



**Establishment and Operation of a Regional System of  
Fisheries *Refugia* in the South China Sea and Gulf of Thailand**

**REPORT**

**LOCAL CONSULTATION WORKSHOPS ON FISHERIES REFUGIA BOUNDARY  
AND MANAGEMENT PLANNING IN TRAT SITE**

**TRAT, THAILAND  
13-18 JULY 2020**

Prepared by  
**DEPARTMENT OF FISHERIES, THAILAND**

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**SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER  
TRAINING DEPARTMENT**



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## REPORT OF THE WORKSHOPS

### 1. INTRODUCTION

Local consultation workshops on fisheries *refugia* boundary and management planning in Trat Site under the project entitled “Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand” were co-organized by Trat Fisheries Provincial Office and Eastern Gulf Fisheries Research and Development Center (Rayong), Department of Fisheries during 13<sup>th</sup> – 18<sup>th</sup> July 2020. They were on-site conducted in all of the 5 coastal districts of Trat Province, namely Muang District, Laem Ngop District, Khlong Yai District, Koh Chang District, and Koh Kut District, aimed at enhancing local involvement in fisheries *refugia* boundary delineation and management planning in the site. The workshops were chaired and opened by District Chiefs of each responsible district and initiated by a review on technical information about marine fisheries in Trat Province by Director of the Eastern Gulf Fisheries Research and Development Center (Rayong). Tentative fisheries *refugia* boundaries and management plans were proposed for discussions, and conclusions were finally done upon mutual agreement in each district. The conclusions will be further prepared for consideration at the Provincial Fisheries Committee meeting for policy guidance prior to submission to the next authority committee. Workshop agenda and a list of the total number of 385 participants are shown in Annex 1 and 2, respectively.

### 2. A REVIEW ON MARINE FISHERIES IN TRAT PROVINCE

**2.1.** Each of the 5 on-site workshop meetings was initiated by a review on marine fisheries in Trat Province presented by **Mr. Kumpon Loychuen**, Director of the Eastern Gulf Fisheries Research and Development Center (Rayong). The presentation was consisted of baseline data for marine fisheries, marine fishing, and status of short mackerel in Trat Province, shown in Annex 3.

**2.2.** Regarding baseline data for marine fisheries in Trat Province, **Mr. Kumpon** showed the following: 1) topographic characteristics related to fisheries: islands, coral reefs, mangroves, seagrass beds, rivers, and sea beds, 2) numbers of fishing communities, 3) numbers of local fishing community organizations, 4) numbers of commercial fishing boats, 5) numbers of small-scale fishing boats, 6) numbers of fishing ports, and 7) sites and areas of artificial reefs.

**2.3.** For marine fishing in Trat Province, **Mr. Kumpon** emphasized fishing areas, catch rates, and catch compositions for each significant fishing gear in Trat Province including purse seines, anchovy falling nets, anchovy purse seines, trawls, crab gill nets, crab traps, shrimp gill nets, and short mackerel gill nets. According to those technical data, he concluded that there were 3 fishing gears affected short mackerel resources, namely purse seines, pair trawls, and short mackerel gill nets.

**2.4.** **Mr. Kumpon** finally drew attention to the status of short mackerel resources in Trat Province. Annual distribution of short mackerel showing the existences of each stage of their life cycle was highlighted. Occurrences of the mackerel in each area of the province, their catch statistics, and their estimated survival in case of restricted catches in the fisheries *refugia* site were also emphasized. It was concluded from his presentation that fully-mature short mackerel were found the most abundance during January-February in a year.

### 3. PROPOSING FISHERIES *REFUGIA* BOUNDARY AND MANAGEMENT PLANNING

**3.1.** **LCdr. Sansern Serirak**, Director of Trat Fisheries Provincial Office, as a facilitator for the workshops, initially introduced 3 tentative fisheries *refugia* boundaries, shown by blue lines in Figure 1, for consideration. He also proposed purse seines, pair trawls, and short mackerel gill nets as the prohibited fishing gears in *refugia* site during January–February each year. The matters of critical period for short mackerel, prohibited fishing gears, and *refugia* boundary were then open for discussion. A vote of fishers and stakeholders was conducted and resolution was concluded at the end of each on-site consultation workshop.

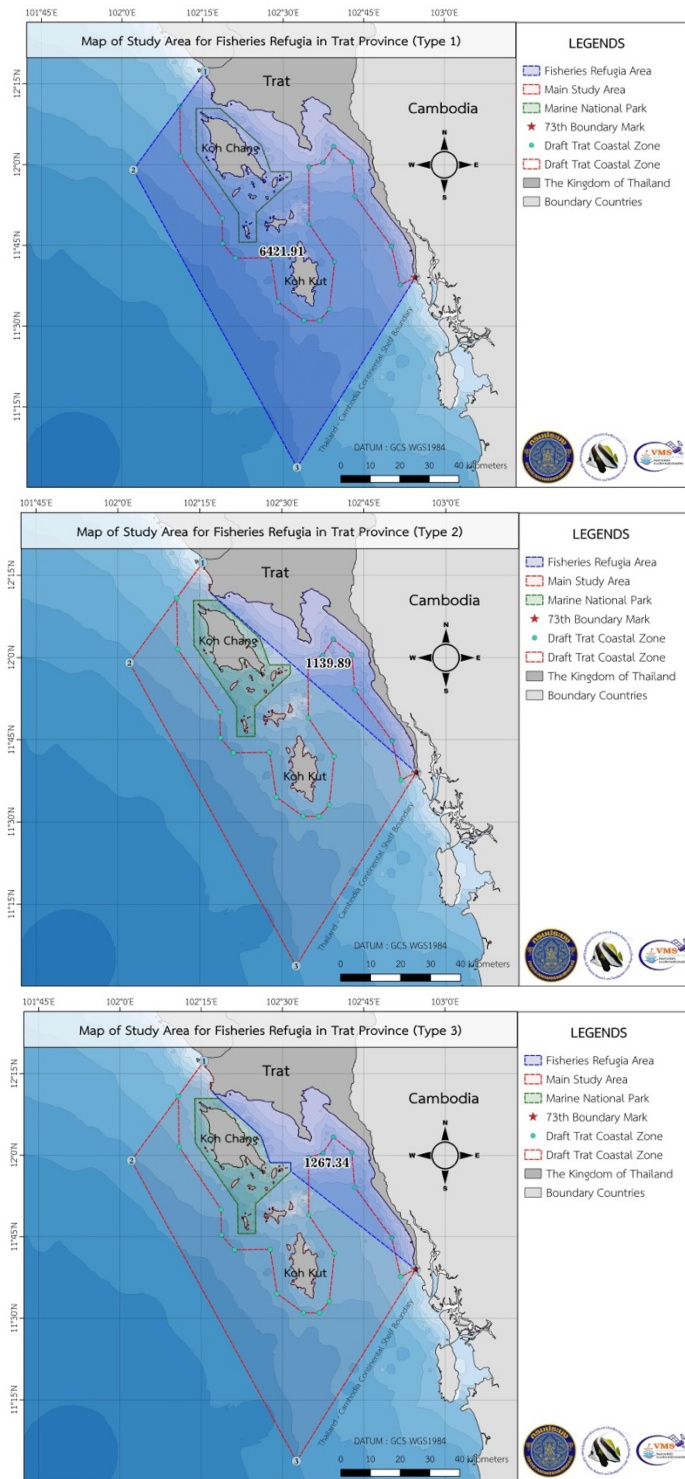


Figure 1 Proposed fisheries *refugia* boundaries in Trat Site

#### 4. WORKSHOP SUMMARY

##### 4.1. Workshop in Muang District

4.1.1. Date: 13<sup>th</sup> July 2020

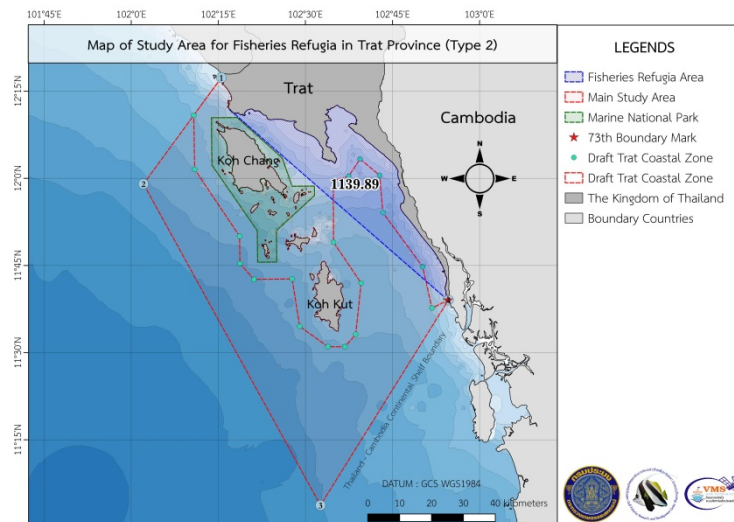
4.1.2. Venue: District hall, Muang District, Trat Province

4.1.3. Number of participants: 83 in total

- Officers from Department of Fisheries: 14
- Local officers: 21
- Fishers: 39



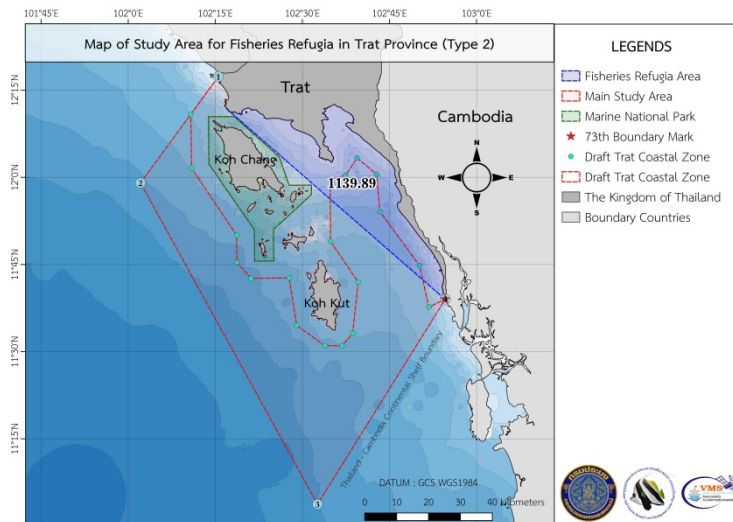
- Observers: 9
- 4.1.4. Chairperson: Mr. Phongphat Sinrai, Deputy District Chief of Muang District
- 4.1.5. Facilitator: LCdr. Sansern Serirak, Director of Trat Fisheries Provincial Office
- 4.1.6. Conclusions:
- Critical period for short mackerel in fisheries *refugia* site: January–February
  - Prohibited fishing gears during critical period: purse seines, pair trawls, and short mackerel gill nets
  - Fisheries *Refugia* boundary: an area of 1,139.89 km<sup>2</sup> with its boundary straight lining along Trat Coast, north-west to south-east between borders of the province (Figure 2)



**Figure 2** Tentative fisheries *refugia* boundary in Trat Site: Muang District consultation

## 4.2. Workshop in Koh Chang District

- 4.2.1. Date: 14<sup>th</sup> July 2020
- 4.2.2. Venue: District meeting room, Koh Chang District, Trat Province
- 4.2.3. Number of participants: 80 in total
- Officers from Department of Fisheries: 14
  - Local officers: 6
  - Fishers: 58
  - Observers: 2
- 4.2.4. Chairperson: Mr. Chatchai Thonglee, Koh Chang District Chief
- 4.2.5. Facilitator: LCdr. Sansern Serirak, Director of Trat Fisheries Provincial Office
- 4.2.6. Conclusions:
- Critical period for short mackerel in fisheries *refugia* site: January–February
  - Prohibited fishing gears during critical period: purse seines, pair trawls, and short mackerel gill nets
  - Fisheries *Refugia* boundary: an area of 1,139.89 km<sup>2</sup> with its boundary straight lining along Trat Coast, north-west to south-east between borders of the province (Figure 3)



**Figure 3** Tentative fisheries *refugia* boundary in Trat Site: Koh Chang District consultation

#### 4.3. Workshop in Laem Ngop District

4.3.1. Date: 15<sup>th</sup> July 2020

4.3.2. Venue: District hall, Laem Ngop District, Trat Province

4.3.3. Number of participants: 83 in total

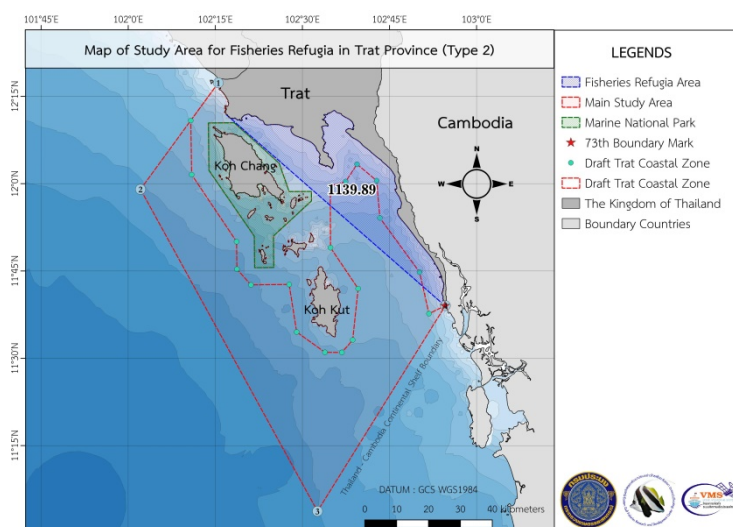
- Officers from Department of Fisheries: 14
- Local officers: 12
- Fishers: 56
- Observers: 1

4.3.4. Chairperson: Mr. Chant Panphet, Laem Ngop District Chief

4.3.5. Facilitator: LCdr. Sansern Serirak, Director of Trat Fisheries Provincial Office

4.3.6. Conclusions:

- Critical period for short mackerel in fisheries *refugia* site: January–February
- Prohibited fishing gears during critical period: all commercial fishing gears, and short mackerel gill nets having catch percentages over the limit (the limited percentage was to be on-site considered, subsequently)
- Fisheries *Refugia* boundary: an area of 1,139.89 km<sup>2</sup> with its boundary straight lining along Trat Coast, north-west to south-east between borders of the province (Figure 4)



**Figure 4** Tentative fisheries *refugia* boundary in Trat Site: Laem Ngop District consultation

#### 4.4. Workshop in Khlong Yai District

4.4.1. Date: 16<sup>th</sup> July 2020

4.4.2. Venue: District hall, Khlong Yai District, Trat Province

4.4.3. Number of participants: 115 in total

- Officers from Department of Fisheries: 14
- Local officers: 9
- Fishers: 88
- Observers: 4

4.4.4. Chairperson: Mr. Peera Karoon, Khlong Yai District Chief

4.4.5. Facilitator: LCdr. Sansern Serirak, Director of Trat Fisheries Provincial Office

4.4.6. Conclusions:

- Critical period for short mackerel in fisheries *refugia* site: January–February
- Prohibited fishing gears during critical period: purse seines, pair trawls, and short mackerel gill nets having catch percentages over the limit (the limited percentage was to be on-site considered, subsequently)
- Fisheries *Refugia* boundary: an area of 1,376.35 km<sup>2</sup> with its boundary straight lining along Trat Coast, from north-west coast to 3 NM offshore of the south-east border (Figure 5)

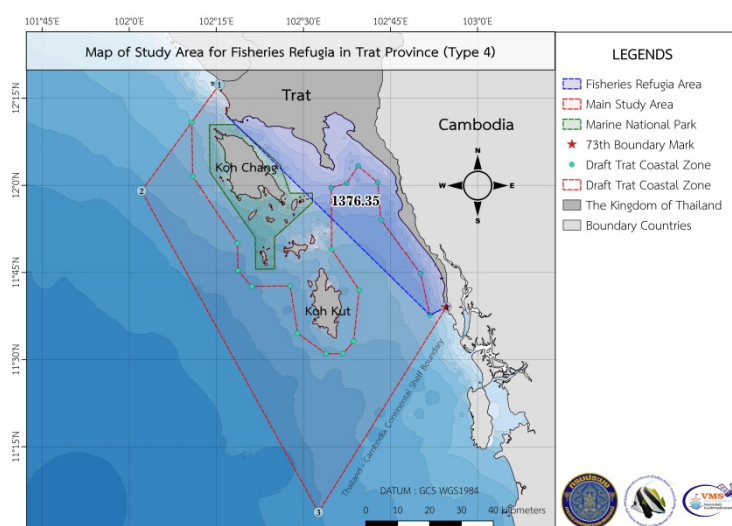


Figure 5 Tentative fisheries *refugia* boundary in Trat Site: Khlong Yai District consultation

#### 4.5. Workshop in Koh Kut District

4.5.1. Date: 18<sup>th</sup> July 2020

4.5.2. Venue: District meeting room, Koh Kut District, Trat Province

4.5.3. Number of participants: 80 in total

- Officers from Department of Fisheries: 14
- Local officers: 10
- Fishers: 55
- Observers: 1

4.5.4. Chairperson: Mr. Somsak Chuthawongkul, Koh Kut District Chief

4.5.5. Facilitator: LCdr. Sansern Serirak, Director of Trat Fisheries Provincial Office

4.5.6. Conclusions:

- Critical period for short mackerel in fisheries *refugia* site: January–February
- Prohibited fishing gears during critical period: purse seines, pair trawls, and short mackerel gill nets

- Fisheries *Refugia* boundary: an area of 1,376.35 km<sup>2</sup> with its boundary straight lining along Trat Coast, from north-west coast to 3 NM offshore of the south-east border, plus an area of 169.65 km<sup>2</sup> with 3 NM offshore boundary along the east coast of Koh Kut (Figure 6)

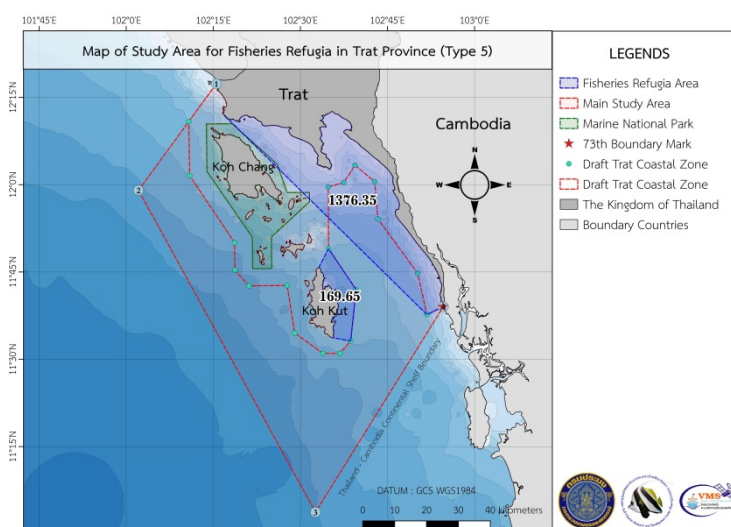


Figure 6 Tentative fisheries *refugia* boundary in Trat Site: Koh Kut District consultation

## ANNEX 1 AGENDA

08:30 a.m. – 09.00 a.m.	Registration
09:00 a.m. – 09.15 a.m.	Opening of the Consultation Workshop
09:15 a.m. – 10.00 a.m.	Review on Marine Fisheries in Trat Province
10:00 a.m. – 10.15 p.m.	Proposing Fisheries <i>Refugia</i> Boundary and Management Planning
10:15 p.m. – 12.00 p.m.	Discussions and Conclusions

## ANNEX 2 LIST OF PARTICIPANTS

### 1. OFFICERS FROM DEPARTMENT OF FISHERIES

1)	LCdr. Sansern Serirak	Director of Trat Fisheries Provincial Office
2)	Ms. Praulai Nootmorn	Senior Expert in Marine Fisheries, as the National Focal Point for Thailand/ SEAFDEC/UNEP/GEF/Fisheries Refugia
3)	Mr. Kumpon Loychuen	Director of Eastern Gulf Fisheries Research and Development Center (Rayong), as the National Technical and Scientific Focal Point for Thailand/ SEAFDEC/UNEP/GEF/Fisheries Refugia
4)	Mr. Ratchakrit Tunvilai	Head of Trat Marine Fisheries Research and Development Station
5)	Mr. Udom Khrueniam	Head of Fishing Ground Development and Rehabilitation Unit, Eastern Gulf Fisheries Research and Development Center (Rayong)
6)	Ms. Kanjana Ongpao	Head of Fisheries Administration and Management Group, Trat Fisheries Provincial Office
7)	Ms. Lakhana Leecha	Fisheries Technical Officer, Trat Fisheries Provincial Office

8)	Ms. Chanab Satsanakit	Technical Officer, Trat Fisheries Provincial Office
9)	Mr. Warut Lamchiek	Technical Officer, Trat Fisheries Provincial Office
10)	Mr. Pinyo Prasaraya	Fisheries Technical Officer, Eastern Gulf Fisheries Research and Development Center (Rayong)
11)	Ms. Narakorn Somwanthana	Fisheries Technical Officer, Eastern Gulf Fisheries Research and Development Center (Rayong)
12)	Ms. Manusanun Sornjunsri	Fisheries Technical Officer, Eastern Gulf Fisheries Research and Development Center (Rayong)
13)	Mr. Jaroonsak Thangmat	Fisheries Technical Officer, Eastern Gulf Fisheries Research and Development Center (Rayong)
14)	Ms. Ratana Munprasit	Project Assistant for Thailand/ SEAFDEC/UNEP/GEF/Fisheries Refugia

## 2. FISHERS AND STAKEHOLDERS

<b>Muang District</b>		
<b>Local Officers</b>		
1)	Mr. Phongphat Sinrai	Deputy District Chief
2)	Mr. Surin Reangnarm	Subdistrict Headman
3)	Mr. Rawee Silaard	Village Headman
4)	Mr. Thiwa Khankhae	Village Headman
5)	Mr. Natthachai Wichitsombat	Village Headman
6)	Mr. Narit Boonlorm	Village Headman
7)	Mr. Ponnarin Thimmakaew	Village Headman
8)	Ms. Nawawan Phaloy	Village Headman
9)	Mr. Chetsada Kitiyasak	Village Headman
10)	Mr. Sarawuth Sooksawat	Assistant Village Headman
11)	Mr. Champen Phadorn	Assistant Village Headman
12)	Mr. Chamnien Nameephet	Assistant Village Headman
13)	Mr. Manoon Suthiwaree	Assistant Village Headman
14)	Ms. Noknoi Chaisiri	Assistant Village Headman
15)	Mr. Chaowarit Thongchote	Assistant Village Headman
16)	Mr. Chatchawan Prasitnawa	Assistant Village Headman
17)	Mr. Surachai Lekkamphuch	Assistant Village Headman
18)	Mr. Banroon Khanayart	Assistant Village Headman
19)	Mr. Anant Phaluong	Assistant Village Headman
20)	Ms. Nongnut Sillapasan	Fisheries District Chief
21)	Ms. Kamonphan Sriphon	Fisheries District Officer
<b>Fishers</b>		
1)	Mr. Sak Sawusdee	Small-scale fisher
2)	Ms. Phathiya Koson	Small-scale fisher
3)	Mr. Suntichai Khaokhom	Small-scale fisher
4)	Mr. Sanga Taphongmart	Small-scale fisher
5)	Mr. Sombat Tanaosri	Small-scale fisher
6)	Mr. Narongsak Kamsert	Small-scale fisher
7)	Mr. Boonsong Prasongnak	Small-scale fisher
8)	Ms. Nuannapha Sornpradit	Small-scale fisher
9)	Mr. Anant Thingluang	Small-scale fisher
10)	Mr. Wiran Phimubon	Small-scale fisher
11)	Mr. Montri Thammachote	Small-scale fisher

12)	Mr. Roong Thubphree	Small-scale fisher
13)	Mr. Siri Phimubon	Small-scale fisher
14)	Mr. Rachane Chobrose	Small-scale fisher
15)	Mr. Somchai Sawaswari	Small-scale fisher
16)	Ms. Chomphunut Chaidee	Commercial fisher
17)	Mr. Somchai Chamharn	Commercial fisher
18)	Mr. Sumate Phumtaeng	Commercial fisher
19)	Ms. Angkhana Aphibarnsri	Commercial fisher
20)	Mr. Somchai Phakamnerd	Commercial fisher
21)	Mr. Panyaphon Madhirun	Commercial fisher
22)	Ms. Saranya Madhiran	Commercial fisher
23)	Mr. Anant Montha	Commercial fisher
24)	Ms. Punyaphorn Montha	Commercial fisher
25)	Mr. Sarotch Chareonrat	Commercial fisher
26)	Mr. Banthat Wongkeaw	Commercial fisher
27)	Mr. Samram Chareonphon	Commercial fisher
28)	Ms. Chuanchom Chareonphon	Commercial fisher
29)	Mr. Sophon Aphibansri	Commercial fisher
30)	Ms. Chiranya Khaokhom	Commercial fisher
31)	Ms. Sasithorn Khaokhom	Commercial fisher
32)	Ms. Ruthairat Wannapraphan	Commercial fisher
33)	Mr. Charan Ruamwong	Commercial fisher
34)	Mr. Narong Chaisiri	Commercial fisher
35)	Ms. Wanna Rattanawarn	Commercial fisher
36)	Ms. Wanwisa Chanthorn	Commercial fisher
37)	Ms. Ladda Chareonphutch	Commercial fisher
38)	Mr. Bانشon Buapralard	Shellfish farmer
39)	Ms. Wilaiwan Erbsuphap	Fish processor
<b>Observers</b>		
1)	SubLt. Chairadit Prayong	Naval Officer, Special Operation Center 61
2)	CPO1 Watcharin Thongboon	Naval Officer, Special Operation Center 61
3)	Mr. Patrawut Thaiphichitburapa	Lecturer, Burapha University
4)	Mr. Tontrakarn Obrom	Master student, Burapha University
5)	Ms. Benchawan Khotchaseni	Master student, Burapha University
6)	Ms. Varantorn Kaewtankam	Technical Officer, Sustainable Development Foundation
7)	Mr. Udom Kumpha	Officer, Sustainable Development Foundation
8)	Mr. Marazalee Kader	Officer, Sustainable Development Foundation
9)	Mr. Krissadakorn Hemwech	Fisheries Technical Officer, Trat Marine Fisheries Research and Development Station

<b>Koh Chang District</b>		
<b>Local Officers</b>		
1)	Mr. Chatchai Thonglee	District Chief
2)	Mr. Sahaschai Angkaew	Agricultural Extension Officer
3)	Mr. Phupharit Methaphattanaboon	Officer, Koh Chang District Agricultural Extension Officer
4)	Mr. Phromchana Boonlorm	Village Headman
5)	Mr. Manop Prasongsin	Village Headman
6)	Mr. Thunwa Oupawetch	Assistant Village Headman



<b>Fishers</b>		
1)	Ms. Sombat Oupawetch	Small-scale fisher
2)	Mr. Manad Oupawetch	Small-scale fisher
3)	Mr. Anusak Aetapun	Small-scale fisher
4)	Mr. Malai Karunyirat	Small-scale fisher
5)	Ms. Supitcha Karunyirat	Small-scale fisher
6)	Mr. Marut Karunyirat	Small-scale fisher
7)	Mr. Romsai Karunyirat	Small-scale fisher
8)	Mr. Somthob Pharaphan	Small-scale fisher
9)	Ms. Khuanchit Pharaphan	Small-scale fisher
10)	Mr. Seing Sribencharat	Small-scale fisher
11)	Mr. Wallop Sawasdiphol	Small-scale fisher
12)	Mr. Johni Damneon	Small-scale fisher
13)	Mr. Kecha Siin	Small-scale fisher
14)	Mr. Chalongchai Krataichan	Small-scale fisher
15)	Mr. Sangwien Hinkhao	Small-scale fisher
16)	Mr. Danai Chanthasi	Small-scale fisher
17)	Mr. Manu Ananthakorn	Small-scale fisher
18)	Mr. Prachuab Phatsanaphin	Small-scale fisher
19)	Ms. Wanwisa Sawasdiphol	Small-scale fisher
20)	Ms. Orasa Khunla	Small-scale fisher
21)	Ms. Saiphin Chintakanont	Small-scale fisher
22)	Mr. Sopha Khumphan	Small-scale fisher
23)	Mr. Wasanchai Oupawetch	Small-scale fisher
24)	Mr. Sommart Khongchareon	Small-scale fisher
25)	Mr. Somnuek Khongchareon	Small-scale fisher
26)	Ms. Namfon Khongchareon	Small-scale fisher
27)	Ms. Chomphunutch Larthi	Small-scale fisher
28)	Mr. Chat Phonphai	Small-scale fisher
29)	Mr. Pratheep Saengrotch	Small-scale fisher
30)	Mr. Prachak Buasai	Small-scale fisher
31)	Ms. Wassana Khaengkhan	Small-scale fisher
32)	Mr. Banchong Naetsong	Small-scale fisher
33)	Ms. Phairat Phengchinda	Small-scale fisher
34)	Ms. Nittaya Chanbua	Small-scale fisher
35)	Mr. Samruan Yatruue	Small-scale fisher
36)	Ms. Supharak Raksat	Small-scale fisher
37)	Mr. Sanae Krataiwin	Small-scale fisher
38)	Mr. Natpharit Oupawetch	Small-scale fisher
39)	Ms. Ouraiphorn Prasitnawa	Small-scale fisher
40)	Mr. Joe Suksawas	Small-scale fisher
41)	Ms. Sasithorn Chankhao	Small-scale fisher
42)	Ms. Samruay Wongsakhorn	Small-scale fisher
43)	Mr. Banleng Phonkarn	Small-scale fisher
44)	Ms. Bongkot Sinthuprasert	Small-scale fisher
45)	Mr. Aekamon Suksing	Small-scale fisher
46)	Mr. Nawaphon Prasitnawa	Small-scale fisher
47)	Ms. Wanna Prasitnawa	Small-scale fisher
48)	Mr. Chanchai Khanornkul	Small-scale fisher
49)	Mr. Chalard Khanornkul	Small-scale fisher



50)	Mr. Prachak Phumanee	Small-scale fisher
51)	Mr. Charoon Kuna	Small-scale fisher
52)	Ms. Somying Saengrotch	Small-scale fisher
53)	Mr. Thamrong Khrueroong	Small-scale fisher
54)	Mr. Chaikaew Wongdan	Small-scale fisher
55)	Mr. Wichit Rattanakotch	Small-scale fisher
56)	Mr. Montri Meelarp	Small-scale fisher
57)	Mr. Sanga Karnchanawan	Small-scale fisher
58)	Mr. Praphart Wannasuk	Commercial fisher
<b>Observers</b>		
1)	Ms. Varantorn Kaewtankam	Technical Officer, Sustainable Development Foundation
2)	Mr. Udom Kumpha	Officer, Sustainable Development Foundation

<b>Laem Ngop District</b>		
<b>Local Officers</b>		
1)	Mr. Chant Panphet	District Chief
2)	Mr. Suchat Thassawin	Subdistrict Headman
3)	Ms. Boonrat Boonruksa	Village Headman
4)	Ms. Phongsri Thana	Village Headman
5)	Ms. Nataya Fuangkasame	Assistant Village Headman
6)	Ms. Nusara Soisri	Assistant Village Headman
7)	Mr. Wiwat Detkullaya	Assistant Village Headman
8)	Ms. Phenthip Sinthuprasert	Assistant Village Headman
9)	Ms. Sirilak Phorntipho	Assistant Village Headman
10)	Mr. Anant Niyom	Assistant Village Headman
11)	Mr. Prasitchai Yisarnkhun	Assistant Village Headman
12)	Ms. Piyanutch Thesraphi	Fisheries District Chief
<b>Fishers</b>		
1)	Mr. Khachen Sukkasem	Secretary for Trat Fisheries Association
2)	Mr. Nawee Kamchatphai	Small-scale fisher
3)	Mr. Morasum Nuchsophon	Small-scale fisher
4)	Mr. Anake Somanant	Small-scale fisher
5)	Ms. Yaowapha Phummanotch	Small-scale fisher
6)	Mr. Sombat Phakdee	Small-scale fisher
7)	Mr. Wannachai Phachala	Small-scale fisher
8)	Mr. Phichit Phokaew	Small-scale fisher
9)	Mr. Nawee Makeworathus	Small-scale fisher
10)	Mr. Suthep Boonmuang	Small-scale fisher
11)	Mr. Yaeng Niyomsilt	Small-scale fisher
12)	Mr. Aran Munthikawit	Small-scale fisher
13)	Mr. Samran Chaichiengaem	Small-scale fisher
14)	Mr. Phattharasorn Binsulaimarn	Small-scale fisher
15)	Mr. Thammarong Phruengkasame	Small-scale fisher
16)	Mr. Piya Chaithieng	Small-scale fisher
17)	Mr. Manit Narkchuwong	Small-scale fisher
18)	Mr. Boon Phuttharasu	Small-scale fisher
19)	Mr. Songkrod Suksathit	Small-scale fisher
20)	Mr. Anucha Narkchuwong	Small-scale fisher
21)	Mr. Thaksin Sangthong	Small-scale fisher

22)	Mr. Pricha Rakdaeng	Small-scale fisher
23)	Mr. Bamphen Chueythuk	Small-scale fisher
24)	Mr. Yothin Wannakosith	Small-scale fisher
25)	Mr. Sutcharit Chusiri	Small-scale fisher
26)	Mr. Pairat Suksathit	Small-scale fisher
27)	Mr. Phitak Kosem	Small-scale fisher
28)	Mr. Thinnakorn Kiatlamthong	Small-scale fisher
29)	Mr. Theerasak karnchumnum	Small-scale fisher
30)	Mr. Wichai Narkchuwong	Small-scale fisher
31)	Mr. Kanoksak Kosem	Small-scale fisher
32)	Mr. Chainarong Aranyakorn	Small-scale fisher
33)	Mr. Sakda Ounbangluang	Small-scale fisher
34)	Mr. Manit Triratrudee	Small-scale fisher
35)	Mr. Suthiphong Srikasem	Small-scale fisher
36)	Mr. Phiphat Sattawan	Small-scale fisher
37)	Mr. Samuer Chotiphorn	Small-scale fisher
38)	Mr. Wirayuth Chotchuang	Small-scale fisher
39)	Mr. Prinya Pumpuang	Small-scale fisher
40)	Mr. Manotch Chuaythook	Small-scale fisher
41)	Mr. Chamnarn Sunthawanik	Small-scale fisher
42)	Mr. Wallop Hemakorn	Small-scale fisher
43)	Mr. Suthep Chotchuang	Small-scale fisher
44)	Mr. Sano Thisa	Small-scale fisher
45)	Mr. Boonsong Thisa	Small-scale fisher
46)	Ms. Wanna Panchanon	Commercial fisher
47)	Ms. Nittaya Haelorm	Commercial fisher
48)	Mr. Suwichai Haelorm	Commercial fisher
49)	Mr. Panya Kongsanun	Commercial fisher
50)	Mr. Suparp Panchanont	Commercial fisher
51)	Ms. Ampornrat Silaarts	Commercial fisher
52)	Ms. Pranorm Rodkhumwong	Commercial fisher
53)	Mr. Somchai Phakamnerd	Commercial fisher
54)	Mr. Nadetch Chaisiri	Commercial fisher
55)	Mr. Surasith Nettrayont	Aquaculture farmer
56)	Mr. Boonluer Boonraksa	Aquaculture farmer
<b>Observers</b>		
1)	Ms. Varantorn Kaewtankam	Technical Officer, Sustainable Development Foundation

<b>Khlong Yai District</b>		
<b>Local Officers</b>		
1)	Mr. Peera Karoon	District Chief
2)	Mr. Yongyuth Meesupa	Village Headman
3)	Mr. Udomsak Kaeng	Village Headman (representative)
4)	Ms. Thanawan Thanasitsung	Assistant Village Headman
5)	Mr. Sathit Hongmark	Assistant Village Headman
6)	Mr. Sophon Mingmechai	Assistant Village Headman
7)	Mr. Aun Vatanaporn	Assistant Village Headman
8)	Mr. Chamorn Boonchu	Assistant Village Headman
9)	Mr. Prapart Binraman	Fisheries District Chief

Fishers		
1)	Mr. Sorawut Kaowkhom	Chairman of the Local Fishing Community Organization of Had Lek Sub-district Fishing Group
2)	Mr. Wiratch Ruangamphun	Chairman of Small-scale Fishing Group Moo 8
3)	Mr. Banchong Thassana	Small-scale fisher
4)	Mr. Panya ChulThuathuek	Small-scale fisher
5)	Mr. Chien Sophon	Small-scale fisher
6)	Mr. Winan Kaewyeang	Small-scale fisher
7)	Mr. Surachai Ruenchit	Small-scale fisher
8)	Mr. Meechoke Sksom	Small-scale fisher
9)	Mr. Samrarn Somboon	Small-scale fisher
10)	Mr. Phetch Netsukri	Small-scale fisher
11)	Mr. Subin Boonarb	Small-scale fisher
12)	Mr. Chalong Boonyad	Small-scale fisher
13)	Mr. Sophon Pharaphan	Small-scale fisher
14)	Mr. Somard Suksomard	Small-scale fisher
15)	Mr. Boonrord Hoisang	Small-scale fisher
16)	Mr. Somchai Sungthong	Small-scale fisher
17)	Mr. MonThon Khewchaoum	Small-scale fisher
18)	Mr. Prakorb Chareonsuk	Small-scale fisher
19)	Ms. Saengdao Khanornkul	Small-scale fisher
20)	Ms. Chulalak Kosol	Small-scale fisher
21)	Mr. Mai Surin	Small-scale fisher
22)	Mr. Loes Suksawat	Small-scale fisher
23)	Ms. Malee Kesonoubol	Small-scale fisher
24)	Ms. Phailin Patkham	Small-scale fisher
25)	Mr. Chairat Kulnara	Small-scale fisher
26)	Mr. Ramphoel Prawatchaikan	Small-scale fisher
27)	Mr. Phichit Khannark	Small-scale fisher
28)	Ms. Malai Aphibalsri	Small-scale fisher
29)	Mr. Prasong Taothong	Small-scale fisher
30)	Mr. Wattana Kimsoi	Small-scale fisher
31)	Mr. Nognoy Kaewyoung	Small-scale fisher
32)	Ms. Ramphueng Saengthong	Small-scale fisher
33)	Ms. Nisarath Saengthong	Small-scale fisher
34)	Mr. Chatree Saengthong	Small-scale fisher
35)	Mr. Boonthum Leela	Small-scale fisher
36)	Ms. Rachadaporn Fueangsathan	Small-scale fisher
37)	Mr. Boonlue Aintachit	Small-scale fisher
38)	Mr. Sahwaeng Suksawat	Small-scale fisher
39)	Mr. Bunsom Charoensuk	Small-scale fisher
40)	Mr. Chali Boonchuoi	Small-scale fisher
41)	Mr. Lek Khunnark	Small-scale fisher
42)	Mr. Amphon Sukjareon	Small-scale fisher
43)	Mr. Damrong Suksawat	Small-scale fisher
44)	Mr. Nulom Khrueawiset	Small-scale fisher
45)	Mr. Watthana Khamwong	Small-scale fisher
46)	Ms. Namfon Sansawat	Small-scale fisher
47)	Mr. Pan Sungthong	Small-scale fisher

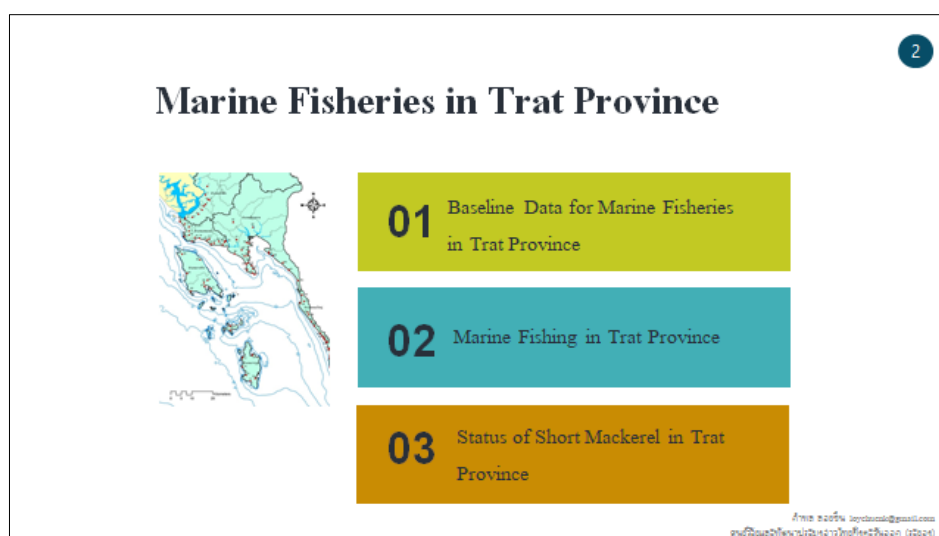
48)	Ms. Wassana Hoisang	Small-scale fisher
49)	Mr. Tid Boonpiek	Small-scale fisher
50)	Ms Wanida Khiewkhachi	Small-scale fisher
51)	Mr. Somyos Hannark	Small-scale fisher
52)	Mr. Phichai Hannark	Small-scale fisher
53)	Mr. Somboon Boonyuphu	Small-scale fisher
54)	Ms. Phol Hoisang	Small-scale fisher
55)	Mr. Nongnueng Singsanae	Small-scale fisher
56)	Mr. Chum Srichariem	Small-scale fisher
57)	Mr. Sanya Suksawas	Commercial fisher
58)	Mr. Anuwat Khaokhom	Commercial fisher
59)	Mr. Samai Khuansirimongkol	Commercial fisher
60)	Ms. Nalina Sai	Commercial fisher
61)	Mr. Niran Fakthong	Commercial fisher
62)	Mr. Samphan Phalaket	Commercial fisher
63)	Mr. Phonphat Suksawat	Commercial fisher
64)	Mr. Wichian Fakthong	Commercial fisher
65)	Mr. Somkhuan Hoisang	Commercial fisher
66)	Mr. Bua Kasem	Commercial fisher
67)	Mr. Tee Boonchuai	Commercial fisher
68)	Mr. Saksri Singhaphan	Commercial fisher
69)	Mr. Taen Singhaphan	Commercial fisher
70)	Mr. Wisuth Wichitsombat	Commercial fisher
71)	Mr. Songkran Phitphan	Commercial fisher
72)	Ms. Ramphueng Hoisang	Commercial fisher
73)	Mr. Chali Ainchalan	Commercial fisher
74)	Ms. Panya Thanakit	Commercial fisher
75)	Mr. Li Thanakit	Commercial fisher
76)	Mr. Srisomwong Phatthanasan	Commercial fisher
77)	Mr. Doeun Chear	Commercial fisher
78)	Ms. Naruemon Singhaphan	Commercial fisher
79)	Ms. Napha Suksawat	Commercial fisher
80)	Mr. Joy Khamwong	Commercial fisher
81)	Mr. Songkran Siritham	Commercial fisher
82)	Mr. Chum Srichariem	Commercial fisher
83)	Ms. Duangchai Sungthong	Shellfish farmer
84)	Mr. Sunthorn Sukkuer	Shellfish farmer
85)	Ms. Thitirat Chaiwisanthanath	Fish processor
86)	Mr. Anuwat Chaisang	Fish collector
87)	Ms. Prawing Nimmark	Fish collector
88)	Ms. Thassanee Prasertsub	Fish trader
<b>Observers</b>		
1)	Ms. Varantorn Kaewtankam	Technical Officer, Sustainable Development Foundation
2)	Mr. Sataporn Mongkolbut	Officer, Sustainable Development Foundation
3)	Mr. Surin Sirimongkol	Naval officer
4)	Mr. Sompong Kumpol	Officer, Trat Fish Inspection Office

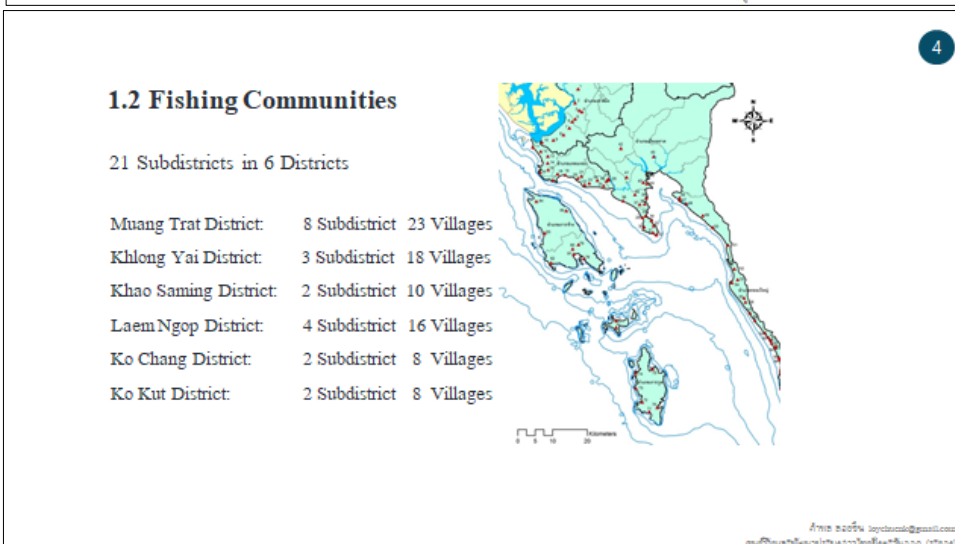
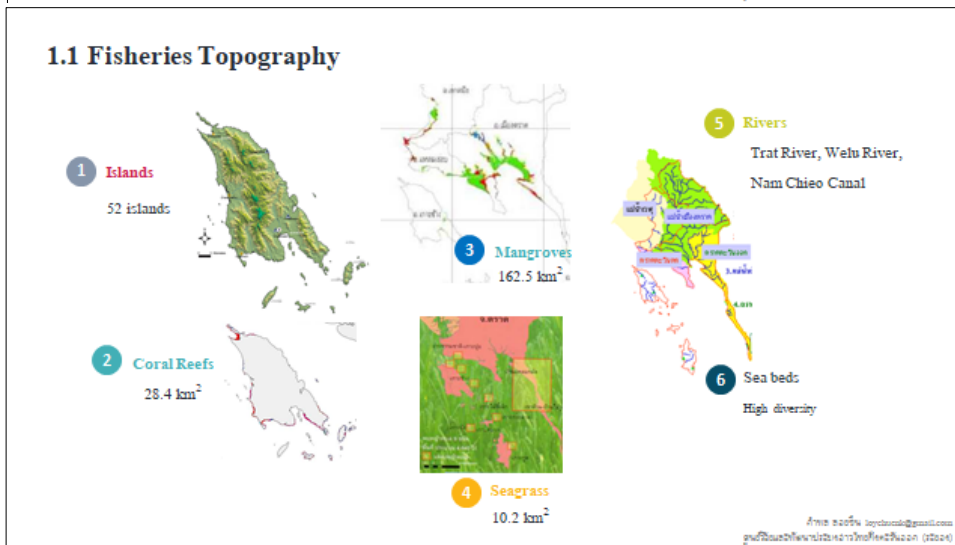
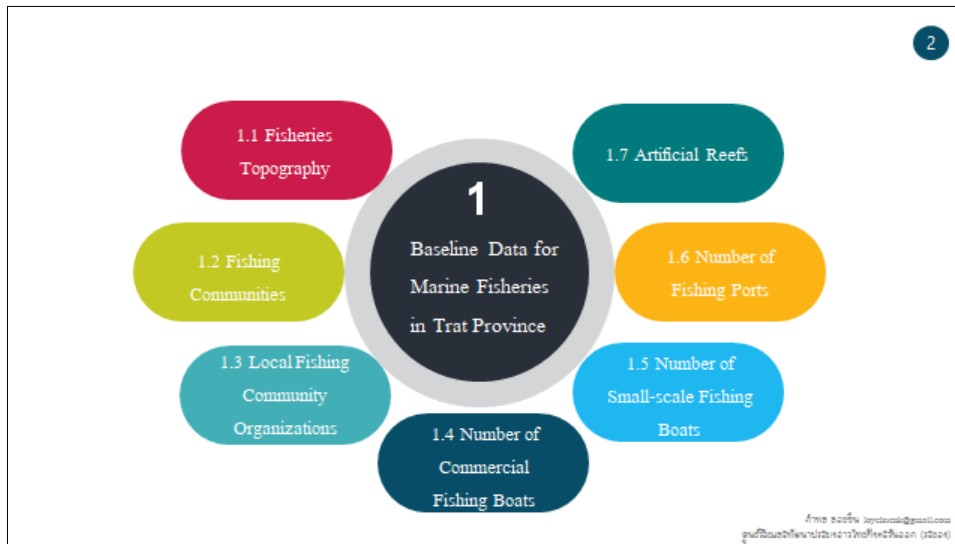
**Koh Kut District****Local Officers**

1)	Mr. Somsak Chuthawongkul	District Chief
2)	Mr. Suthi Sirirasniyom	Village Headman
3)	Mr. Chuchat Malikho	Village Headman
4)	Mr. Thongthot Thottra	Village Headman
5)	Mr. Thinnaphat Sam	Assistant Village Headman
6)	Ms. Churiwan Ketkaew	Assistant Village Headman
7)	Mr. Sommai Ketkaew	Assistant Village Headman
8)	Mr. Surin Phanomthom	Chairman, Subdistrict Administrative Organization Council
9)	Mr. Authen Korat	Officer, Subdistrict Administrative Organization Council
10)	Mr. Sirithun Chanob	Officer, Subdistrict Administrative Organization Council
<b>Fishers</b>		
1)	Mr. Surachai Rumpai	Small-scale fisher
2)	Ms. Kannika Sukha	Small-scale fisher
3)	Mr. Bunrueang Nariangrat	Small-scale fisher
4)	Mr. Ongart Kongprasert	Small-scale fisher
5)	Mr. One Chunsuphon	Small-scale fisher
6)	Mr. Chayut Nariangrat	Small-scale fisher
7)	Mr. Samroeng Somcharoen	Small-scale fisher
8)	Mr. Pin Chaiwisan	Small-scale fisher
9)	Mr. Manop Hoisang	Small-scale fisher
10)	Mr. Winai Kesi	Small-scale fisher
11)	Mr. Phorntherd Siribut	Small-scale fisher
12)	Mr. Manus Kesi	Small-scale fisher
13)	Mr. Daeng Kesi	Small-scale fisher
14)	Mr. Samnieng Somcharoen	Small-scale fisher
15)	Mr. Li Kesi	Small-scale fisher
16)	Mr. Sampan Praphaphan	Small-scale fisher
17)	Mr. Anuchit Klaharn	Small-scale fisher
18)	Mr. Sombat Rumpai	Small-scale fisher
19)	Mr. Bunsong Bualoi	Small-scale fisher
20)	Mr. Photchanat Hinkhao	Small-scale fisher
21)	Mr. Wiwat Chanthorn	Small-scale fisher
22)	Mr. Sutden Sidachati	Small-scale fisher
23)	Mr. Worawit Tapsamut	Small-scale fisher
24)	Mr. Rungrueang Narueangrat	Small-scale fisher
25)	Mr. Wichai Khiaokhagee	Small-scale fisher
26)	Ms. Phennapha Mongkhonloes	Small-scale fisher
27)	Mr. Wallop Saithong	Small-scale fisher
28)	Mr. Kittiphong Thongchoti	Small-scale fisher
29)	Mr. Sunti Mongkhonloes	Small-scale fisher
30)	Ms. Thitichaya Sirirachniyom	Small-scale fisher
31)	Mr. Kittikhun Kesi	Small-scale fisher
32)	Mr. Thi Saichon	Small-scale fisher
33)	Mr. Audorn Kesi	Small-scale fisher
34)	Mr. Chuchat Rattanawan	Small-scale fisher
35)	Mr. Manit Prawatwin	Small-scale fisher
36)	Mr. Somchai Chansa	Small-scale fisher

37)	Mr. Suban Rayapsi	Small-scale fisher
38)	Mr. Boonsaksa Sanwirat	Small-scale fisher
39)	Mr. Outhit Manakit	Small-scale fisher
40)	Mr. Sakkarin Chanob	Small-scale fisher
41)	Ms. Thassani Rumpai	Small-scale fisher
42)	Mr. Tinnagon Rumpai	Small-scale fisher
43)	Mr. Preecha Srikamphaeng	Small-scale fisher
44)	Mr. Mana Thawinwong	Small-scale fisher
45)	Mr. Sunthorn Sirirachniyom	Small-scale fisher
46)	Mr. Chakkarin Khlongyai	Small-scale fisher
47)	Ms. Saichai Malawan	Small-scale fisher
48)	Ms. Daruni Khlongphankam	Small-scale fisher
49)	Ms. Weeraya Khlongyai	Small-scale fisher
50)	Mr. Kritsada Dochano	Small-scale fisher
51)	Ms. Bunrat Songsahwang	Small-scale fisher
52)	Mr. Lai Songsahwang	Small-scale fisher
53)	Ms. Phennapha Mongkhonloes	Small-scale fisher
54)	Mr. Manop Chaiaut	Small-scale fisher
55)	Ms. Watsana Singhaphan	Commercial fisher
<b>Observers</b>		
1)	Ms. Wongduean Maliyoy	Trader

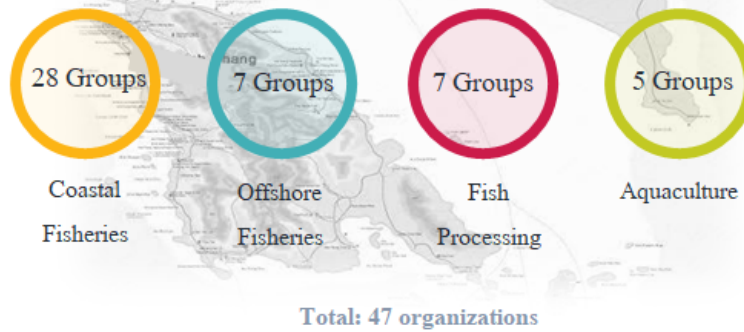
### ANNEX 3 Marine Fisheries in Trat Province







### 1.3 Local Fishing Community Organizations



คำทศ สลอสัน loy@meak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลอันดามัน (อชบช)

### 1.4 Numbers of Commercial Fishing Boats



Fishing vessels	Numbers
<b>Vessels with low-efficient fishing gears</b>	<b>246</b>
Short-necked clam dredges	16
Other clam dredges	4
Longlines (>100 m)	15
Fish traps	2
Crab traps	72
Squid traps	2
Octopus traps	9
Squid falling nets	88
Gill nets	38
<b>Vessels with high-efficient fishing gears</b>	<b>552</b>
Light luring vessels	102
Anchovy falling nets	208
Anchovy purse seines	17
Purse seines	31
Beam trawls	55
Pair trawls	4
Otter board trawls	135
<b>Total commercial fishing vessels</b>	<b>798</b>

คำทศ สลอสัน loy@meak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลอันดามัน (อชบช)

### 1.5 Numbers of Small-Scale Fishing Boats



Fishing vessels	Numbers
Shrimp gill nets	667
Crab gill nets	390
Short mackerel gill nets	68
Mullet gill nets	27
Other gill nets	94
Fish traps	12
Crab traps	263
Squid traps	48
Handlines	64
Longlines	38
Short-necked clam dredges	13
Squid falling nets	32
Others	193
<b>Total small-scale fishing vessels</b>	<b>1,909</b>

คำทศ สลอสัน loy@meak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลอันดามัน (อชบช)

คำทศ สลอสัน loy@meak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลอันดามัน (อชบช)

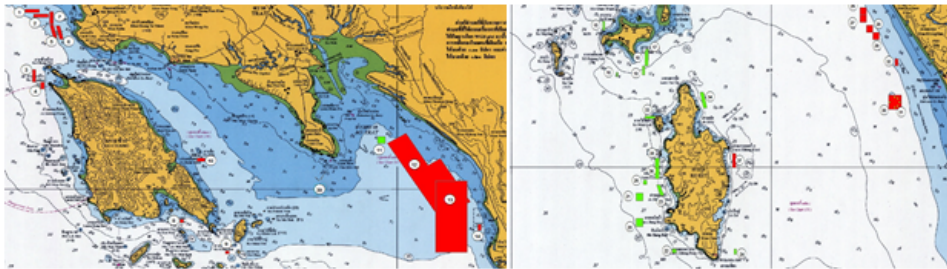
### 1.6 Numbers of Fishing Ports: 42



ภัทราภ ช่ออินทร์ loychnemk@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลตะวันออก (ประมงอ)

ภัทราภ ช่ออินทร์ loychnemk@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลตะวันออก (ประมงอ)

### 1.7 Artificial Reefs



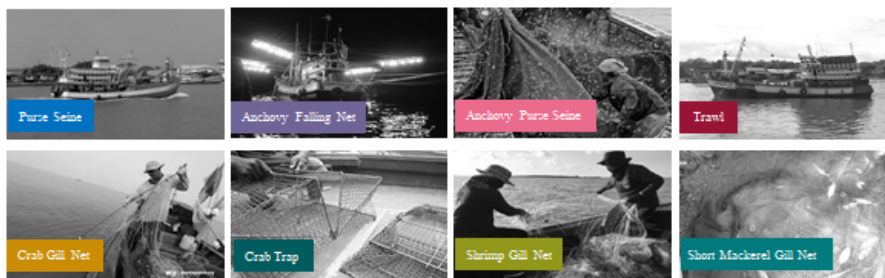
Total area: 118.476 km<sup>2</sup> (1989-2012)

- Large-scale artificial reef: 2 units
- Small-scale artificial reef: 42 units
- Budget from Department of Fisheries: 19 units,
- Trat Provincial Office: 19 units, and Local Government
- Organizations: 4 units

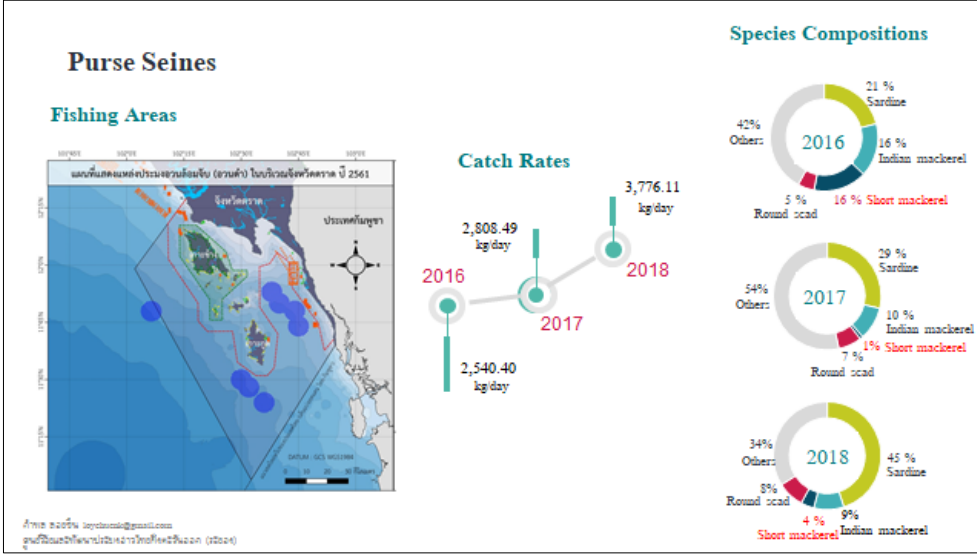
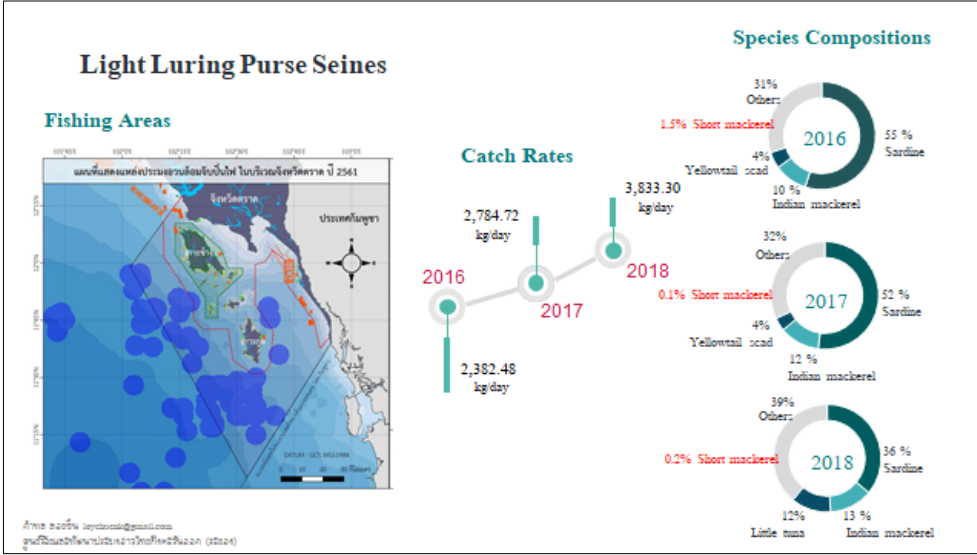
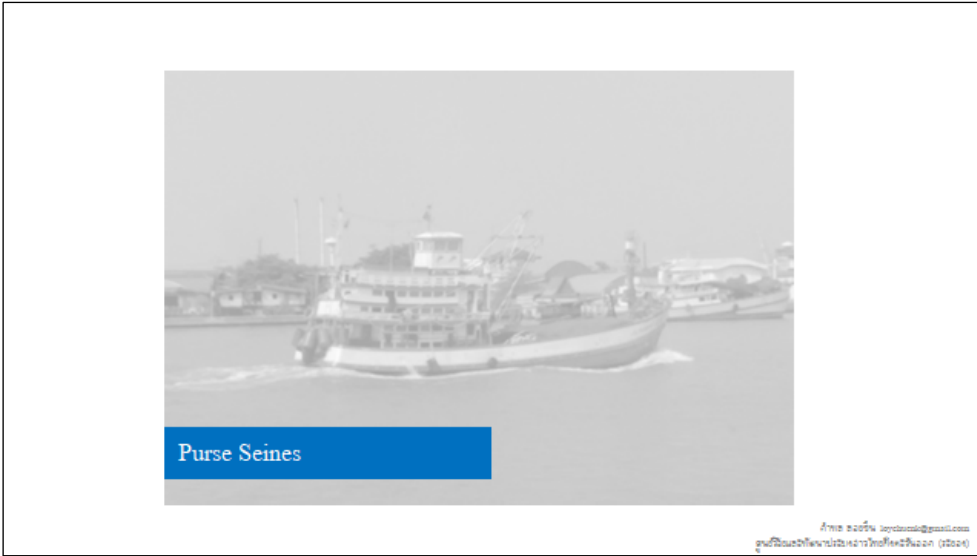
ภัทราภ ช่ออินทร์ loychnemk@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลตะวันออก (ประมงอ)

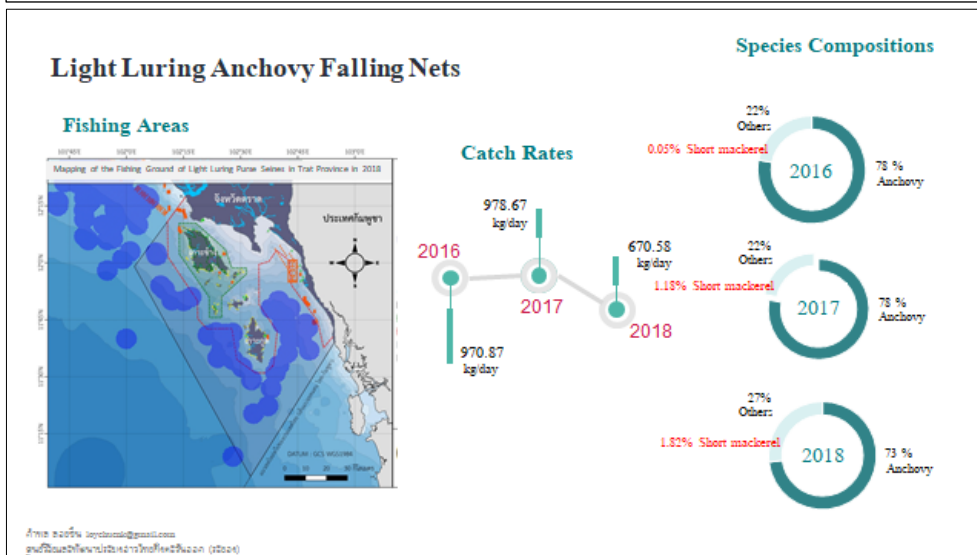
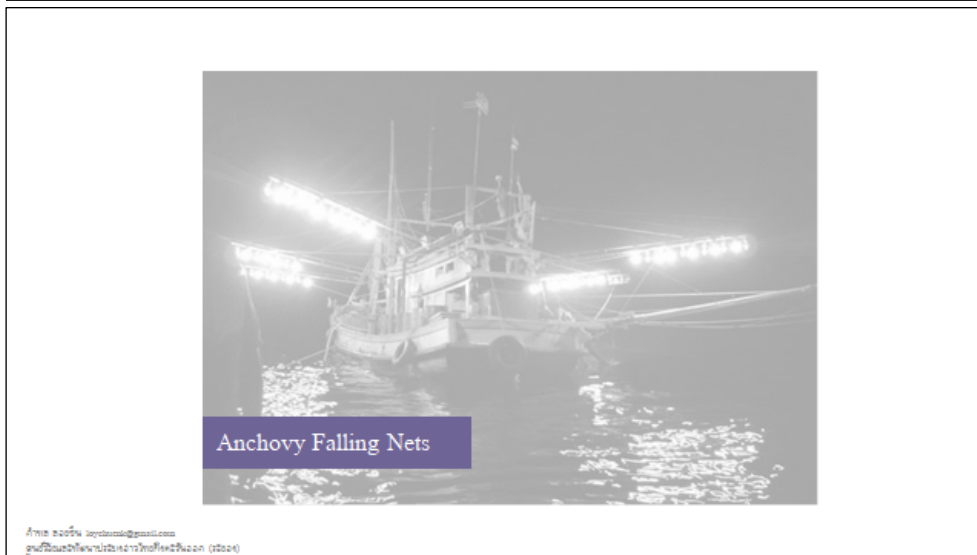
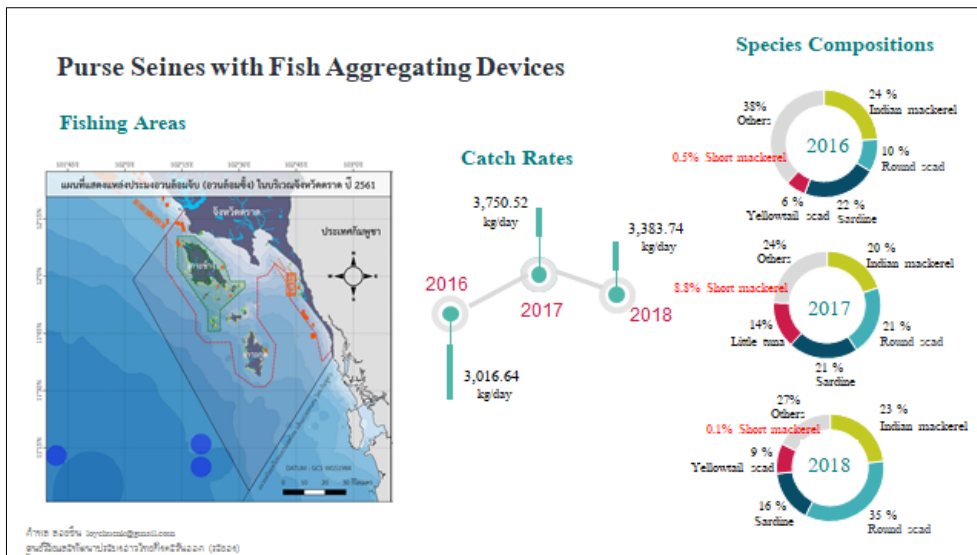
2

### 2 Marine Fishing in Trat Province



ภัทราภ ช่ออินทร์ loychnemk@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลตะวันออก (ประมงอ)





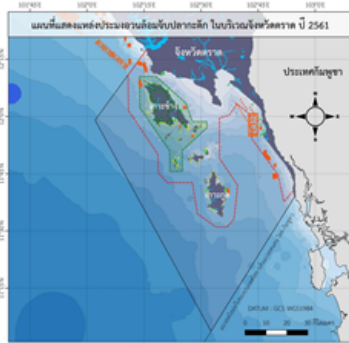


Anchovy Purse Seines

คำทศ สอนิชย์ koytomsak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงทะเลอ่าวไทยฝั่งตะวันออก (อ่าวไทย)

### Anchovy Purse Seines

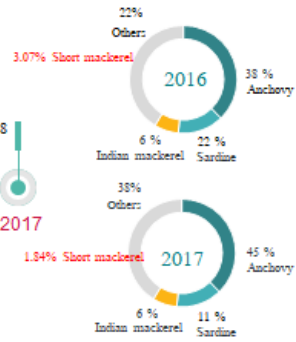
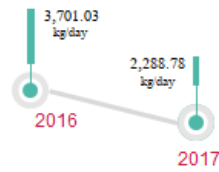
#### Fishing Areas



คำทศ สอนิชย์ koytomsak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงทะเลอ่าวไทยฝั่งตะวันออก (อ่าวไทย)

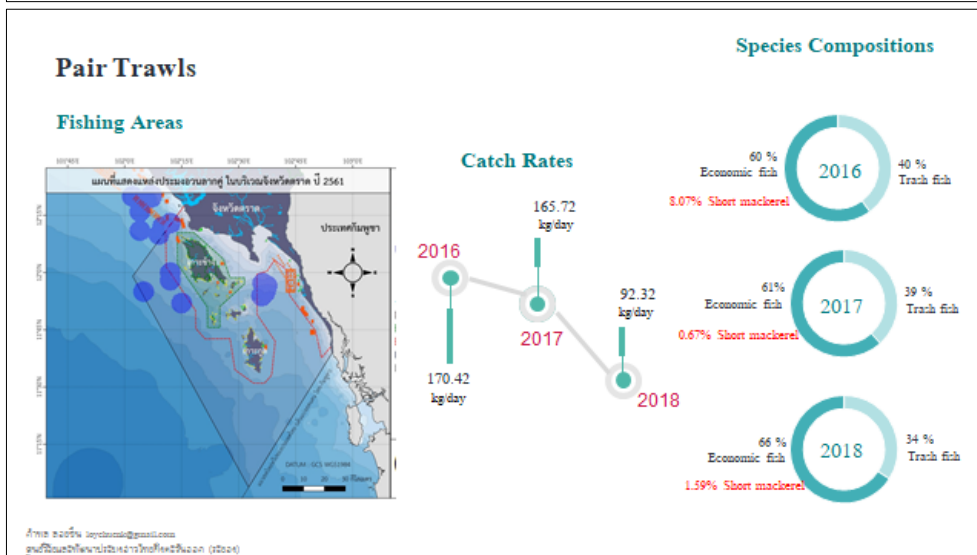
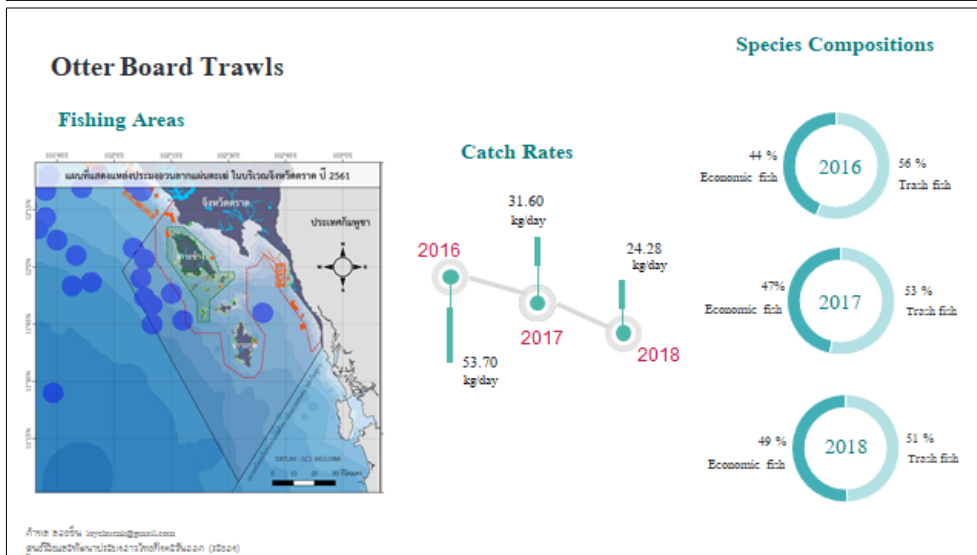
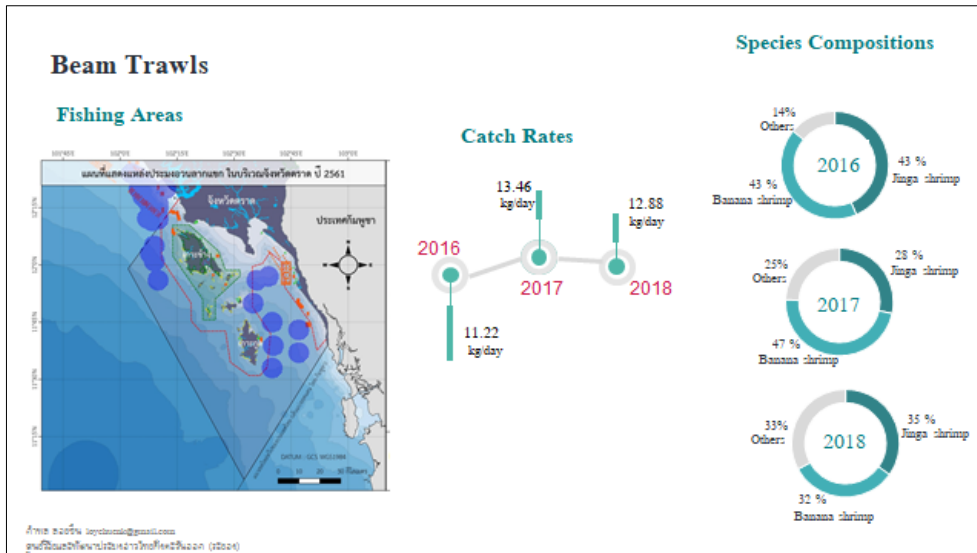
#### Species Compositions

#### Catch Rates



Trawls

คำทศ สอนิชย์ koytomsak@gmail.com  
ศูนย์วิจัยและพัฒนาประมงทะเลอ่าวไทยฝั่งตะวันออก (อ่าวไทย)





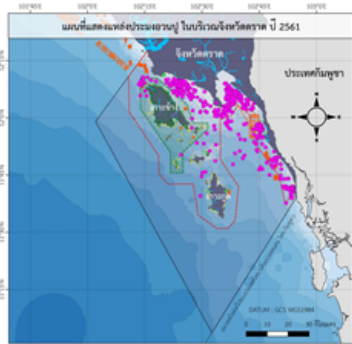


Crab Gill Nets

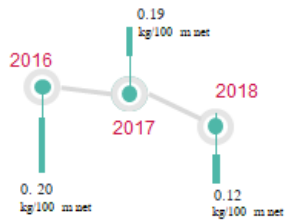
คำทศ สอนดีชัย koytomsong@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลภาคใต้ (สวช.๓)

### Crab Gill Nets

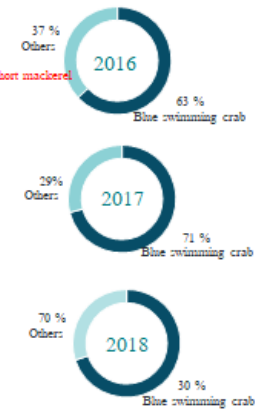
#### Fishing Areas



#### Catch Rates



#### Species Compositions



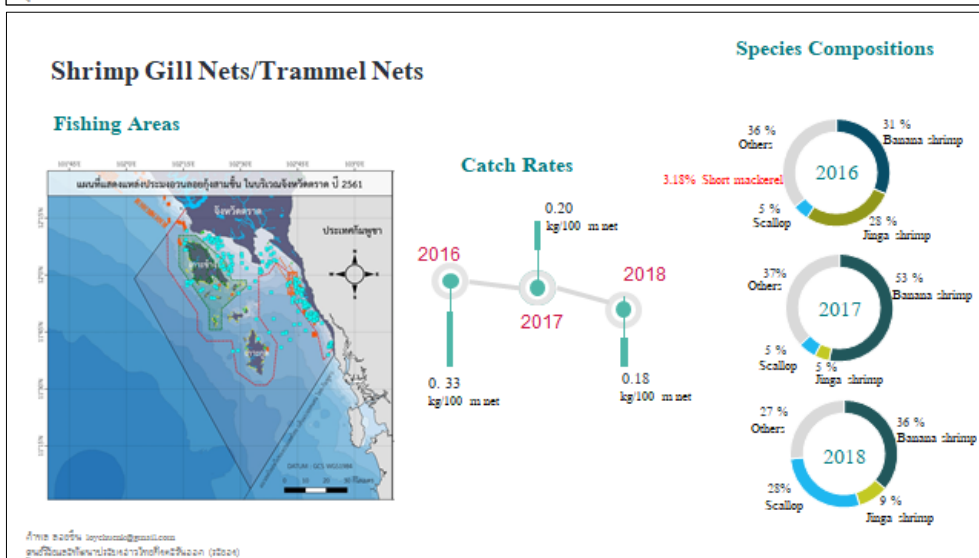
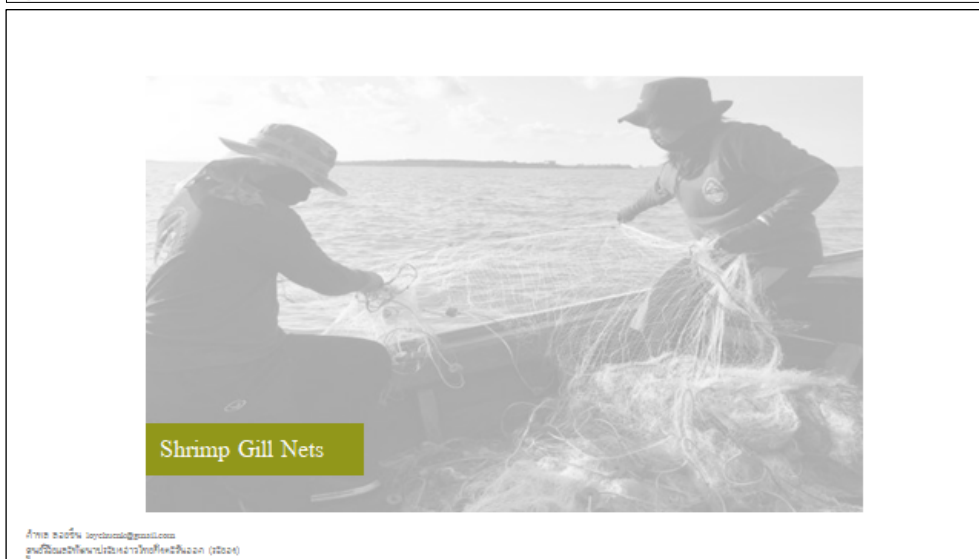
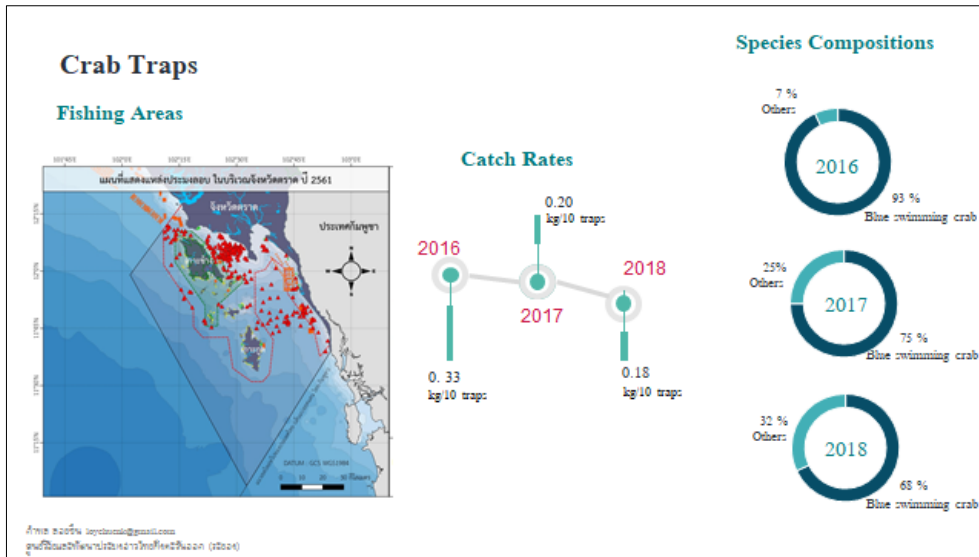
คำทศ สอนดีชัย koytomsong@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลภาคใต้ (สวช.๓)



Crab Traps

คำทศ สอนดีชัย koytomsong@gmail.com  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลภาคใต้ (สวช.๓)



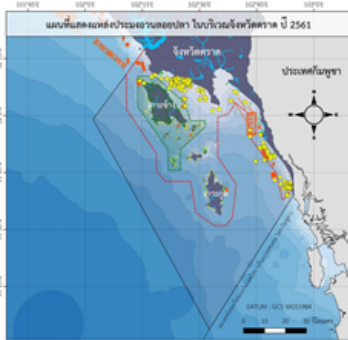




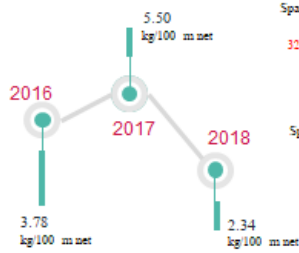
ผู้จัดทำ: อรุณรัตน์ ใจเย็นธรรมใจ@gmail.com  
ศูนย์วิจัยและพัฒนาประมงน้ำจืดภาคกลาง (สวช.ลพ.)

### Short Mackerel Gill Nets

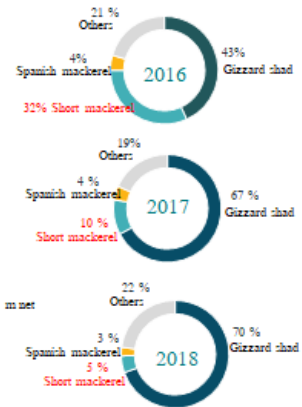
#### Fishing Areas



#### Catch Rates



#### Species Compositions



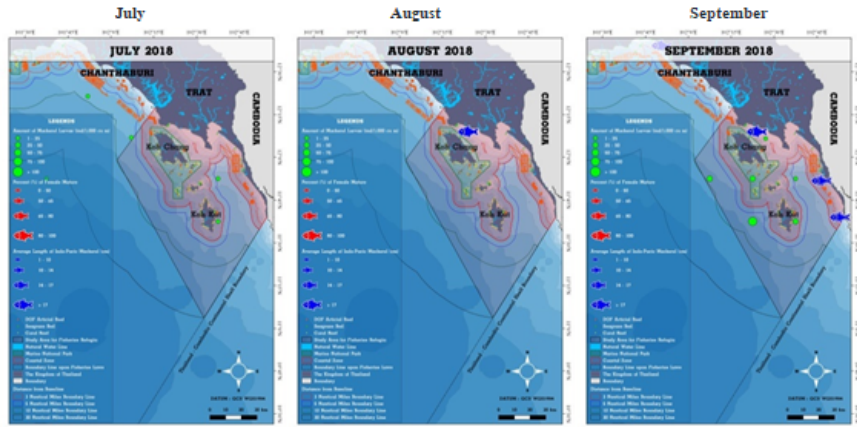
ผู้จัดทำ: อรุณรัตน์ ใจเย็นธรรมใจ@gmail.com  
ศูนย์วิจัยและพัฒนาประมงน้ำจืดภาคกลาง (สวช.ลพ.)

## 3 Status of Short (Indo-Pacific) Mackerel in Trat Province

ผู้จัดทำ: อรุณรัตน์ ใจเย็นธรรมใจ@gmail.com  
ศูนย์วิจัยและพัฒนาประมงน้ำจืดภาคกลาง (สวช.ลพ.)

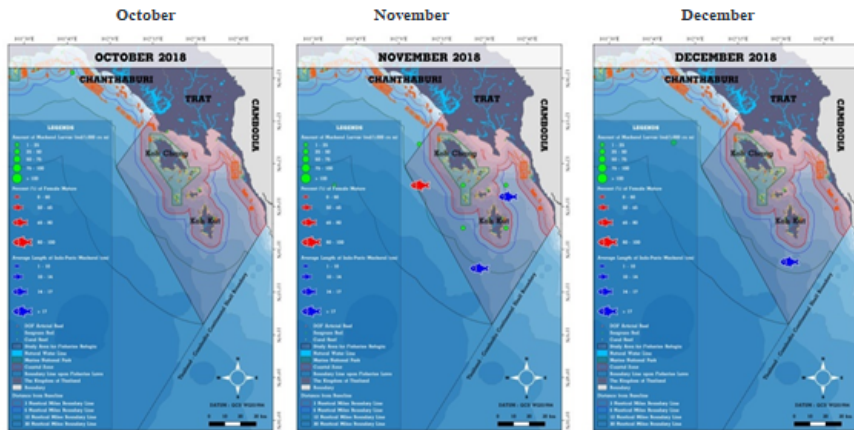


Distributions of Indo-Pacific Mackerel in the Study Area of Trat Province



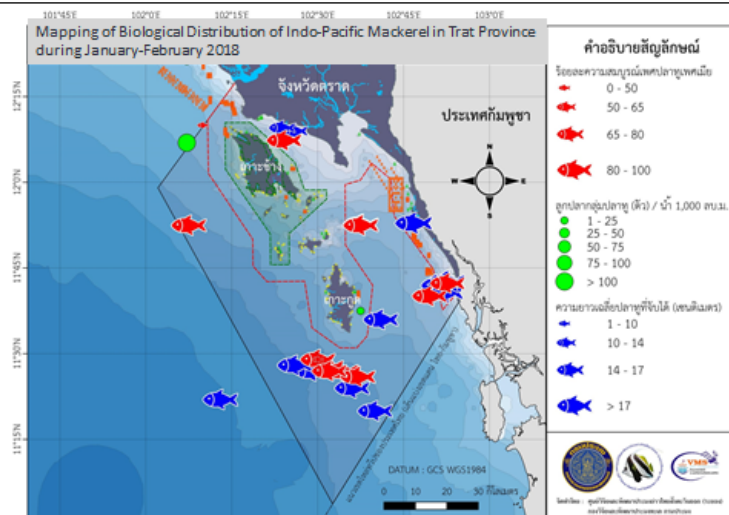
ทำโดย อ.ฉวีพร อภัยธรรมรัตน์  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลจังหวัดฉะเชิงเทรา (ปี 2562)

Distributions of Indo-Pacific Mackerel in the Study Area of Trat Province

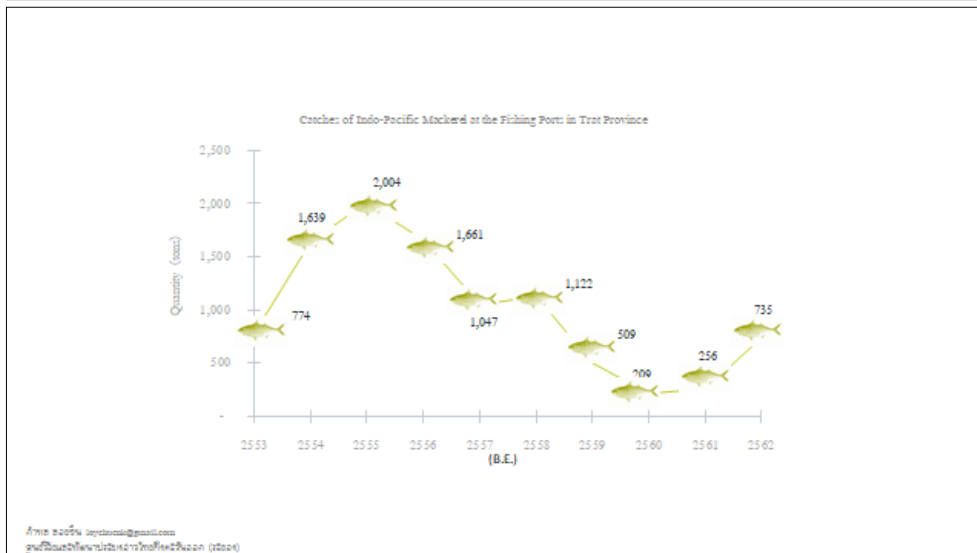
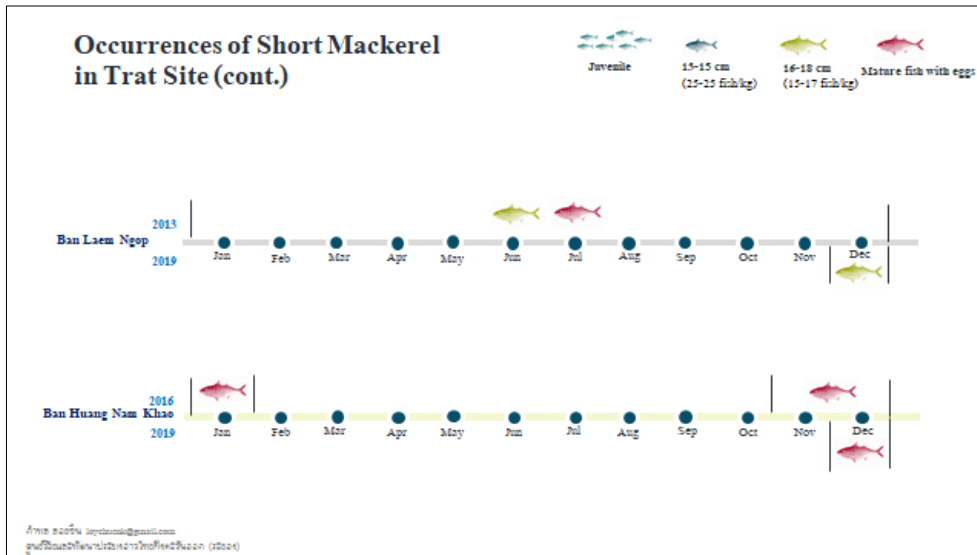
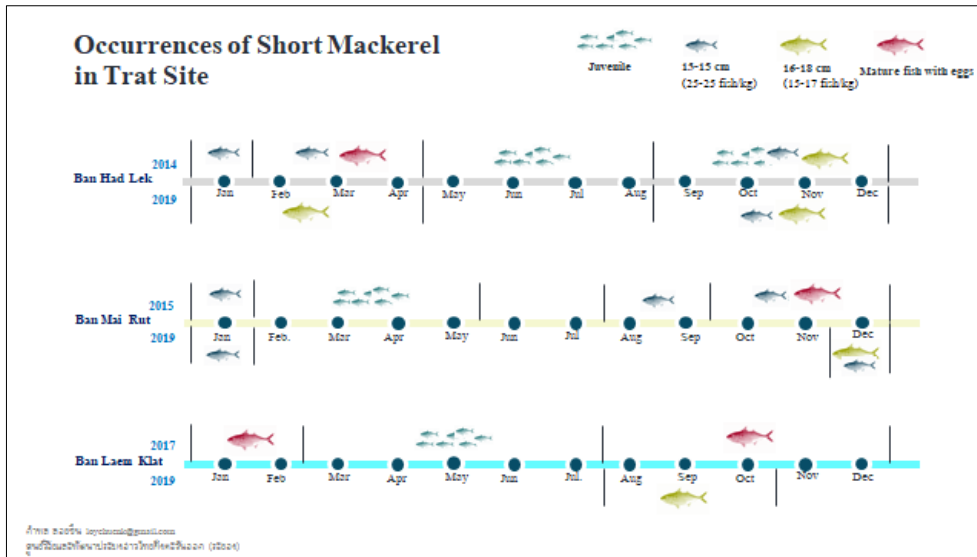


ทำโดย อ.ฉวีพร อภัยธรรมรัตน์  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลจังหวัดฉะเชิงเทรา (ปี 2562)

Mapping of Biological Distribution of Indo-Pacific Mackerel in Trat Province during January-February 2018

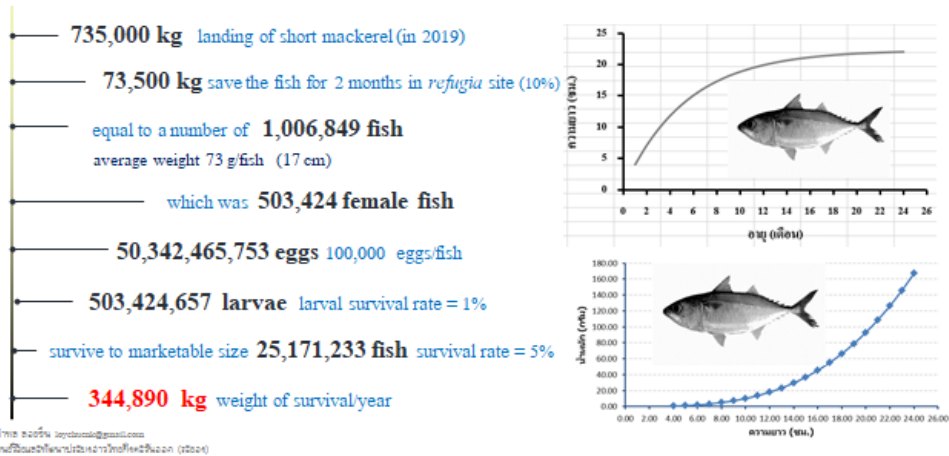


ทำโดย อ.ฉวีพร อภัยธรรมรัตน์  
ศูนย์วิจัยและพัฒนาประมงชายฝั่งทะเลจังหวัดฉะเชิงเทรา (ปี 2562)





**Estimated survival of short mackerel while implementing fisheries *refugia* management**



Thank You

**ANNEX 4  
Workshop Photos**

**Muang District  
13<sup>th</sup> July 2020**





**Koh Chang District  
14<sup>th</sup> July 2020**







Laem Ngop District  
15<sup>th</sup> July 2020



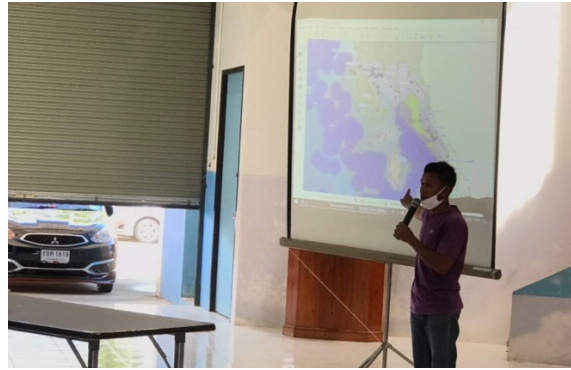




Khlong Yai District  
16<sup>th</sup> July 2020







Koh Kut District  
18<sup>th</sup> July 2020



