

**Seabird and Shark Bycatches in
the Pacific Ocean from
Taiwanese Observer Data of
2002-2005**

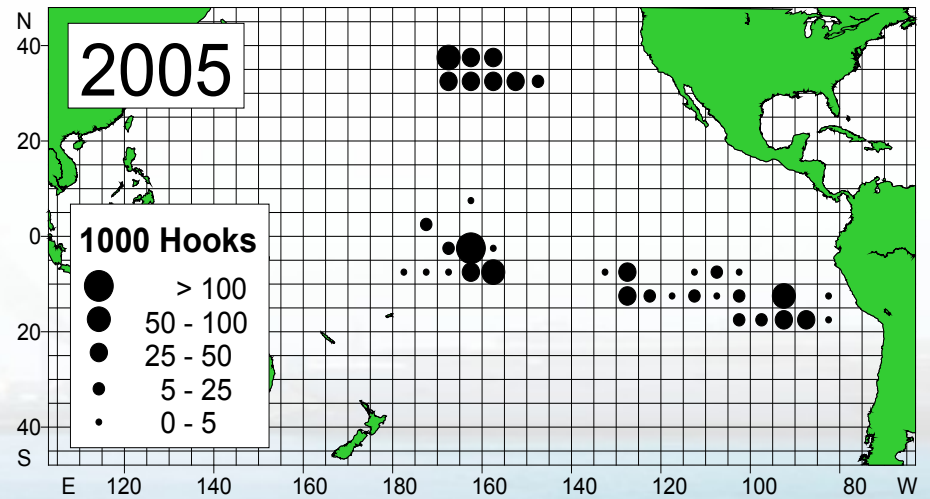
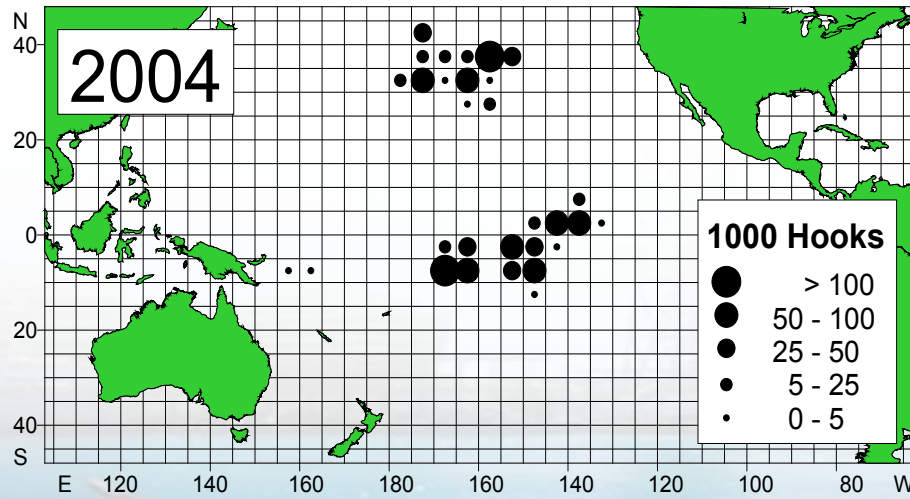
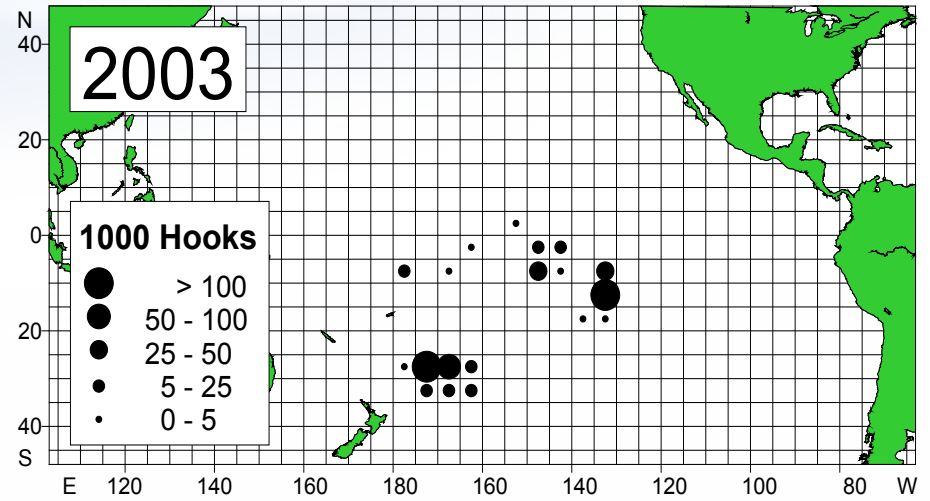
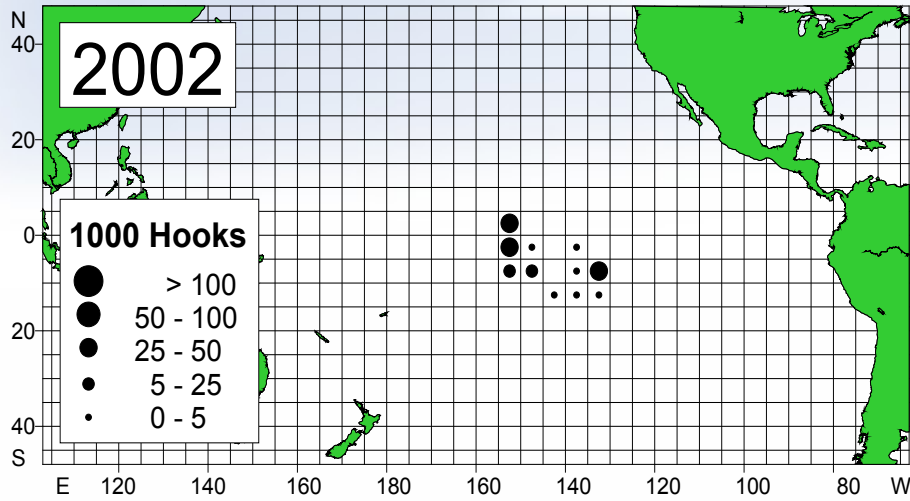
***Shui-Kai Chang,
Ju-Ping Tai & Chih-Hao Shiao***

Observer Program was launched on Taiwanese LL in the Pacific Ocean since 2002

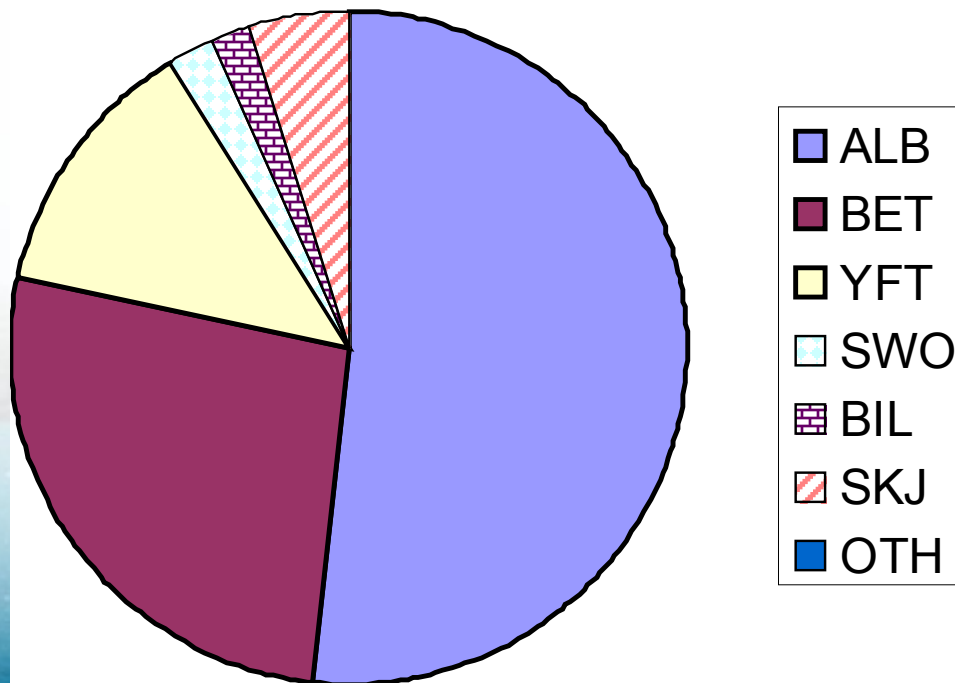
Altogether 13 observation trips during 2002-05

- 4 on ALB vessels – in temperate region
- 9 on BET vessels – in tropical region

Year	No. Obs	No. Vessel	Total efforts	Fishing days
2002	1	1	186	65
2003	2	3	653	183
2004	2	4	1066	324
2005	4	5	982	308



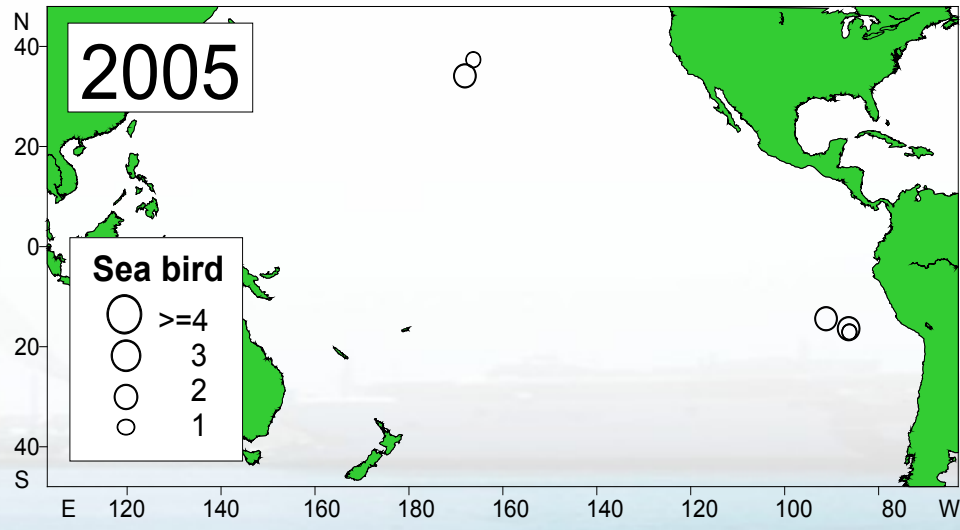
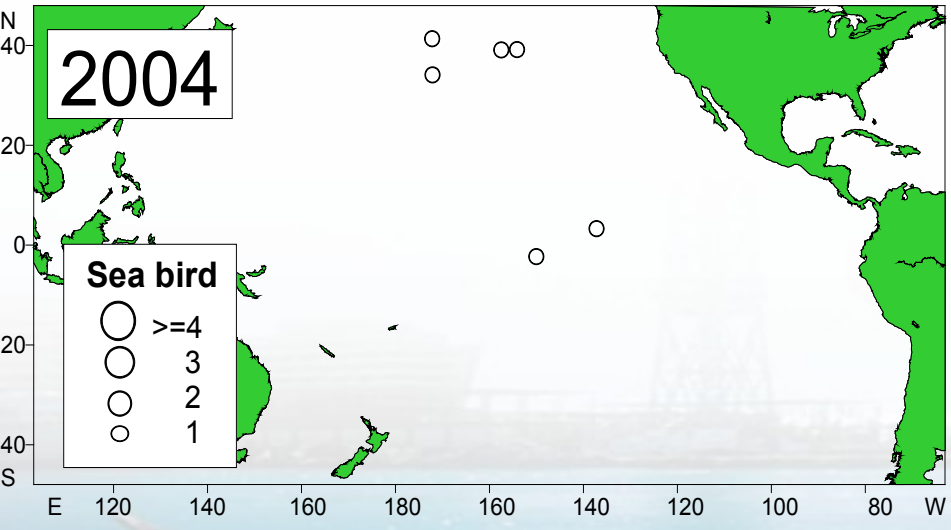
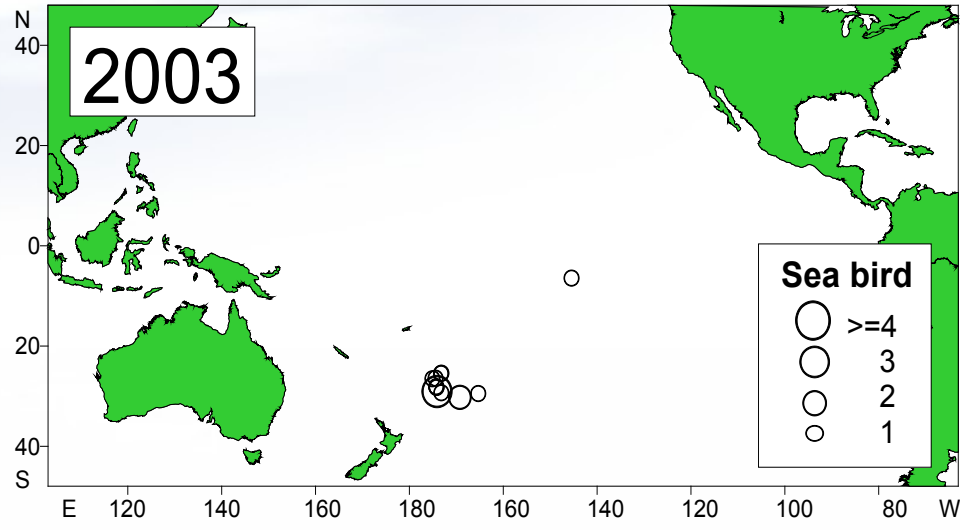
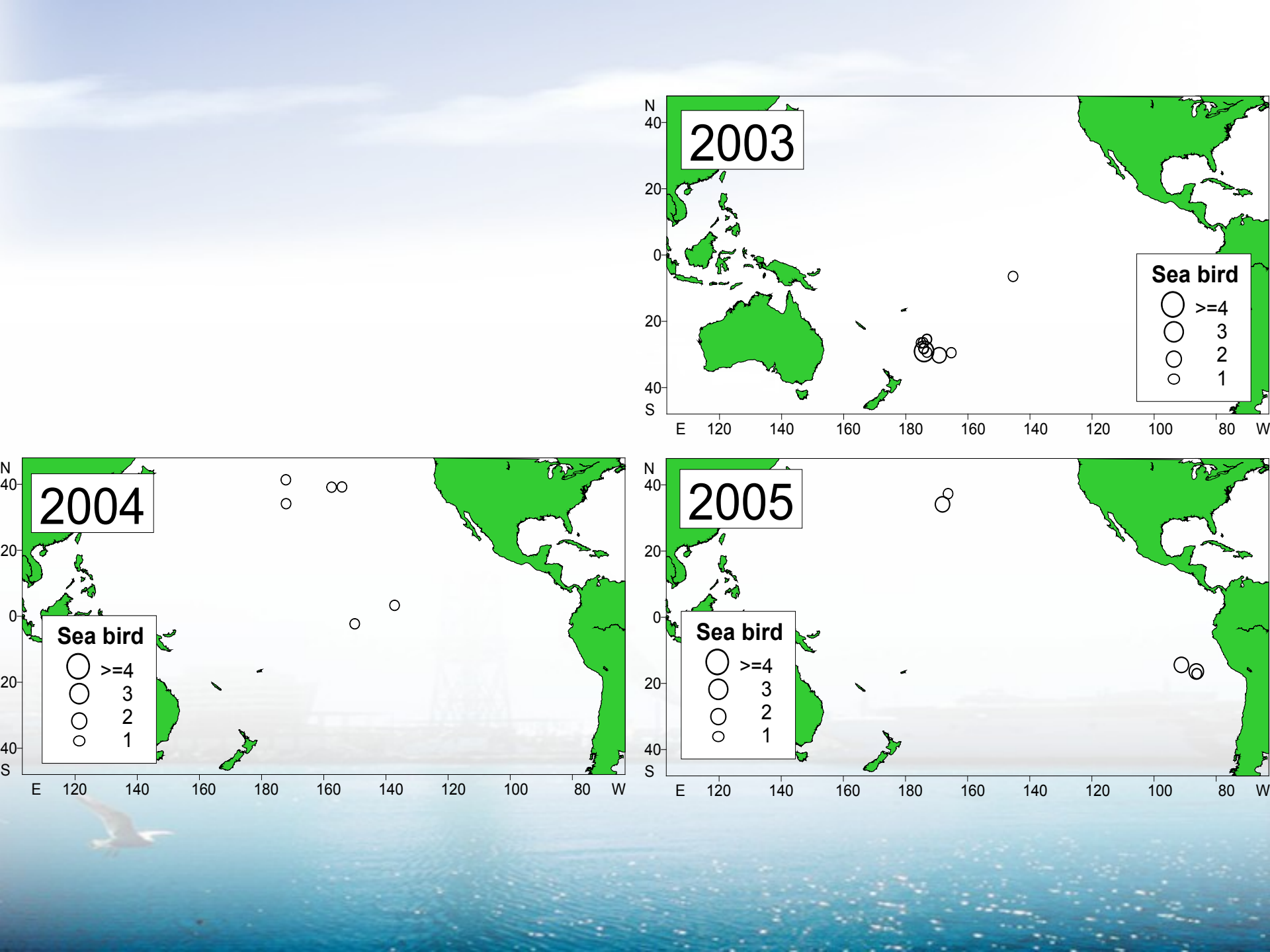
Year	Tunas		Billfishes		Sharks		Other fishes		Seabirds	
	No.	%	No.	%	No.	%	No.	%	No.	%
2002	2,374	83.36	147	5.16	81	2.84	246	8.64	0	0.00
2003	11,672	87.44	202	1.51	365	2.73	1,094	8.20	15	0.11
2004	12,253	88.11	519	3.73	733	5.20	518	3.72	6	0.04
2005	15,028	82.02	970	5.29	876	4.78	1,438	7.85	9	0.05

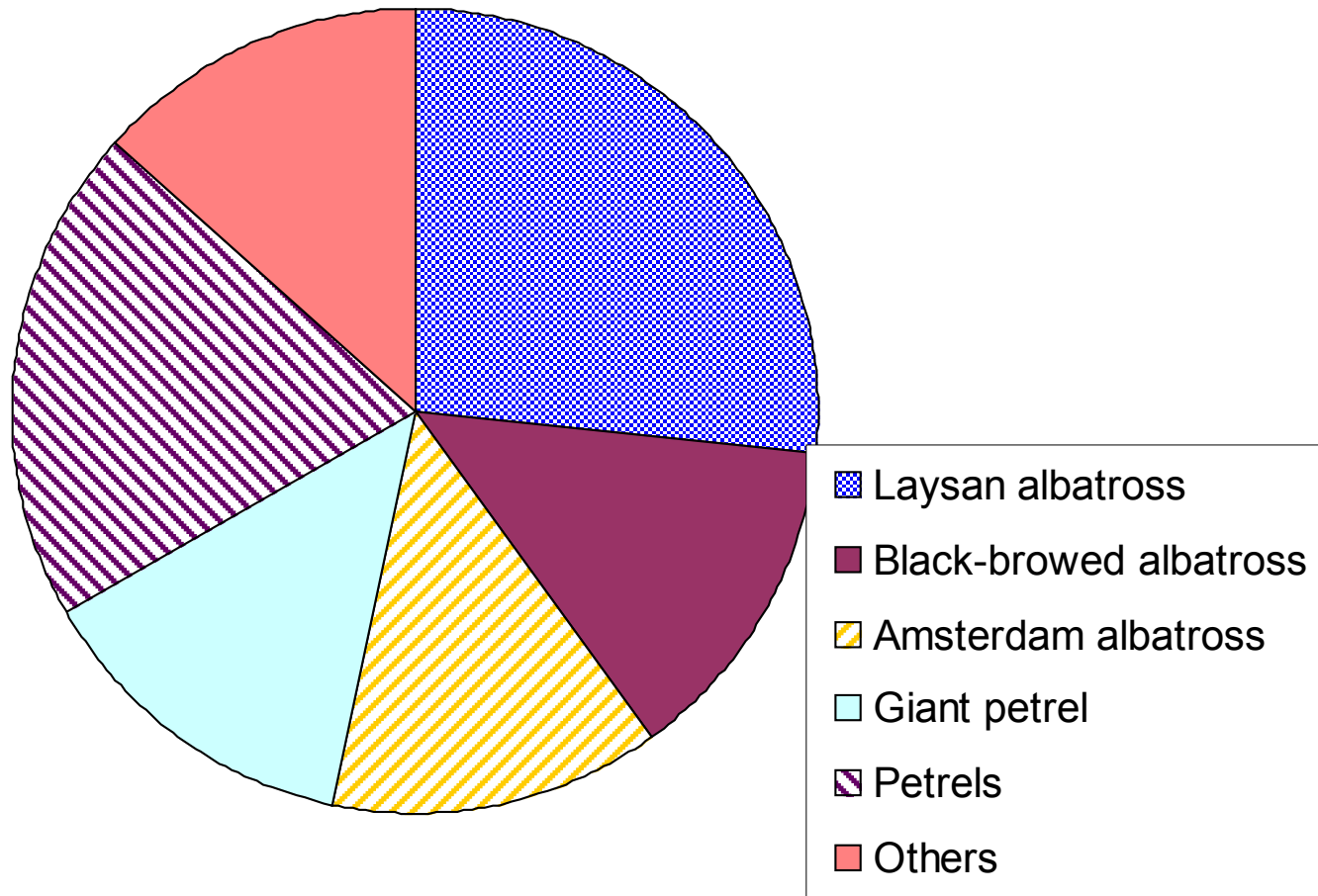


SEABIRDS

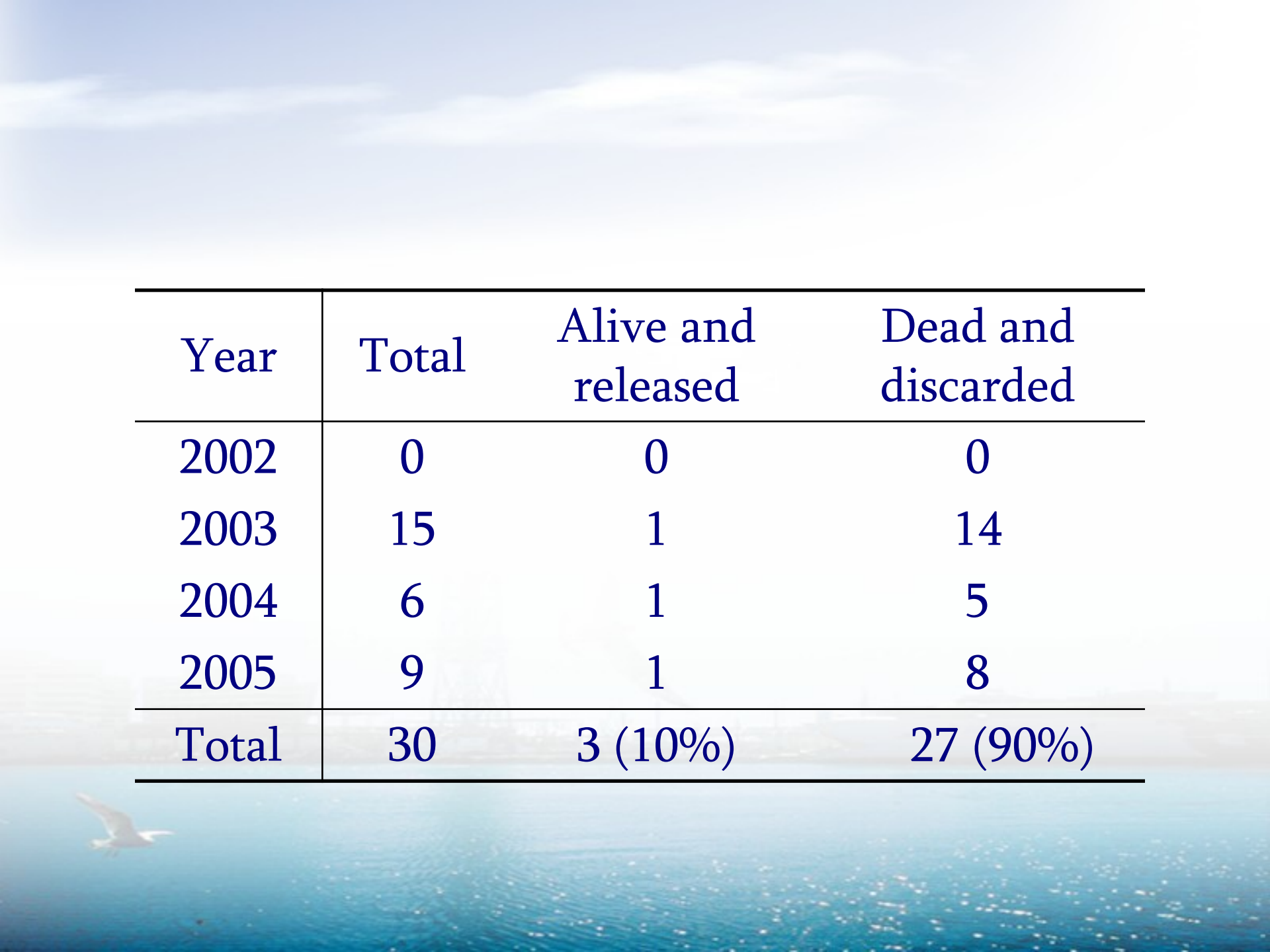
➤ Ranged between 0.00-0.11% to the total catches

Year	Seabird			
	Overall		EPO	
	No.	Catch rate	No.	Catch rate
2002	0	0.000	0	0.000
2003	15	0.023	1	0.004
2004	6	0.006	1	0.003
2005	9	0.009	6	0.016

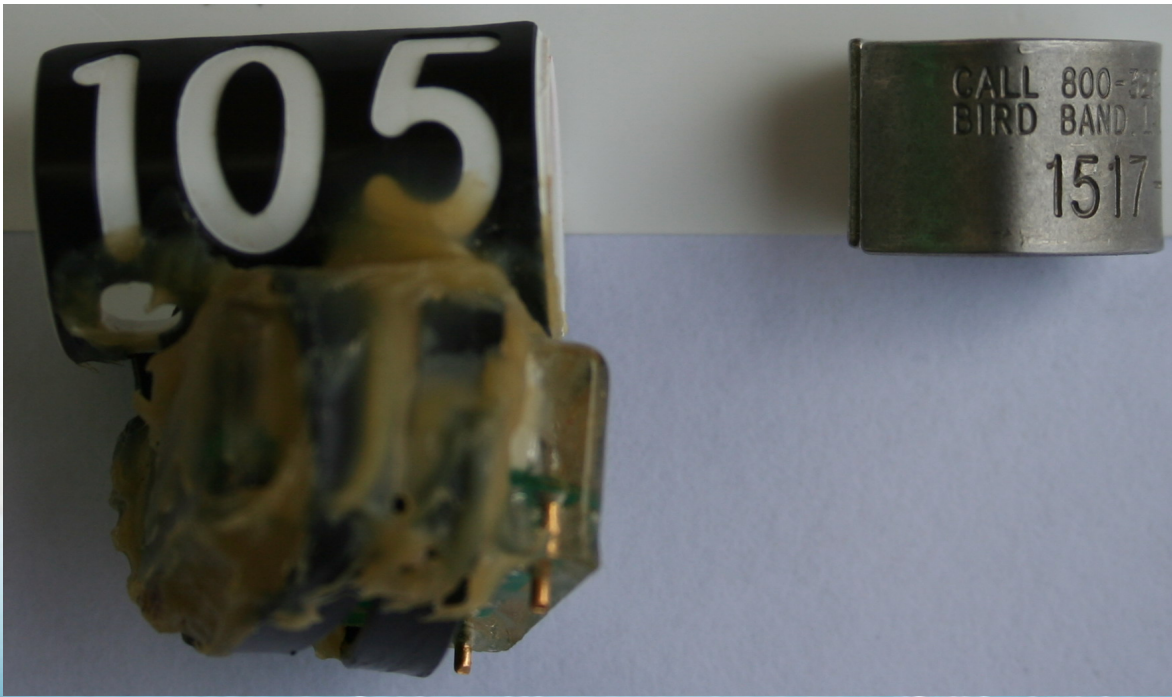


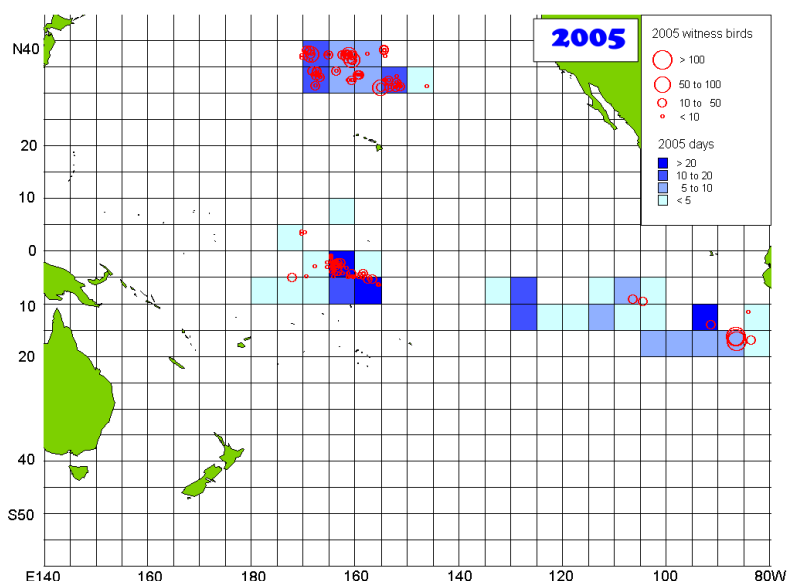
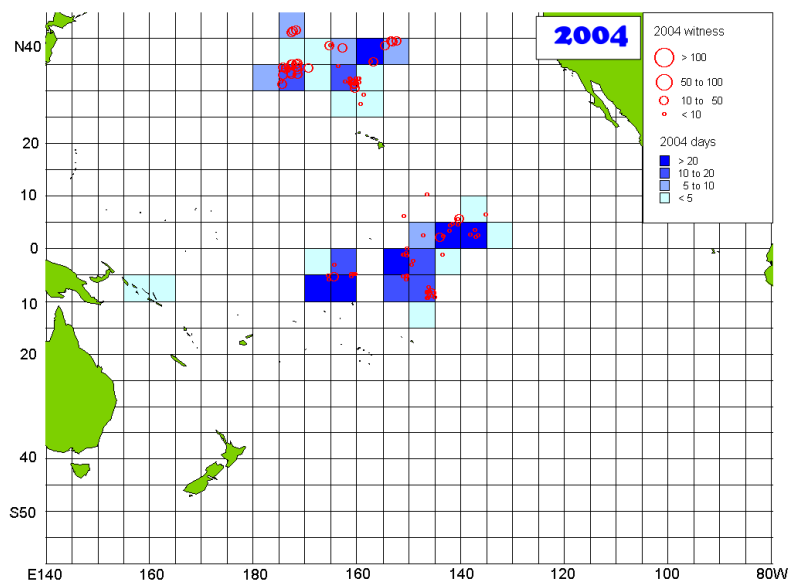
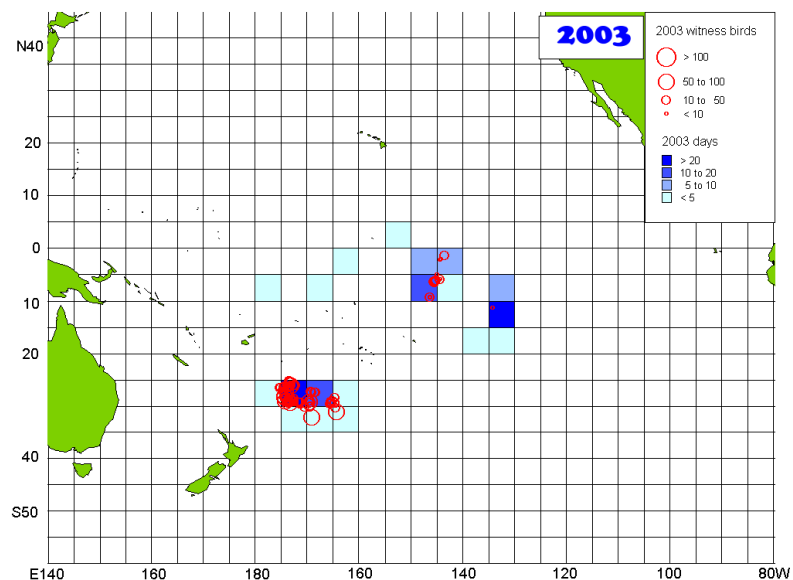
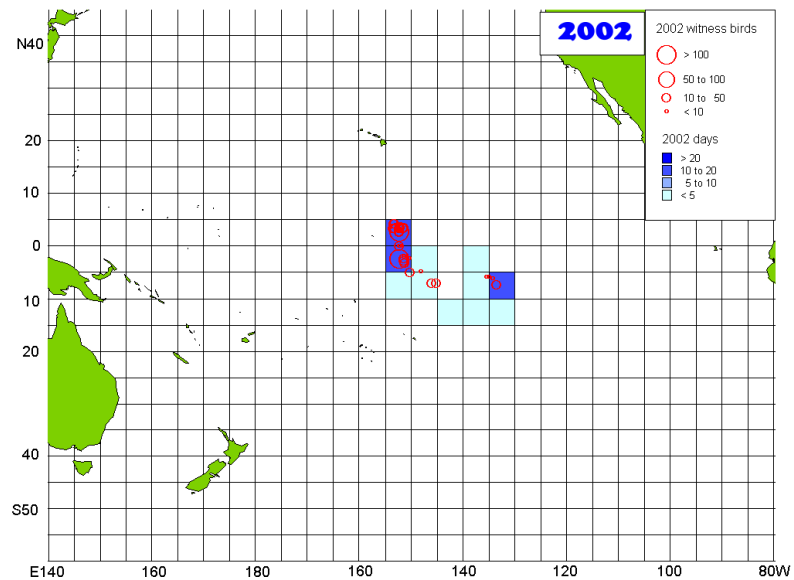


For 2004-05 when new
observer logbook
adopted



Year	Total	Alive and released	Dead and discarded
2002	0	0	0
2003	15	1	14
2004	6	1	5
2005	9	1	8
Total	30	3 (10%)	27 (90%)

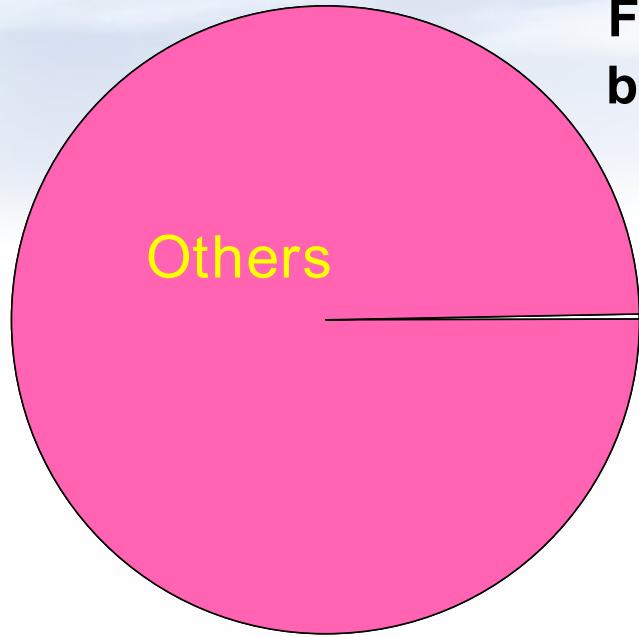




Tropical Region

$N=519$

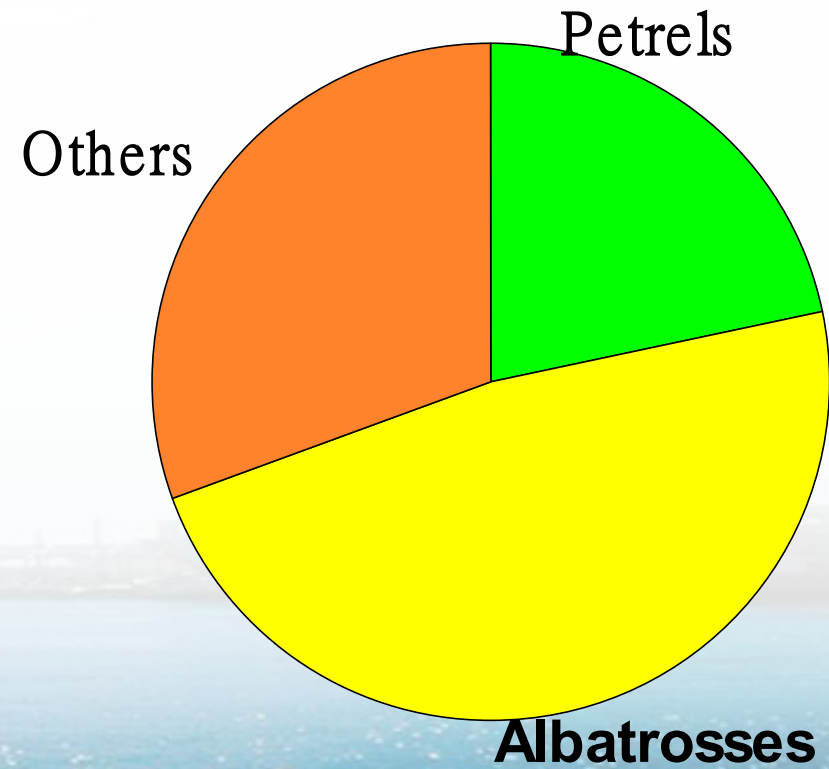
**Frigit
birds**



**Albatr-
osses**

Temperate Region

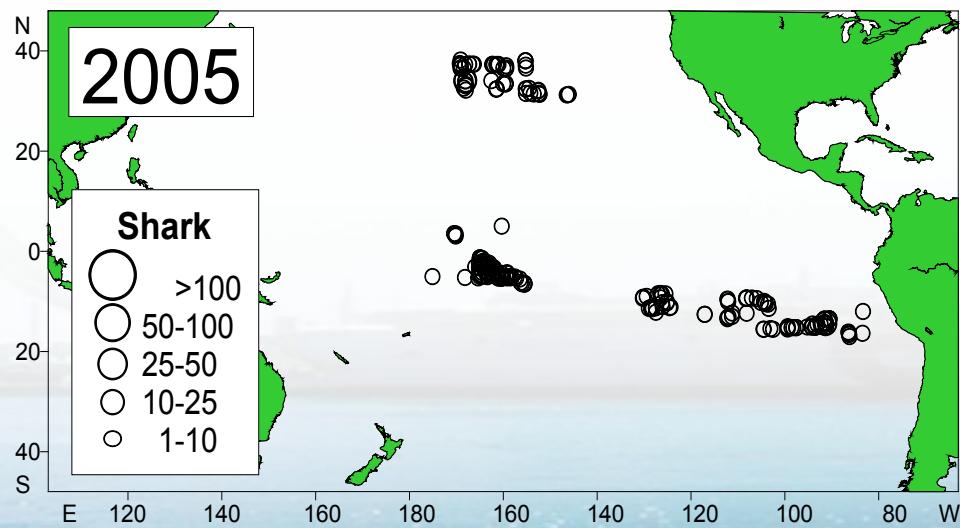
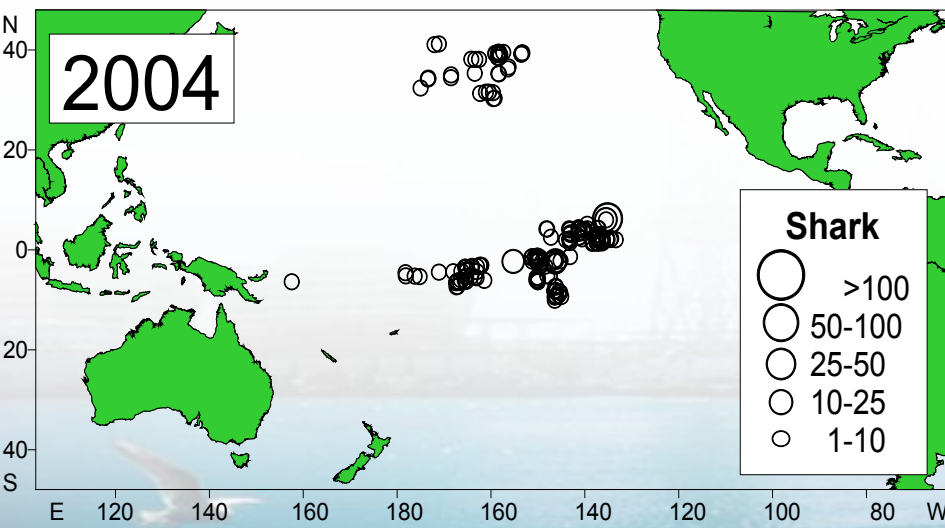
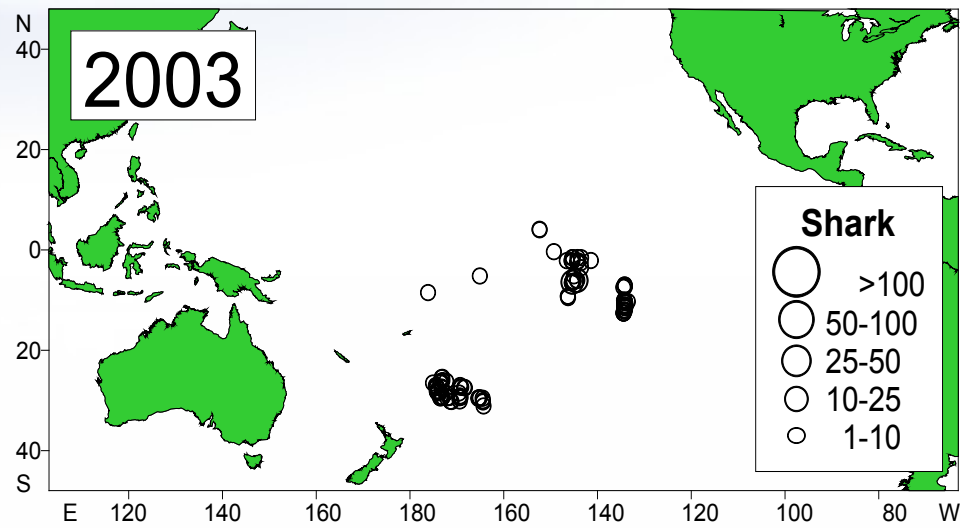
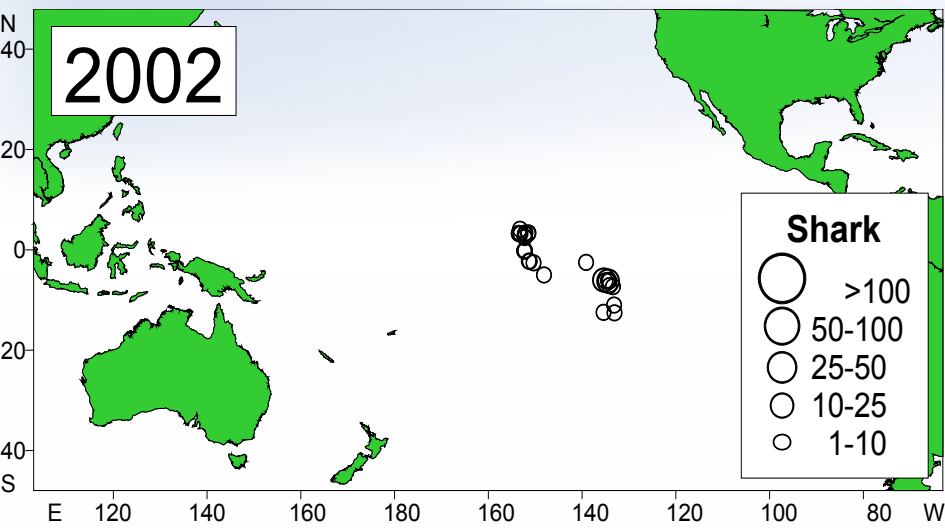
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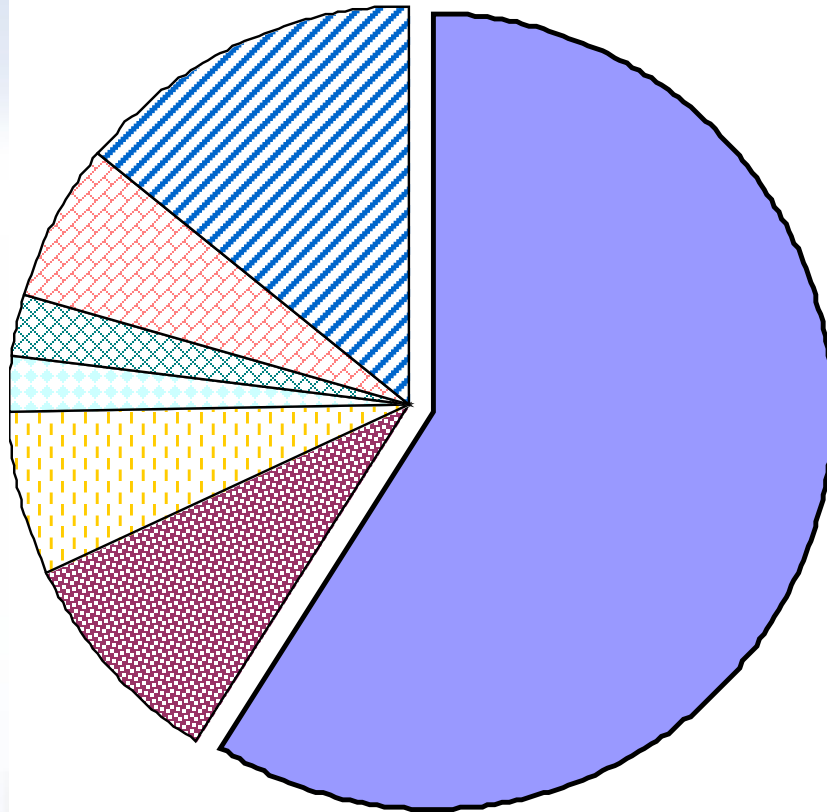


SHARKS

➤ Ranged between 2.73-5.20% to the total catches

Year	Shark			
	Overall		EPO	
Year	No.	Catch rate	No.	Catch rate
2002	81	0.436	42	0.507
2003	365	0.559	267	0.987
2004	733	0.688	391	1.250
2005	876	0.892	285	0.745





■ Blue shark

■ Silky shark

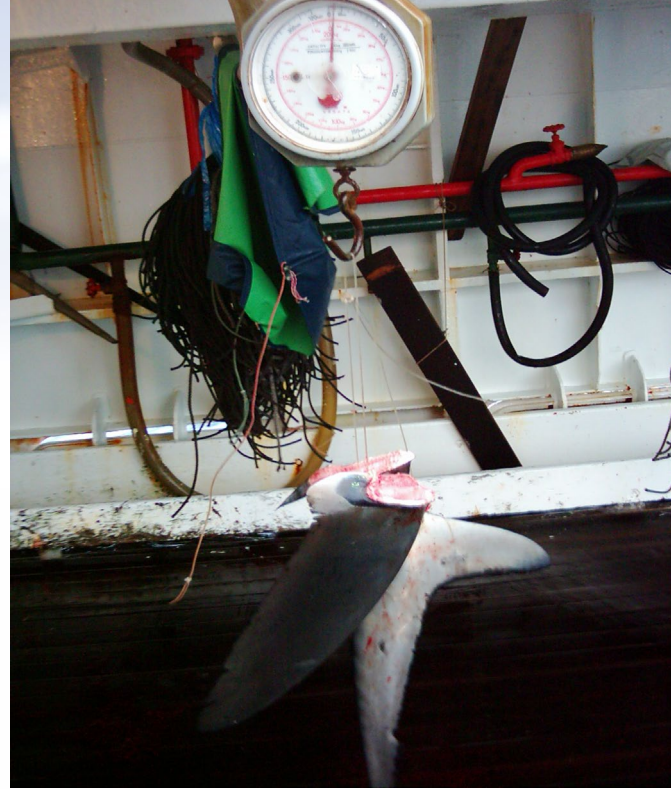
■ Shortfin mako

■ Oceanic whitetip shark

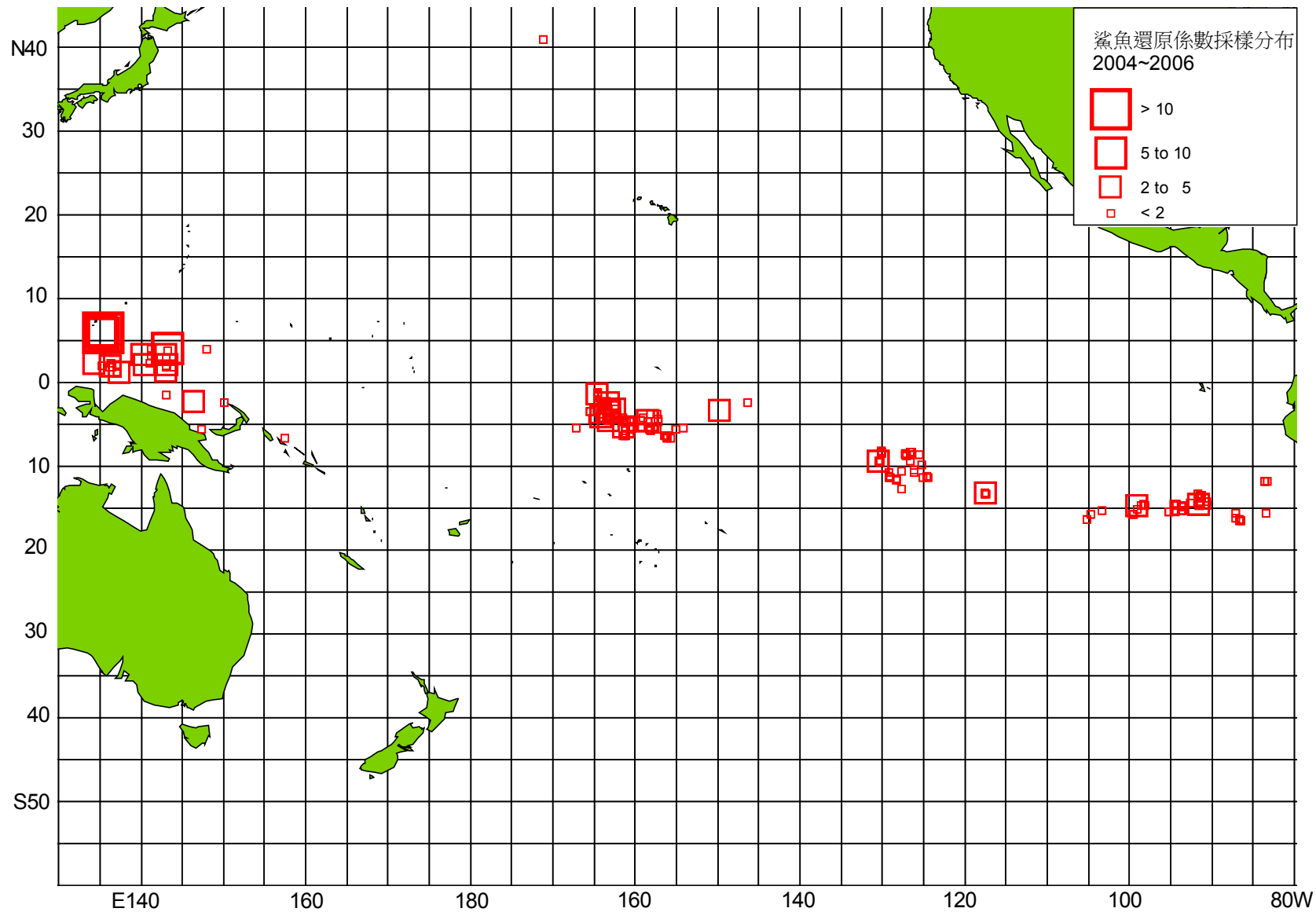
■ Pelagic thresher

■ Bigeye thresher

■ Other shark



- 308 fish: 286 (2004-05) + 22 (2006)
- 80% from blue shark and 10% from silky shark
- shark-fin-ratio varies significantly by species
and by the way the shark carcasses are processed



Brief Introduction to the 2006 Workshop on Reduction of Sea Turtle Incidental Catch



➤ 60 peoples from industry and government

➤ Topics

(1) World actions to conserve sea turtles

(2) The endangered sea turtles

(3) Results from circle hooks experiments

(4) The usage of de-hooker

(5) Invitation for large scale circle hooks experiments

7 Atlantic LL and 3 Pacific LL enrolled