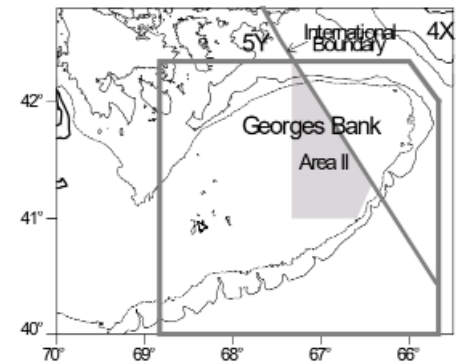


Stock Assessment of Georges Bank Yellowtail Flounder 2022

Alex Hansell, Cat Regnier-McKellar, Kelly Kraska, Chris Legault



What happened last year?

- Limiter approach → 200 mt catch advice
 - Lower limit = 1,000 mt
 - Upper limit = 7,300 → 8,500 mt
- TRAC recommended quota 200 mt
- TMGC set 200 mt quota for 2022

Catch

Units kg!

Year	US Land	US Dis	CA Land	CA Dis	Total
2020	5,181	56,543	99	6,340	68,163
2021	1,037	46,058	15	3,604	50,714

Percentage

Year	US Land	US Dis	CA Land	CA Dis	Total
2020	8	83	0	9	100
2021	2	91	0	7	100

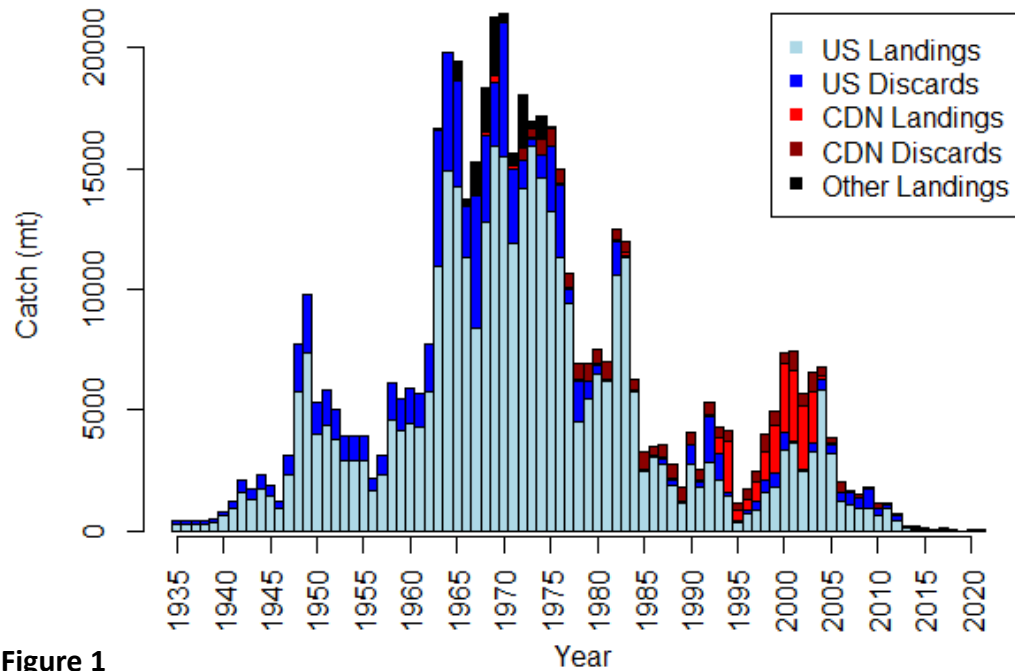
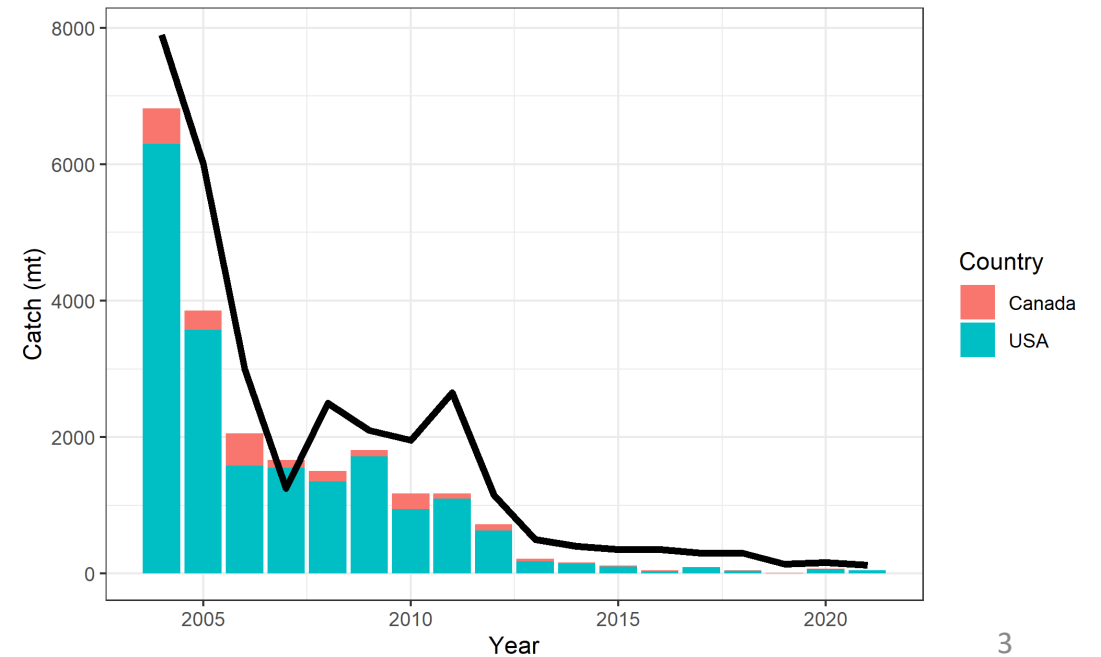


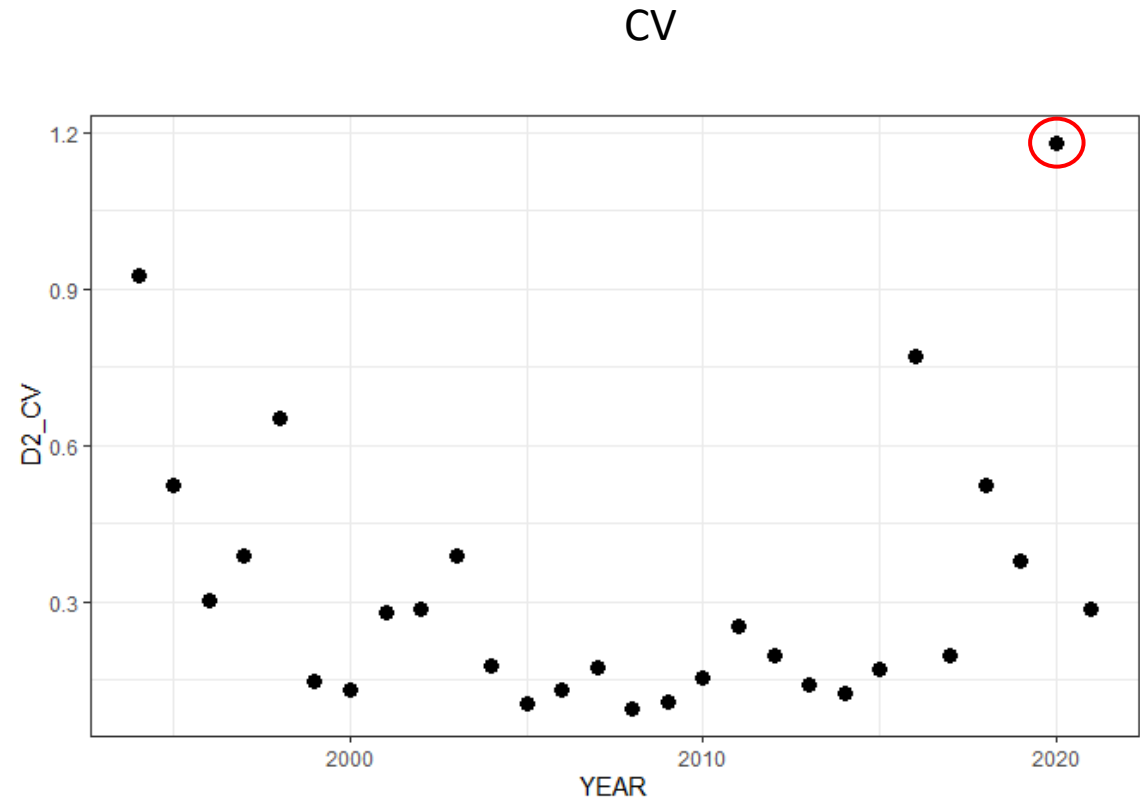
Figure 1



US Discards

2020 US discards were revised
from ~ 2 to 57 mt

Year	Landings	Discards
2011	904	192
2012	443	188
2013	130	49
2014	70	74
2015	63	41
2016	26	7
2017	35	57
2018	32	11
2019	3	2
2020	5	57
2021	1	46



Surveys

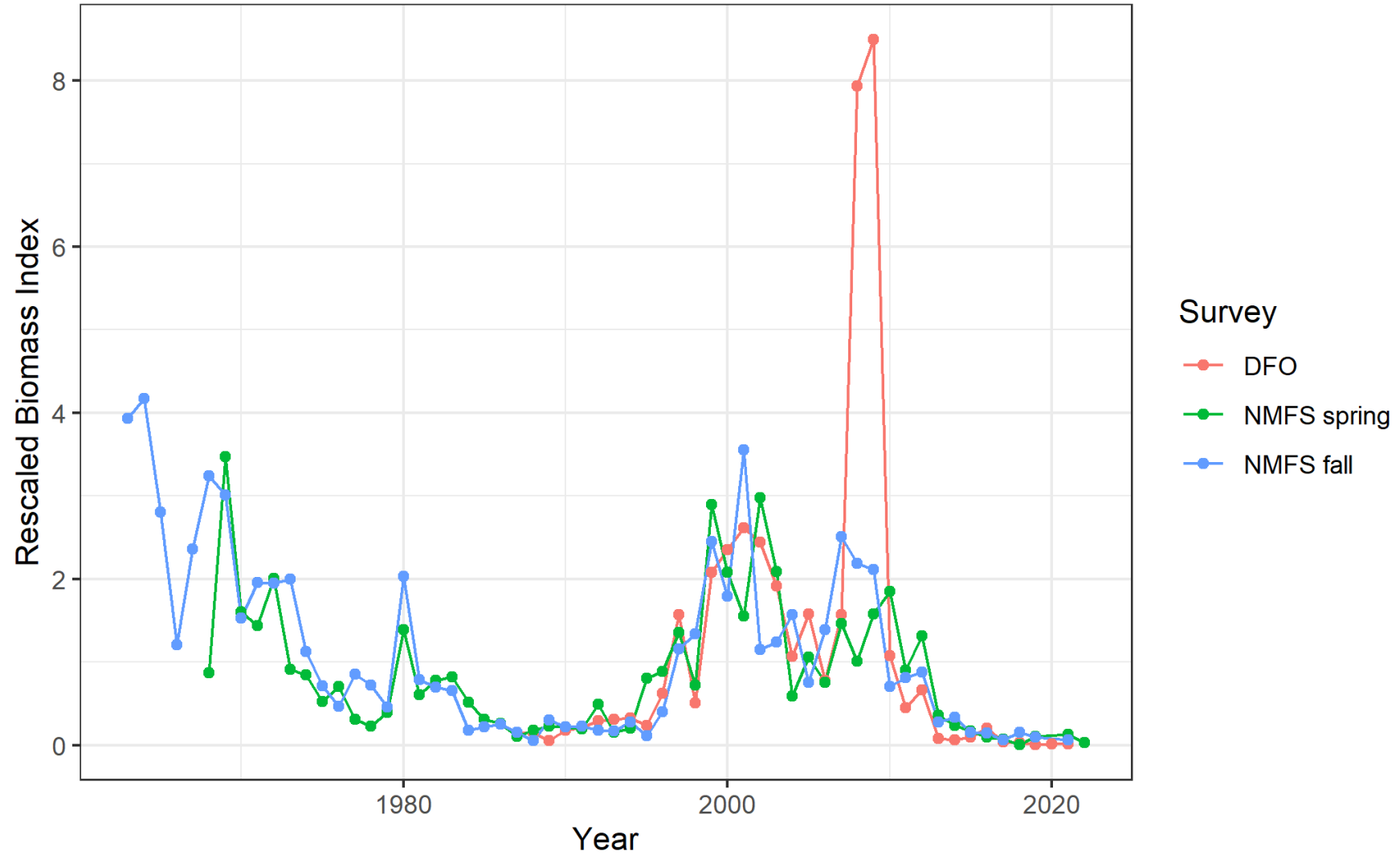
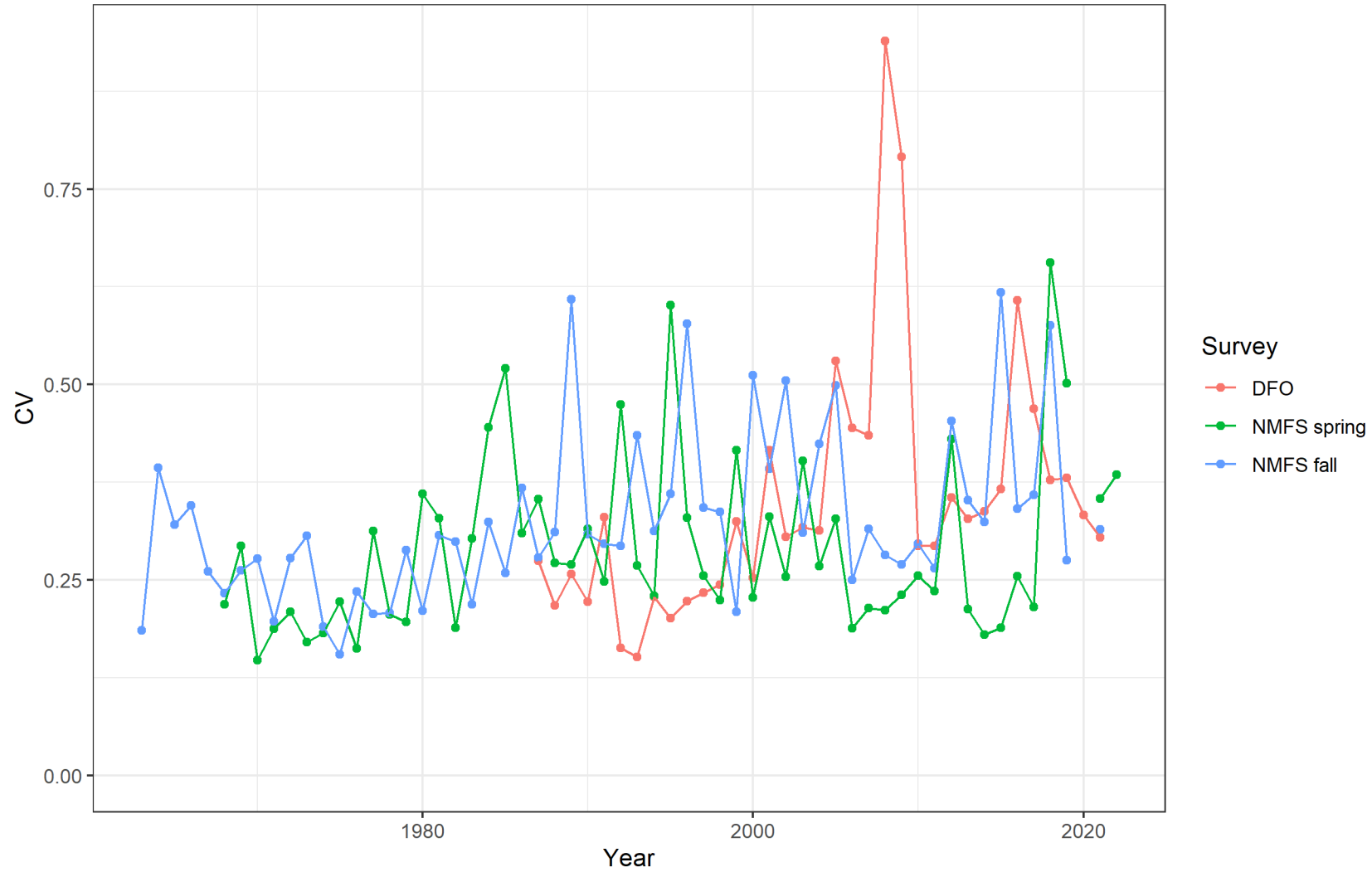
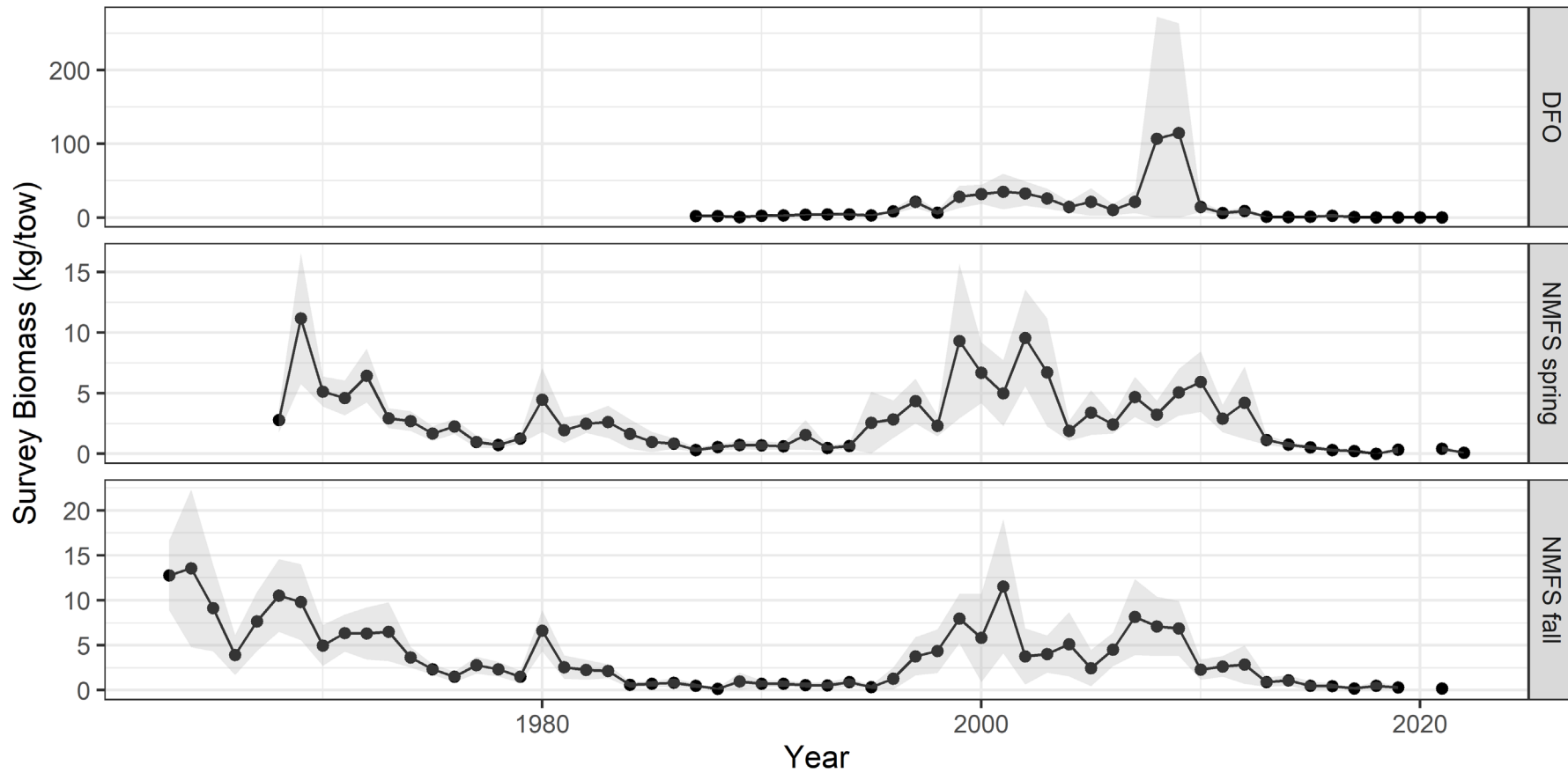


Figure 2A

Survey CVs



Survey Time Series



DFO 2022 estimate not available

NMFS spring 2022 2nd lowest in 55 years

NMFS Fall 2021 2nd lowest in 59 years

Figure 5

Survey Recruitment

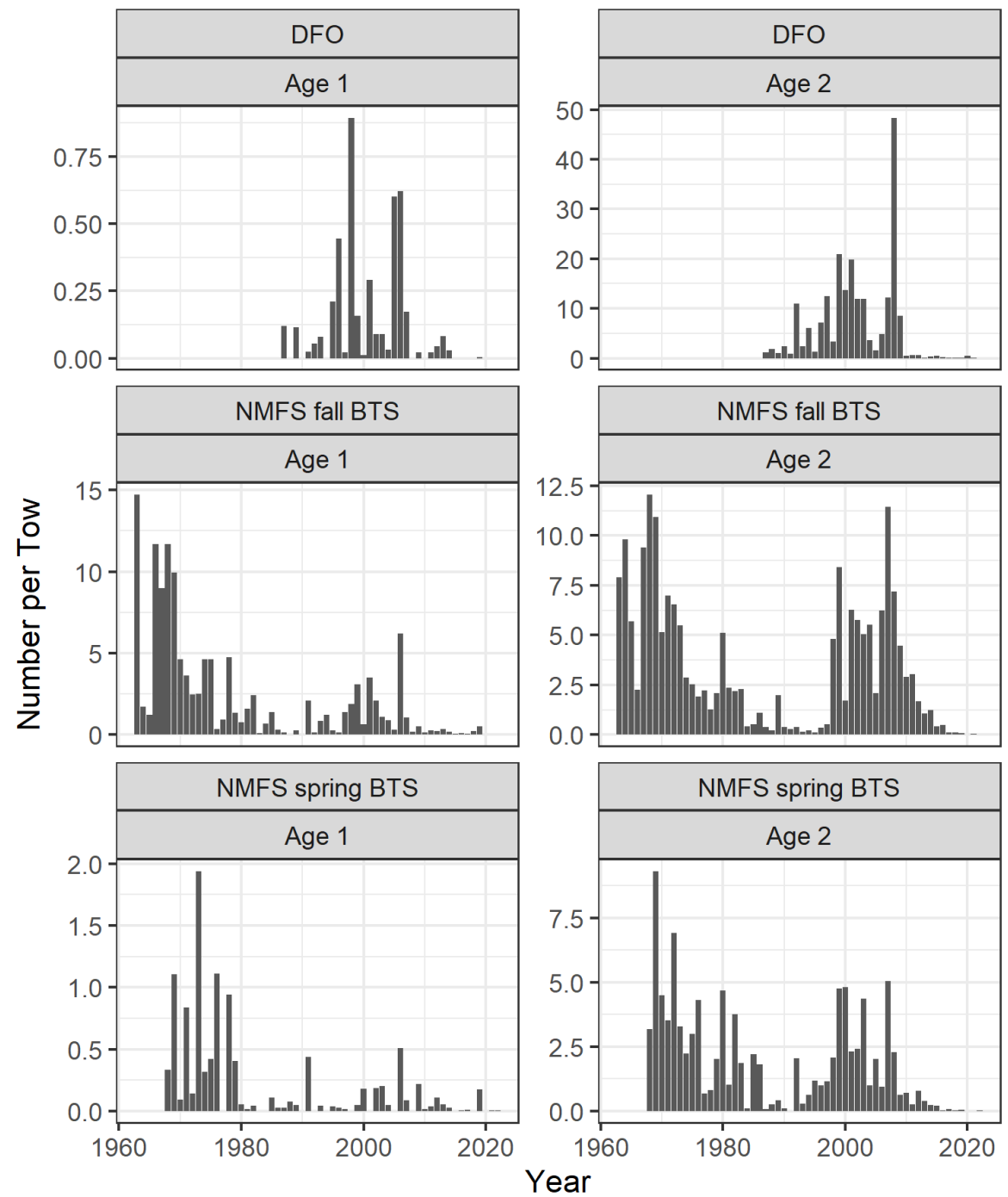


Figure 4

Relative F and Survey Z

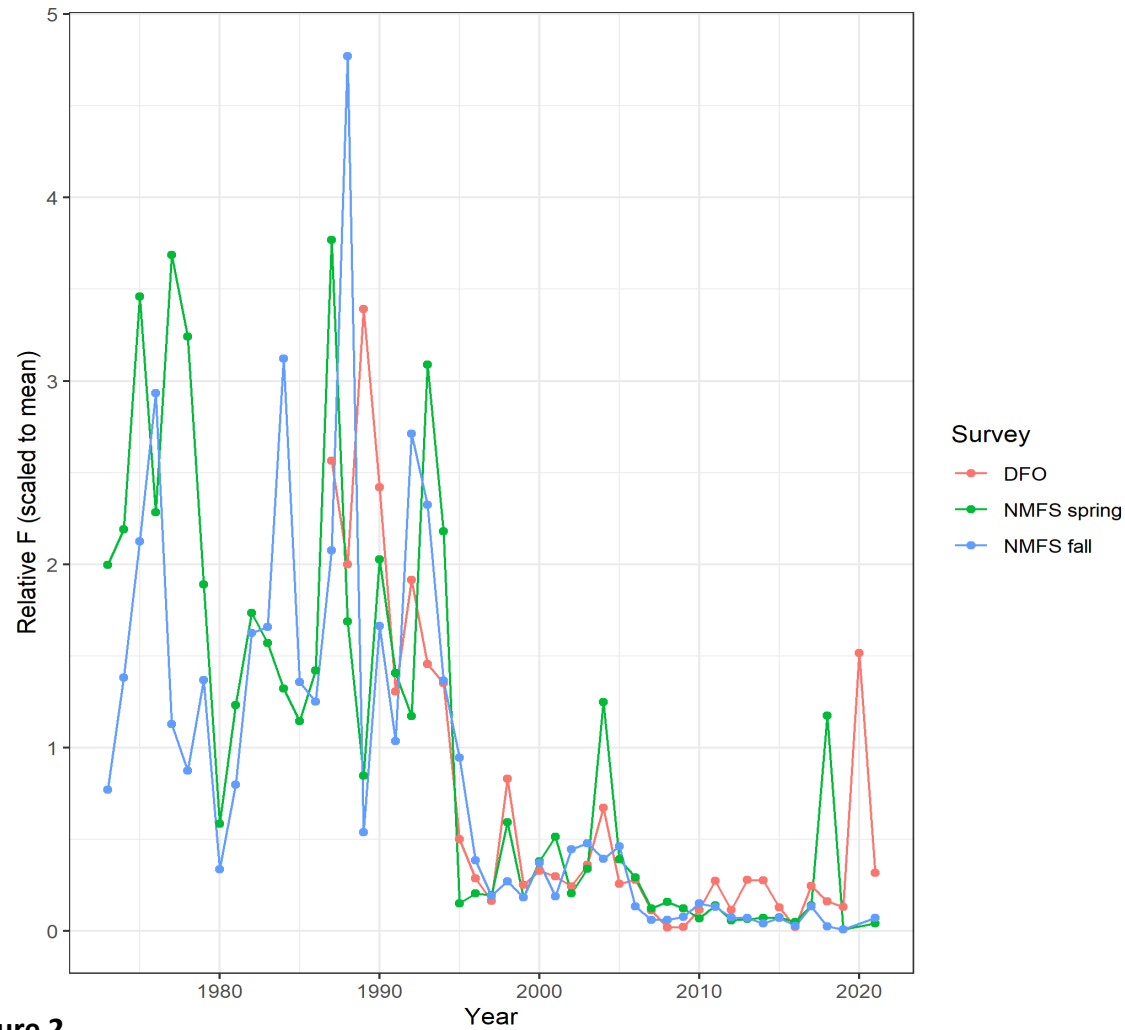


Figure 2

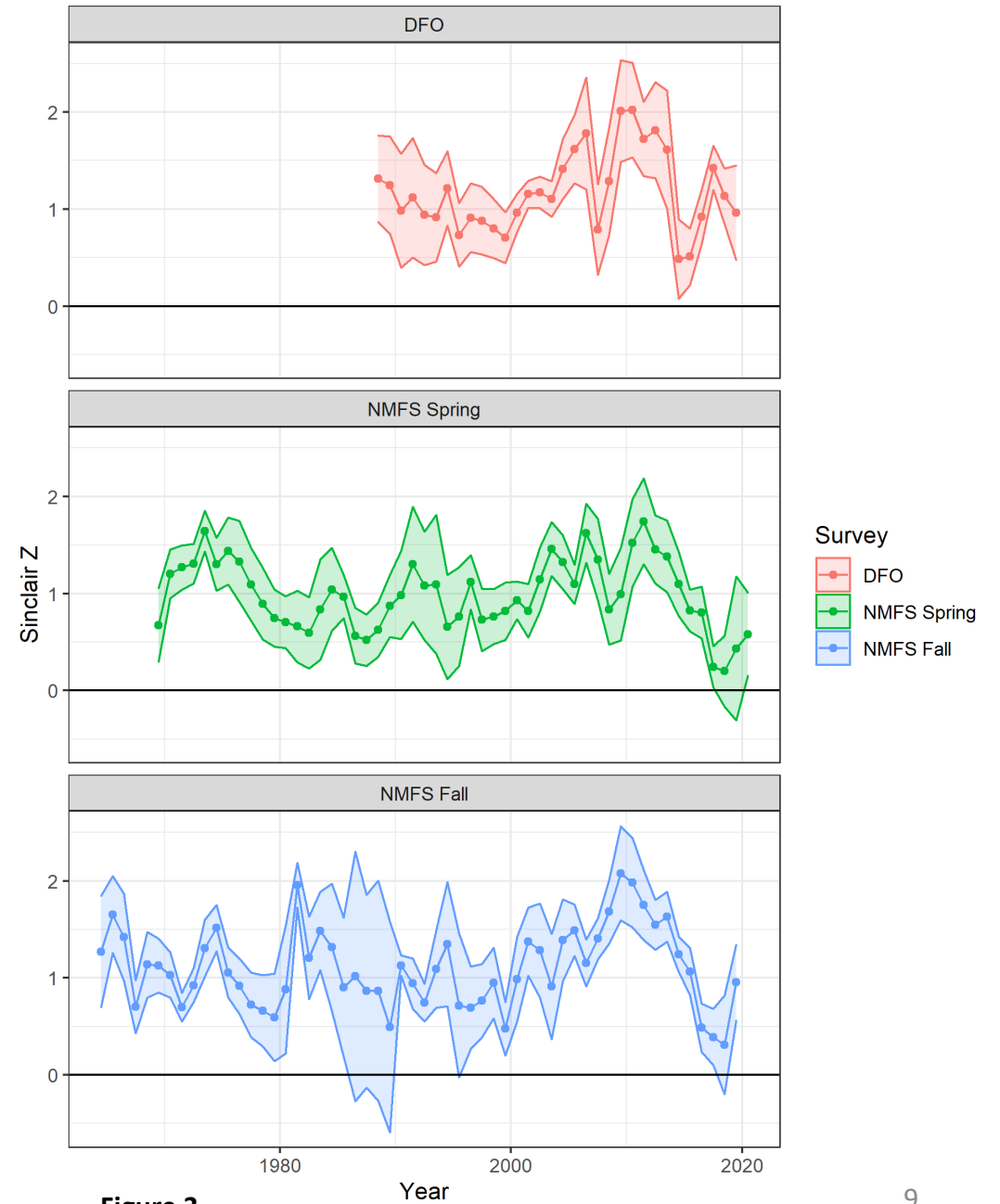


Figure 3

Empirical Approach

Year	Biomass (mt)				Catch Advice (mt)
	DFO	Spring	Fall (year-1)	Average	
2013	2,249	11,879	24,340	12,823	898
2014	1,654	8,040	8,946	6,213	435
2015	2,650	5,312	10,964	6,309	442
2016	5,569	3,063	4,578	4,403	308
2017	1,104	2,558	4,610	2,757	193
2018	812	139	1,891	947	66
2019	182	2,776	4,728	2,562	179
2020	404	NA	3,608	2,006	140
2021	446	4,804	NA	2,625	184
2022	NA	929	2,070	1,500	105



Table 2

Miller et al. 2021

Adjustment for missing DFO

- TRAC accepted approach in 2021
- Adjustment = $1/(1+\text{rel diff})$
 - For no DFO, adjustment = 0.807
 - $1,500 * 0.807 = 1,211 \text{ mt}$
 - $105 * 0.807 = 85 \text{ mt}$

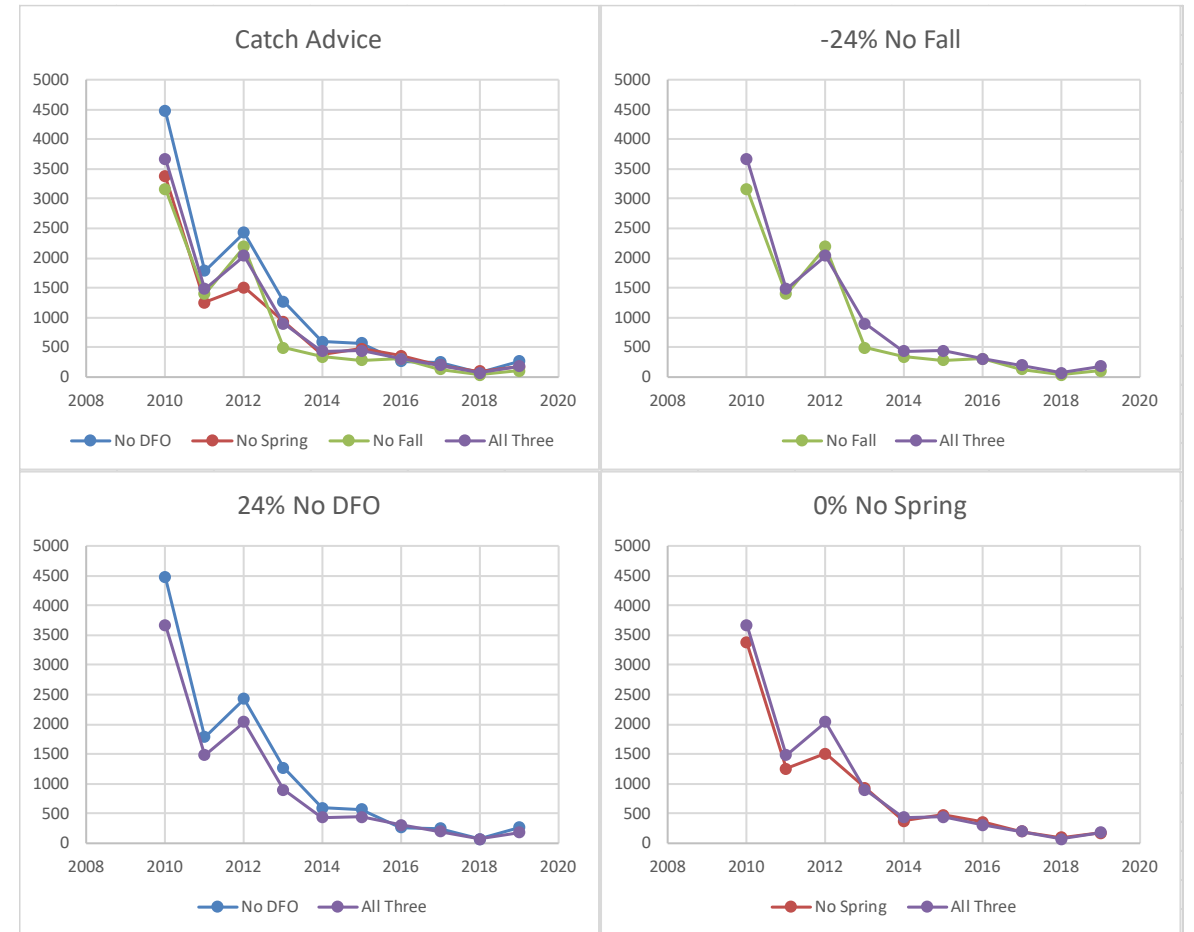


Figure A5

Catch Advice

- Average survey biomass
 - 1,500 mt
- Adjusted for missing DFO
 - 1,211 mt
- Both values are between the bounds of the Limiter (1000 – 8,500 mt)
- Catch advice = 200 mt
- Projected exploitation = 16.5 %

Adjusted for missing DFO

Terminal Year	
Exploitation Rate	Catch Advice (mt)
2%	24
3%	36
4%	48
5%	61
6%	73
7%	85
8%	97
9%	109
10%	121
11%	133
12%	145
13%	157
14%	169
15%	182
16%	194
16.5%	200

Questions?

