

*The 3rd Meeting of the SWG on Neritic Tunas
Stock Assessment in the SEA Waters*

**Review/Progress of the
Genetic Study & Improve
Data Collection, Details of
Budget and Work in 2016-
2017**

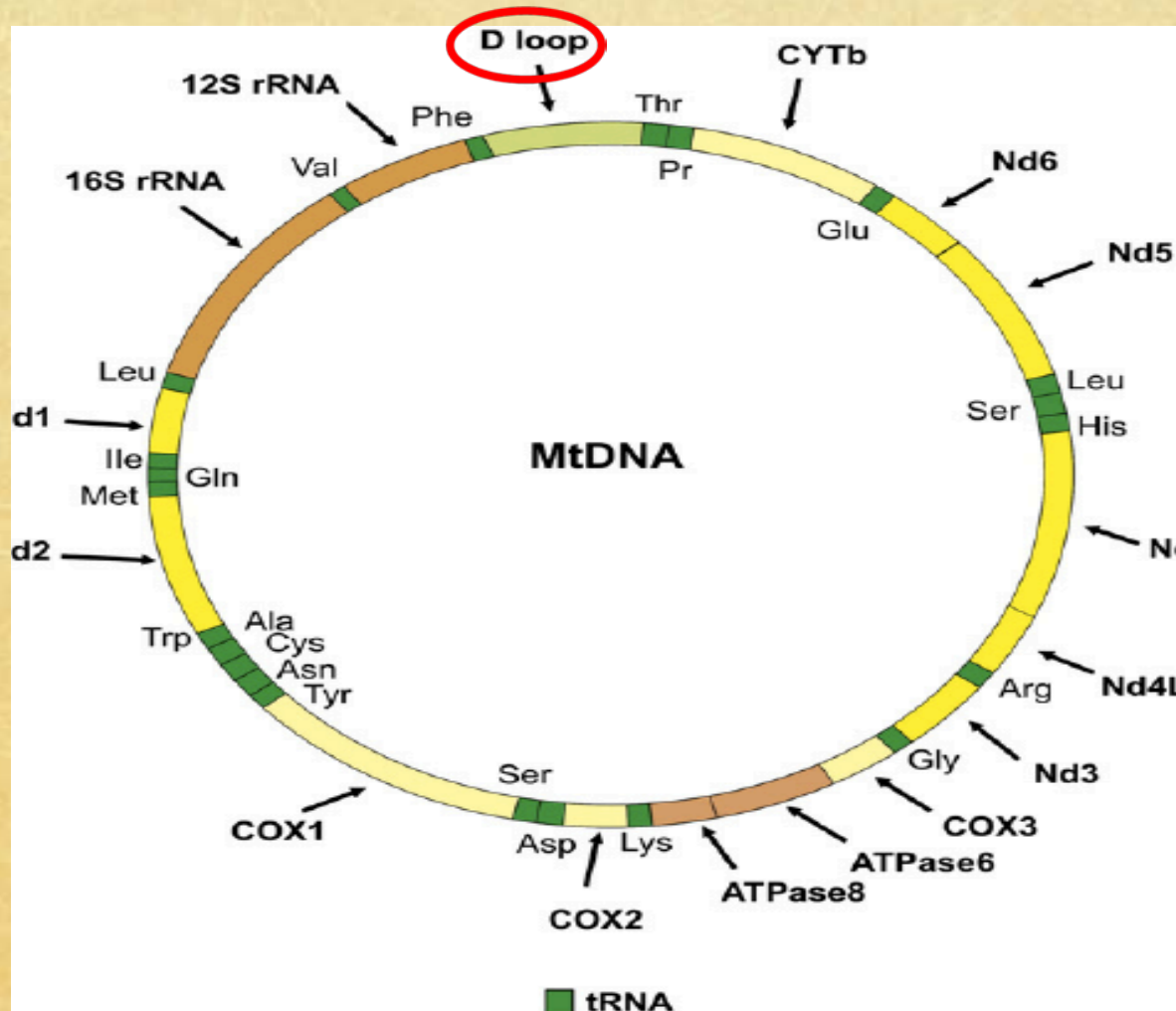
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Project title: The Population
Study of *Thunnus tonggol*
(Bleeker, 1851) in the Southeast
Asian Region.

Objectives

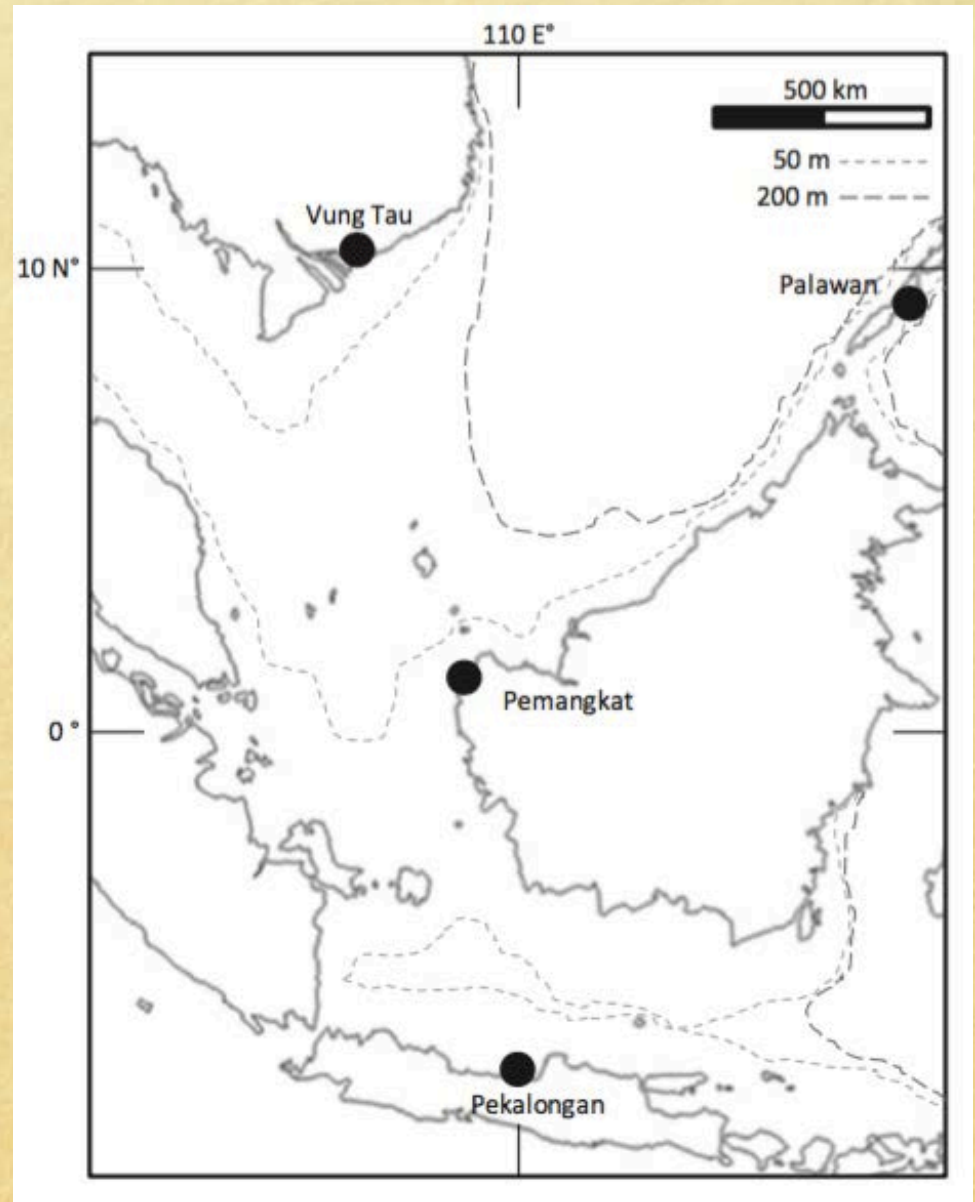
- ◆ To identify the level of genetic diversity of *Thunnus tonggol* (Longtail tuna) in the South China Sea and Andaman Sea.
- ◆ To identify the genetic structure of *Thunnus tonggol* (Longtail tuna) in the South China Sea and Andaman Sea waters by using mitochondrial DNA (mtDNA) **displacement loop (D-loop)** marker.

Why D-loop?

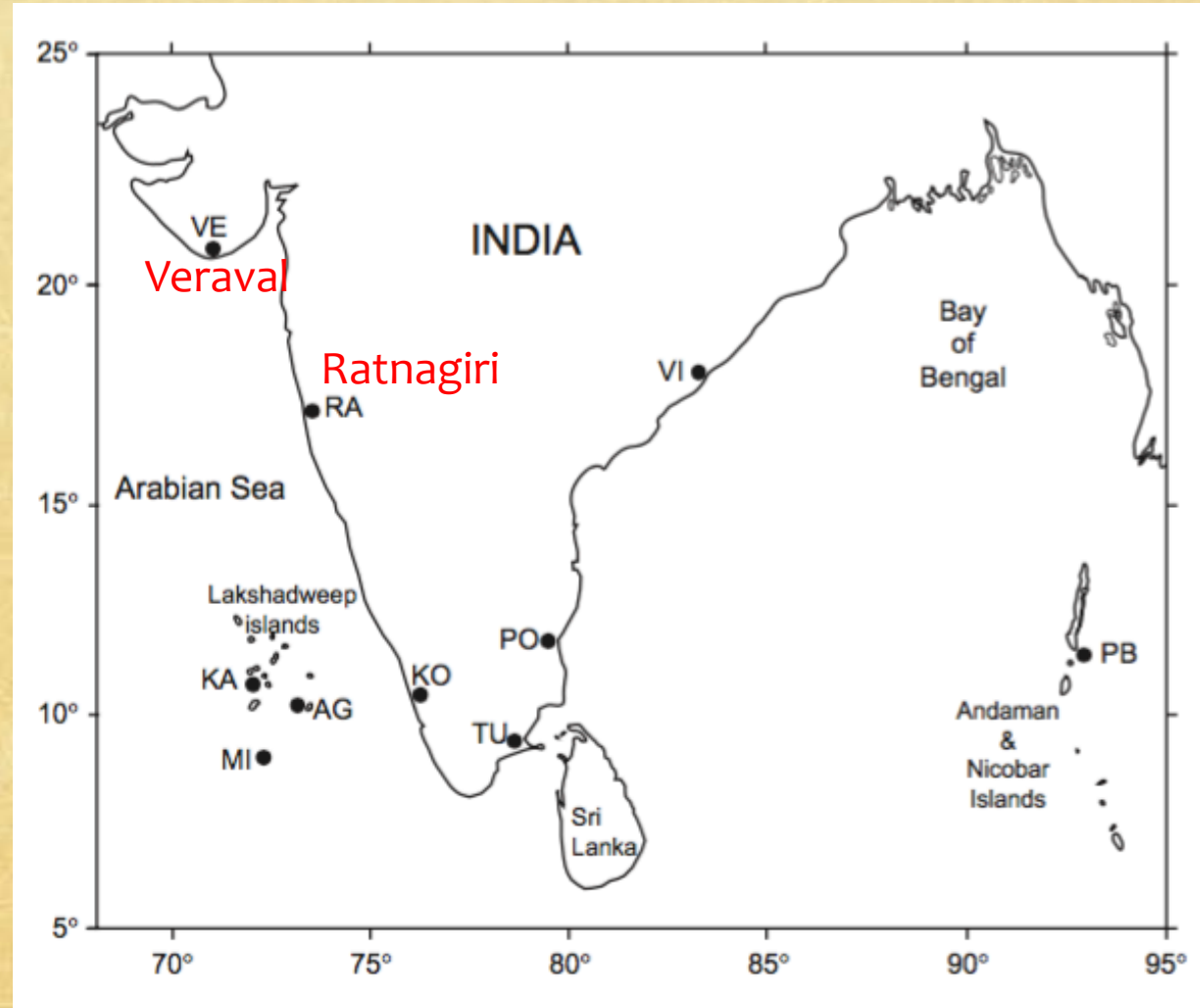


Jurnal:

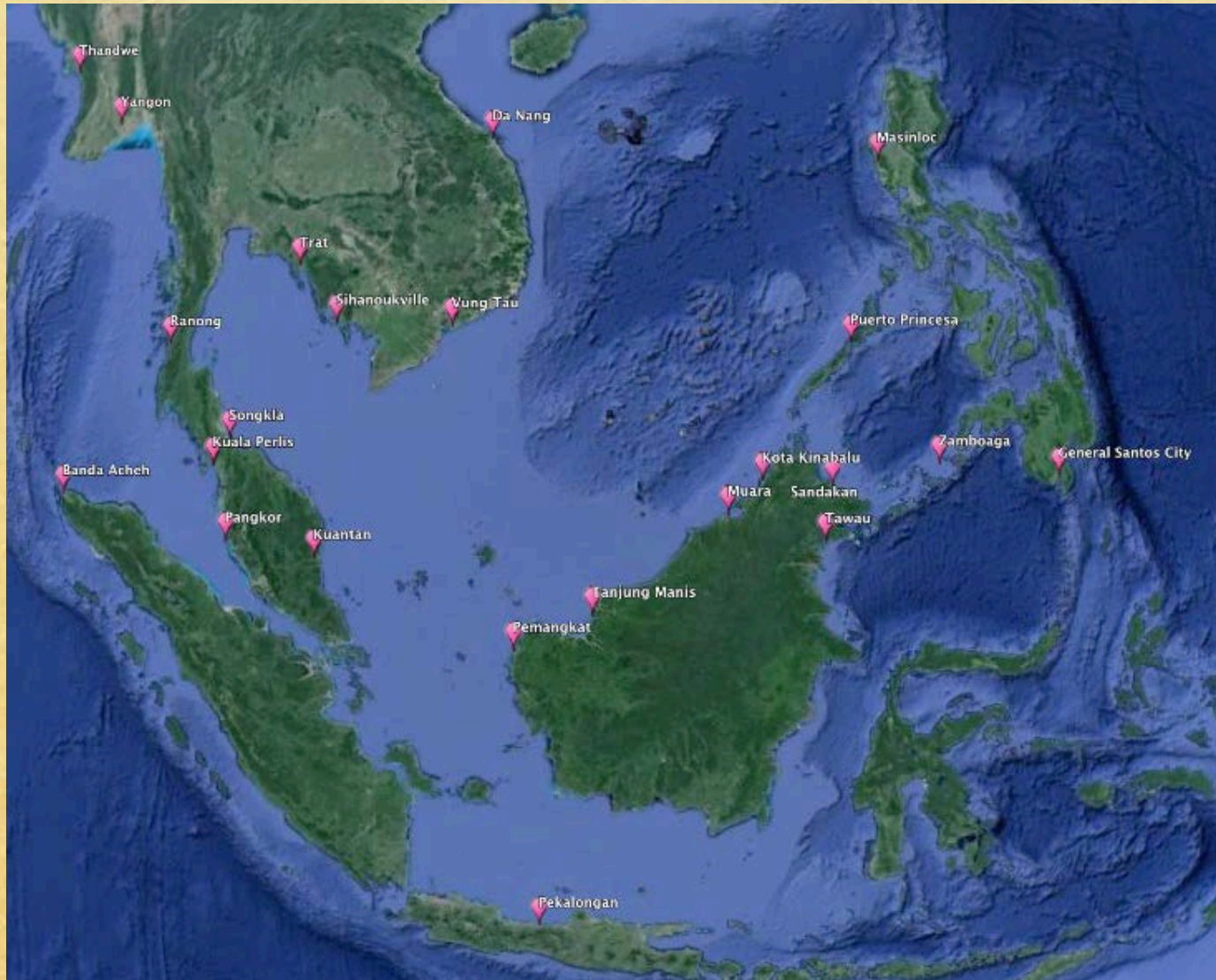
1) D. A. Willette, M. D. Santos and D. Leadbitter (2016). **Longtail tuna *Thunnus tonggol* (Bleeker, 1851) shows genetic partitioning across, but not within, basins of the Indo-Pacific based on mitochondrial DNA.** *J. Appl. Ichthyol.* 32, 318–323.



2) Swaraj Priyaranjan Kunal, Girish Kumar, Maria Rosalia Menezes & Ram Murti Meena (2014) **Genetic homogeneity in longtail tuna *Thunnus tonggol* (Bleeker, 1851) from the northwest coast of India inferred from direct sequencing analysis of the mitochondrial DNA D-loop region**, Marine Biology Research, 10:7, 738-743.



Sampling sites



Country		Sites
South China Sea and Gulf of Thailand Sub-Region		
Brunei	1	Muara
Cambodia	2	Sihanoukville
Indonesia	3	Pemangkat
Malaysia	4	Kuantan
	5	Kota Kinabalu
	6	Tanjung Manis
Philippines	7	Masinloc
	8	Puetto Pricesa
Thailand	9	Trat
	10	Songkla
Viet Nam	11	Da Nang
	12	Vung Tau
Andaman Sea Sub-Region		
Indonesia	13	Banda Aceh
Malaysia	14	Kuala Perlis
	15	Pangkor
Myanmar	16	Yangon
	17	Thandwe
Thailand	18	Ranong
Sulu Sulawesi Sea Sub-Region/Out-Group		
Indonesia	19	Pekalongan
Malaysia	20	Tawau
	21	Sandakan
Philippines	22	Zamboaga
	23	General Santos City

Budget

Country	Sites	No. of sites	No. of specimens	No. of species	x 8 USD	Chemicals and etc.	Countries Staff			MFRDMD Staff			Total in USD	Shipping sampling materials
							Allowance	Accommodation	Transportation	Allowance	Accommodation	Air Ticket (AT*P)		
South China Sea and Gulf of Thailand Sub-Region														
Brunei	Muara	1	50	2	800	40	280	0	100	360	200	1200	2980	85
Cambodia	Sihanoukville	1	50	2	800	40	200	400	200	280	200	1200	3320	85
Indonesia	Pemangkat	1	50	2	800	40	280	400	200	360	200	1200	3480	85
Malaysia	Kuantan	1	50	2	800	40	0	0	200	560	400	0	2000	0
	Kota Kinabalu	1	50	2	800	40	140	200	100	600	400	800	3080	0
	Tanjung Manis	1	50	2	800	40	140	200	100	600	400	1000	3280	0
Philippines	Masinloc	1	50	2	800	40	280	400	100	360	200	1000	3180	85
	Puetto Pricesa	1	50	2	800	40	280	400	100	0	0	0	1620	85
Thailand	Trat	1	50	2	800	40	280	400	100	360	200	1200	3380	85
	Songkla	1	50	2	800	40	280	400	100	360	0	0	1980	85
Viet Nam	Da Nang	1	50	2	800	40	200	400	100	280	200	1400	3420	85
	Vung Tau	1	50	2	800	40	200	400	100	280	0	0	1820	85
Sub Total		12	600		9600	480	2560	3600	1500	4400	2400	9000	33540	765
Andaman Sea Sub-Region														
Indonesia	Banda Aceh	1	50	2	800	40	280	400	100	0	0	0	1620	85
Malaysia	Kuala Perlis	1	50	2	800	40	140	400	250	560	300	0	2490	0
	Pangkor	1	50	2	800	40	140	400	250	560	300	0	2490	0
Myanmar	Yangon	1	50	2	800	40	200	400	100	380	200	2500	4620	85
	Thandwe	1	50	2	800	40	200	400	200	0	0	0	1640	85
Thailand	Ranong	1	50	2	800	40	280	400	100	0	0	0	1620	85
Sub Total		6	300		4800	240	1240	2400	1000	1500	800	2500	14480	340
Sulu Sulawesi Sea Sub-Region/Out-Group														
Indonesia	Pekalongan	1	50	2	800	40	280	400	100	0	0	0	1620	85
Malaysia	Tawau	1	50	2	800	40	140	200	100	640	400	400	2720	0
	Sandakan	1	50	2	800	40	140	200	100	640	400	400	2720	0
Philippines	Zamboaga	1	50	2	800	40	280	400	100	0	0	0	1620	85
	General Santos	1	50	2	800	40	280	400	100	0	0	0	1620	85
Sub Total		5	250		4000	200	1120	1600	500	1280	800	800	10300	255
TOTAL		23	1150		18400	920	4920	7600	3000	7180	4000	12300	58320	1,360

Expected Outputs

- Activities reports, Annual Progress Reports (in form of analytical explanation which it shall covers progress, how, constraint, difficulties)
- Final report

This study will be identified the level of genetic diversity of Longtail in the Southeast Asian region and theirs stock structure either one single stock or divided into a few stocks / management units.