875.44
1. TUN	PBF	0	0	0.8	0	3	Method 3 - Logsheet trip estimate raised to total trips	0.8
1. TUN	SKJ	0	0	48.91	0	3	Method 3 - Logsheet trip estimate raised to total trips	48.91
1. TUN	YFT	0	0	4788.91	0	3	Method 3 - Logsheet trip estimate raised to total trips	4788.91
2. BIL	BLM	0	0	3.46	0	3	Method 3 - Logsheet trip estimate raised to total trips	3.46
2. BIL	BUM	0	0	214.52	0	3	Method 3 - Logsheet trip estimate raised to total trips	214.52
2. BIL	MLS	0	0	1.75	0	3	Method 3 - Logsheet trip estimate raised to total trips	1.75
2. BIL	SWO	0	0	41.97	0	3	Method 3 - Logsheet trip estimate raised to total trips	41.97
3. SHK	BSH	0	0	12.78	0	3	Method 3 - Logsheet trip estimate raised to total trips	12.78
3. SHK	FAL	0	0	0	0	3	Method 3 - Logsheet trip estimate raised to total trips	0
3. SHK	HAM	0	0	0	0	3	Method 3 - Logsheet trip estimate raised to total trips	0
3. SHK	MAK	0	0	4.9	0	3	Method 3 - Logsheet trip estimate raised to total trips	4.9
3. SHK	OCS	0	0	0	0	3	Method 3 - Logsheet trip estimate raised to total trips	0
3. SHK	POR	0	0	0	0	3	Method 3 - Logsheet trip estimate raised to total trips	0
3. SHK	RHN	0	0	0	0	3	Method 3 - Logsheet trip estimate raised to total trips	0
3. SHK	THR	0	0	0.19	0	3	Method 3 - Logsheet trip estimate raised to total trips	0.19

ACE Tables

WCPFC



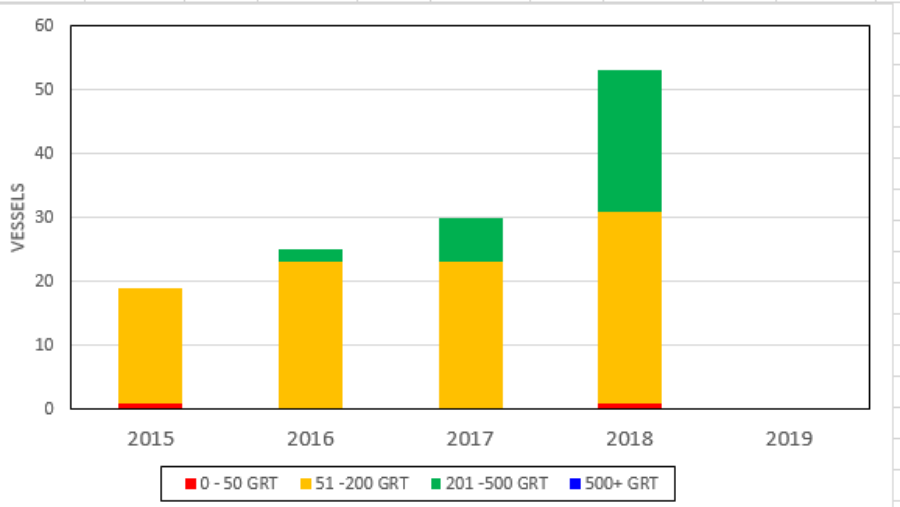
WCPFC Key Species	2015		2016		2017		2018		2019	
	MT	%	MT	%	MT	%	MT	%	MT	%
ALBACORE	1,428	25%	2,036	33%	517	11%	2,069	25%	0	
BIGEYE TUNA	2,296	40%	1,803	30%	2,134	44%	3,107	38%	0	
PACIFIC BLUEFIN TUNA	3	0%	1	0%	0	0%	2	0%	0	
SKIPJACK TUNA	49	1%	27	0%	17	0%	89	1%	0	
YELLOWFIN TUNA	1,691	29%	1,589	26%	1,416	29%	2,395	29%	0	
BLACK MARLIN	0	0%	0	0%	4	0%	12	0%	0	
BLUE MARLIN	288	5%	504	8%	376	8%	318	4%	0	
STRIPED MARLIN	1	0%	0	0%	1	0%	0	0%	0	
SWORDFISH	42	1%	58	1%	35	1%	79	1%	0	
BLUE SHARK	0	0%	2	0%	155	3%	30	0%	0	
SILKY SHARK	0	0%	66	1%	100	2%	66	1%	0	
HAMMERHEAD SHARKS	0	0%	0	0%	0	0%	0	0%	0	
MAKO SHARKS	0	0%	0	0%	4	0%	24	0%	0	
OCEANIC WHITETIP SHARK	0	0%	0	0%	99	2%	0	0%	0	
PORBEABLE / SALMON SHARK	0	0%	0	0%	0	0%	0	0%	0	
WHALE SHARK	0	0%	0	0%	0	0%	0	0%	0	
THRESHER SHARKS	0	0%	1	0%	1	0%	1	0%	0	
Total	5,798		6,087		4,859		8,192		0	

- Complete, tidy and concise way to view your ACE
- Charts, maps, tables,…
- Easy copy/paste in AR part 1
- Generated after TDW making use of the ACEs

ACE Tables

WCPFC

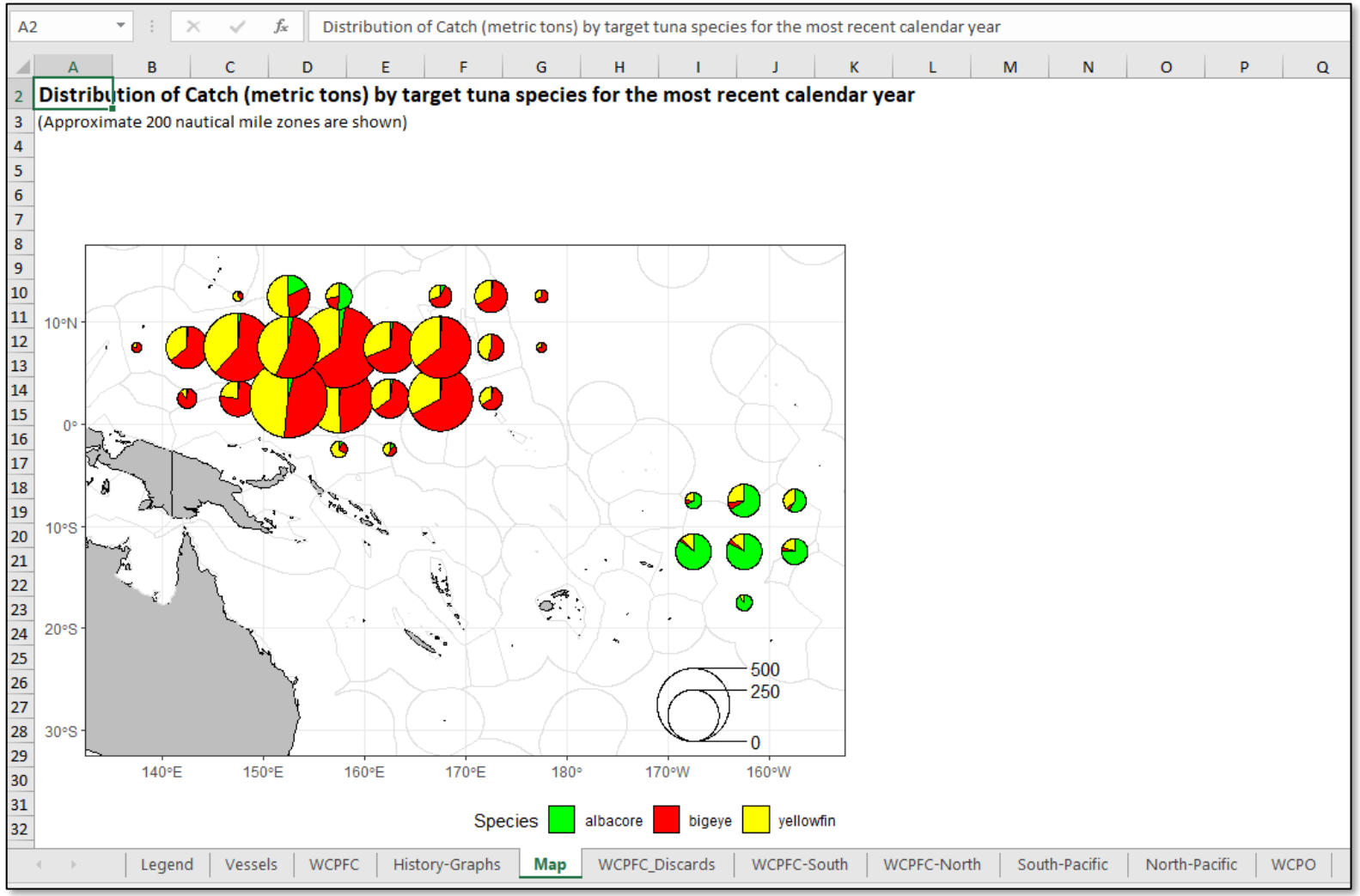
Vessel category	2015		2016		2017		2018		2019	
	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 50 GRT	1	5%	0	0%	0	0%	1	2%	0	
51 -200 GRT	18	95%	23	92%	23	77%	30	57%	0	
201 -500 GRT	0	0%	2	8%	7	23%	22	42%	0	
500+ GRT	0	0%	0	0%	0	0%	0	0%	0	
Total	19		25		30		53		0	
N/A	0		0		0		0		0	



Legend | Vessels | WCPFC | History-Graphs | Map | WCPFC_Discards | WCPFC-South | WCPFC-North | South-Pacific | North-Pacific | WCPO

ACE Tables

WCPFC



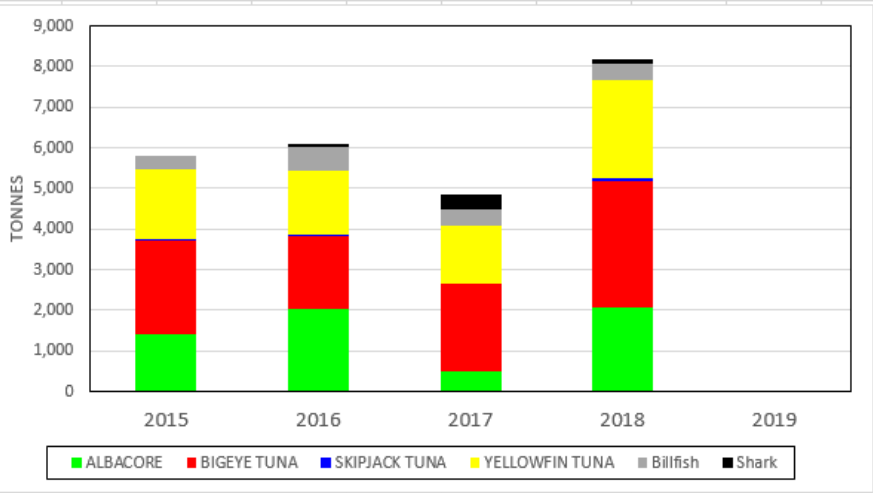
ACE Tables

WCPFC

bit.ly/ACE-TABLES

A1 | WCPFC Key Species

WCPFC Key Species	2015		2016		2017		2018		2019	
	MT	%	MT	%	MT	%	MT	%	MT	%
ALBACORE	1,428	25%	2,036	33%	517	11%	2,069	25%	0	
BIGEYE TUNA	2,296	40%	1,803	30%	2,134	44%	3,107	38%	0	
PACIFIC BLUEFIN TUNA	3	0%	1	0%	0	0%	2	0%	0	
SKIPJACK TUNA	49	1%	27	0%	17	0%	89	1%	0	
YELLOWFIN TUNA	1,691	29%	1,589	26%	1,416	29%	2,395	29%	0	
BLACK MARLIN	0	0%	0	0%	4	0%	12	0%	0	
BLUE MARLIN	288	5%	504	8%	376	8%	318	4%	0	
STRIPED MARLIN	1	0%	0	0%	1	0%	0	0%	0	
SWORDFISH	42	1%	58	1%	35	1%	79	1%	0	
BLUE SHARK	0	0%	2	0%	155	3%	30	0%	0	
SILKY SHARK	0	0%	66	1%	100	2%	66	1%	0	
HAMMERHEAD SHARKS	0	0%	0	0%	0	0%	0	0%	0	
MAKO SHARKS	0	0%	0	0%	4	0%	24	0%	0	
OCEANIC WHITETIP SHARK	0	0%	0	0%	99	2%	0	0%	0	
PORBEABLE / SALMON SHARK	0	0%	0	0%	0	0%	0	0%	0	
WHALE SHARK	0	0%	0	0%	0	0%	0	0%	0	
THRESHER SHARKS	0	0%	1	0%	1	0%	1	0%	0	
Total	5,798		6,087		4,859		8,192		0	



Legend | Vessels | WCPFC | History-Graphs | Map | WCPFC_Discards | WCPFC-South | WCPFC-North | South-Pacific | North-Pacific | WCPO

Annual Catch Estimates

What's next?

- ✓ Get in touch with your SPC contact
  - ACEs
  - Artisanal
- ✓ Calculate and review your TUFMAN ACEs
- ✓ **Submit your draft ACE for all your fleet, for review by SPC staff.**

Annual Catch Estimates

SPC's assistance

Don't hesitate to request some assistance from your assigned SPC contact

TDW18 Annual Catch Estimates calculations	
COUNTRY	**SPC STAFF**
Cook Islands	Aurélien
Fiji	Colley
FSM	Benoit
French Polynesia	Benoit
Indonesia	
Kiribati	Manu
Marshall Islands	Aurélien
New Caledonia	Bruno
Nauru	Manu
Niue	
Palau	Manu
PNG	Bruno
Philippines	
Samoa	Bruno
Solomon Islands	Colley
Tonga	Colley
Tuvalu	Aurélien
Tokelau	
Vanuatu	Manu
Vietnam	
Wallis & Futuna	

Pacific Community
Communauté du Pacifique

Let’s get started!

2023 ACE web page

tinyurl.com/TDW2024

Thank you

TDW18 Annual Catch Estimates calculations	
COUNTRY	SPC STAFF
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Tokelau	
Vanuatu	Manu
Vietnam	
Wallis & Futuna	