



"Türkiye'nin Deniz ve Kıyı Koruma Alanları Sisteminin Güçlendirilmesi Projesi"

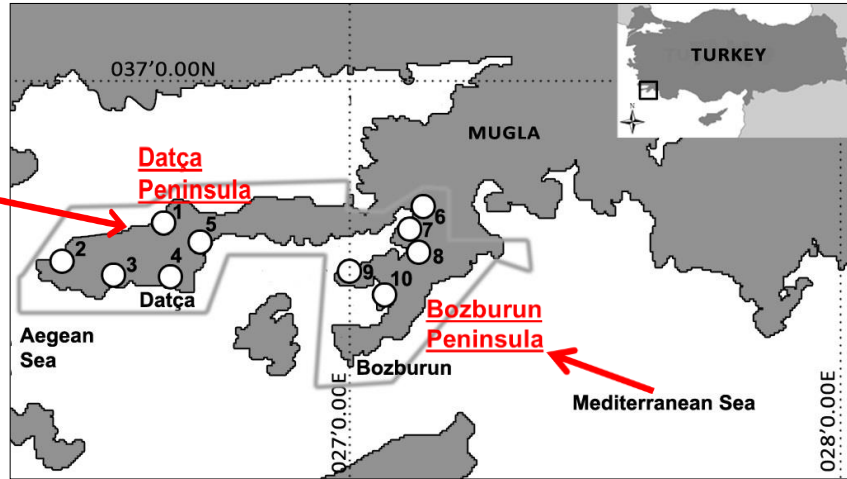
## Viability of small-scale fisheries in Datça-Bozburun Special Environmental Protection Area (SEPA), (Eastern Mediterranean), Turkey



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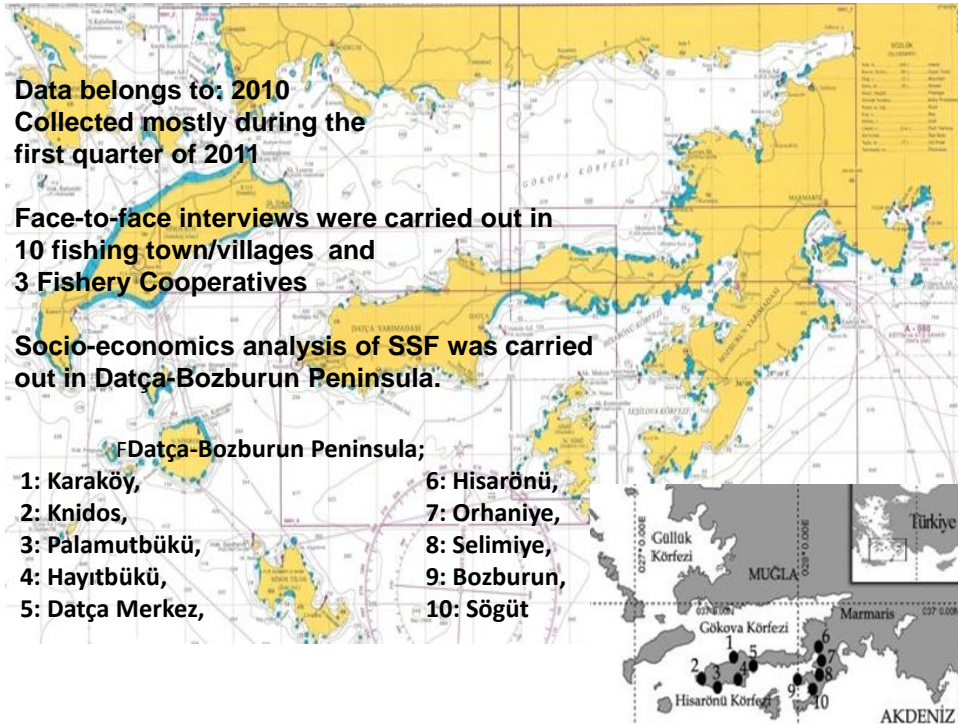
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Fishing districts and villages studied in SEPA, Turkey

(Datça-Bozburun Special Environmental Protection Area (SEPA); 1: Karaköy, 2: Knidos, 3: Palamutbükü, 4: Hayıtbükü, 5: Datça, 6: Hisarönü, 7: Orhaniye, 8: Selimiye, 9: Bozburun, 10: Sögüt)

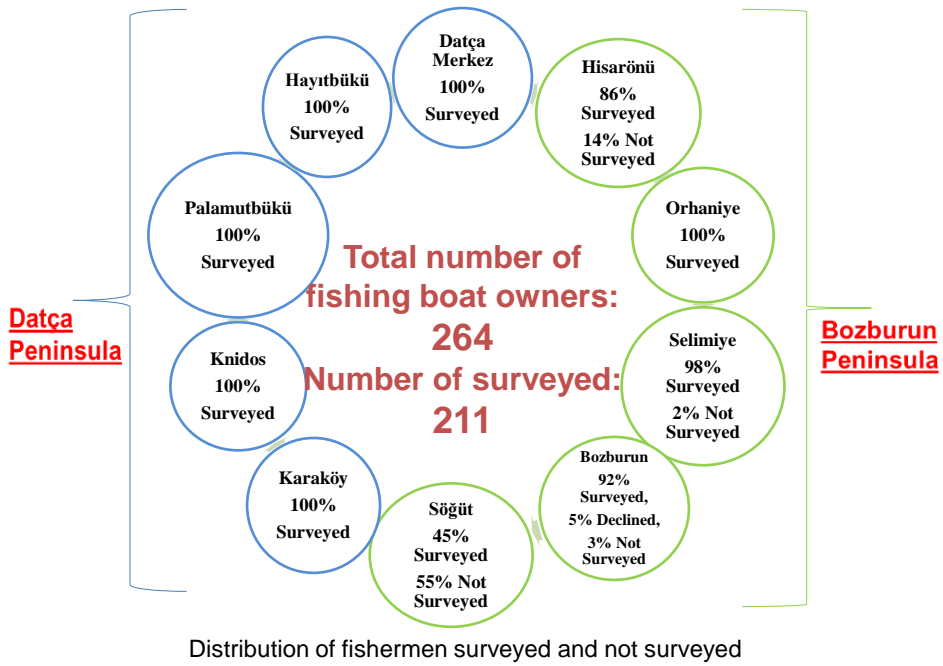


## The way of we work

- ✓ Elderman
- ✓ Spend time on boards with fishers (sailed with fishing boats)
- ✓ Developed sincere relations with the fishers in the area
- ✓ Worked with the president of fishery cooperatives
- ✓ Organized meetings

Face-to face interviews

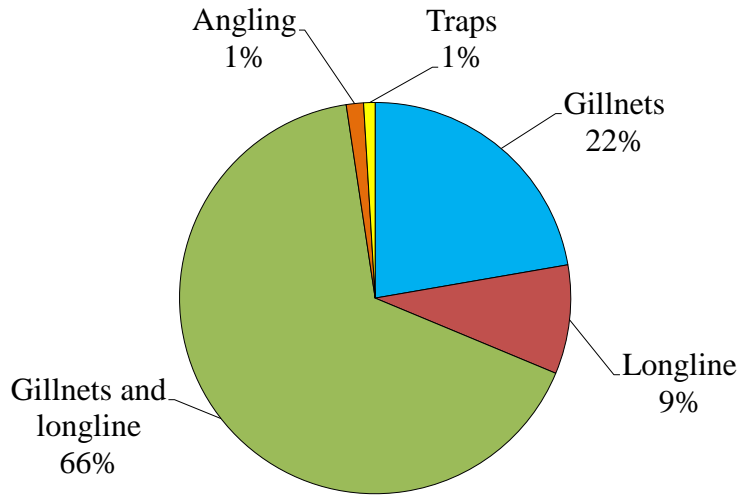




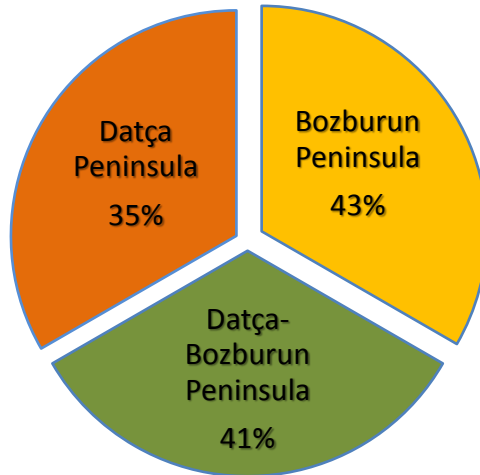
## Results

- 264 fishing boats
- It was reached 211 fishing boats and skippers/owners
- Considering all fishing boats, there are 490-500 fishers



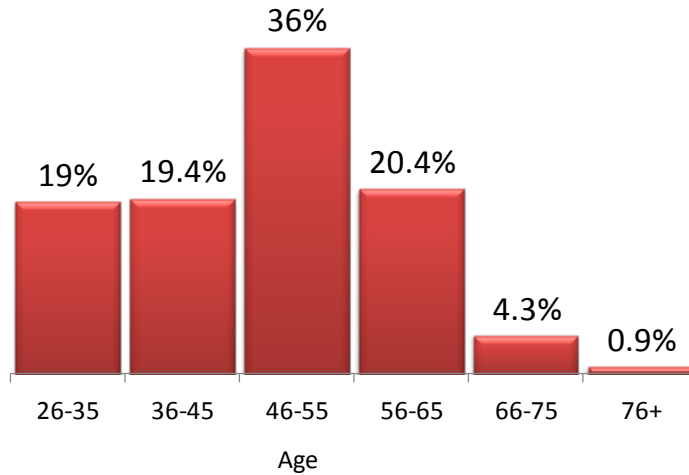


**Gear preferences among Datca-Bozburun fishermen**



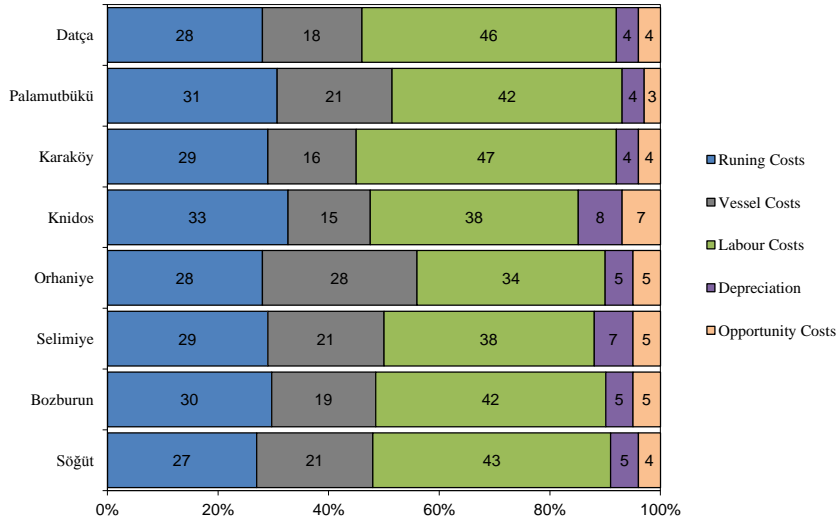
**Distribution of fishers depending solely on fishing income**

	Datça n=19	Palamut/ Hayıtbük n=17	Karaköy n=15	Knidos n=6	Datça Peninsula n=57	Hisaröni- Orhaniye n=10	Selimiye n=48	Bozburun Peninsula n=59	Sığüt n=37	Bozburun Peninsula n=154	Datça Bozburun N=211
Avg. Age of fishermen (years)	50±15 (min.27- max.82)	49±12 (min.30- max.73)	48±10 (min.32- max.65)	52±8 (min.40- max.60)	49±12 (min.27- max.82)	48±12 (min.34- max.70)	44±12 (min.26- max.68)	51±11 (min.28- max.77)	46±9 (min.30- max.62)	47±11 (min.26- max.77)	48±11 (min.26- max.82)
Avg. Experience of fishermen (years)	25±11 (min.25- max.50)	24±11 (min.6- max.45)	27±10 (min.10- max.40)	26±3 (min.21- max.30)	25±10 (min.6- max.50)	23±12 (min.7- max.48)	22±12 (min.4- max.50)	26±11 (min.1- max.50)	21±8 (min.7- max.40)	23±11 (min.1- max.50)	24±11 (min.1- max.50)
Avg. Education of fishermen (years)	7±3 (min.5- max.14)	7±3 (min.5- max.14)	5±2 (min.0- max.8)	7±3 (min.5- max.11)	6±3 (min.0- max.14)	5±2 (min.0- max.5)	6±2 (min.5- max.14)	5±2 (min.0- max.11)	5±2 (min.5- max.11)	5±2 (min.0- max.14)	6±2 (min.0- max.14)
Number of dependants	2±1 (min.0- max.4)	2±1 (min.0- max.4)	3±2 (min.0- max.7)	3±2 (min.1- max.5)	2±2 (min.0- max.7)	2±1 (min.0- max.3)	2±1 (min.0- max.5)	2±1 (min.1- max.6)	2±1 (min.1- max.7)	2±1 (min.0- max.7)	2±1 (min.0- max.7)
Marriage Rate (%)	89	82	80	100	86	90	92	95	100	95	92
Depend solely on fishing (%)	37	29	47	17	35	40	46	49	30	43	41
Having social security (%)	89	94	67	83	84	100	79	92	89	88	87



**Distribution of age groups of fishermen in Datca-Bozburun**

Region	Age of vessel (years) (mean±std)	Length of vessel (m) (mean±std)	Power of engine (HP) (mean±std)	Number of crew (mean±std)	Days at the sea per year (mean±std)
Datça	13±8 (min.1-max.28)	8±1 (min.6-max.9,7)	23±23 (min.9-max.105)	2±1 (min.1-max.4)	175±88 (min.53-max.300)
Palamutbükü-Hayıtbükü	19±10 (min.9-max.40)	7±1 (min.5,3-max.8,5)	10±2 (min.6-max.11,5)	2±1 (min.1-max.2)	183±68 (min.115-max.305)
Karaköy	19±10 (min.2-max.36)	8±1 (min.5,5-max.10)	27±36 (min.6-max.135)	2±0 (min.1-max.2)	175±69 (min.50-max.300)
Knidos	15±8 (min.5-max.25)	7±1 (min.6-max.8,8)	18±10 (min.9-max.32)	1±1 (min.1-max.2)	201±42 (min.121-max.241)
<b>Datça Peninsula</b>	<b>17±9 (min.1-max.40)</b>	<b>7±1 (min.5,3-max.10)</b>	<b>20±23 (min.6-max.135)</b>	<b>2±1 (min.1-max.4)</b>	<b>180±72 (min.50-max.310)</b>
Hisarönü-Orhaniye	15±6 (min.6-max.25)	7±1 (min.6-max.8,25)	15±8 (min.9-max.30)	1±0 (min.1-max.2)	158±79 (min.21-max.277)
Selimiye	12±6 (min.1-max.21)	8±1 (min.6,6-max.9,8)	19±12 (min.9-max.54)	1±0 (min.1-max.2)	167±79 (min.15-max.325)
Bozburun	14±7 (min.3-max.35)	8±1 (6,75-max.10,5)	20±12 (min.6-max.82)	2±0 (min.1-max.3)	143±54 (min.50-max.300)
Söğüt	15±8 (min.1-max.27)	8±1 (min.6-max.11)	18±15 (min.6-max.85)	1±1 (min.1-max.3)	167±88 (min.29-max.300)
<b>Bozburun Peninsula</b>	<b>14±7 (min.1-max.35)</b>	<b>8±1 (min.6-max.11)</b>	<b>19±13 (min.6-max.85)</b>	<b>1±1 (min.1-max.3)</b>	<b>158±73 (min.15-max.325)</b>
<b>Datça-Bozburun Peninsula</b>	<b>15±7 (min.1-max.40)</b>	<b>8±1 (min.5,3-max.11)</b>	<b>19±16 (min.6-max.135)</b>	<b>2±1 (min.1-max.3)</b>	<b>165±74 (min.15-max.325)</b>



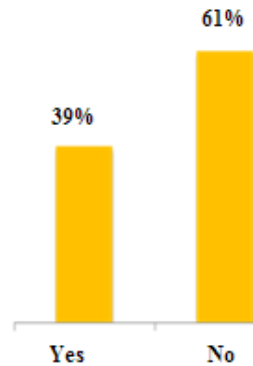
### Total cost components of Datça-Bozburun fishermen

Economical activity results for Datca-Bozburun fishing vessels

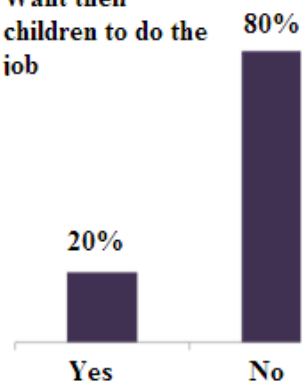
Economic Activity Results per vessel per year (in USD)	Datça Peninsula n=57		Bozburun Peninsula n=154		Datça-Bozburun Peninsula N=211	
	Mean	±std	Mean	±std	Mean	±std
Running costs	3003	1783	2351	1514	2527	1613
Vessel costs	1796	1102	1676	1119	1708	1113
Labour costs	4448	3246	3308	1838	3636	2351
Depreciation	434	337	437	214	436	253
Capital costs	400	286	379	189	384	219
Total costs	10079	5270	8151	3427	8672	4087
Fishing income-Revenue	4582	5072	4902	4792	4816	4860
Operational income*	3173	5078	4124	4513	3884	4661

\* It reflects average values of only 21 vessels showing positive results

Considering quitting fishing



Want their children to do the job



Rate of fishermen who consider quitting and don't want their children to do the job

### Opinions of Datca-Bozburun fishermen on the job and future of fisheries

Region	Consider quitting fishing (%)	Want their children to do the job (%)	Pessimistic about future of fisheries (%)
Datça	26	47	79
Palamutbükü-Hayıtbükü	29	24	94
Karaköy	13	27	93
Knidos	33	0	100
<b>Datça Peninsula</b>	<b>25</b>	<b>30</b>	<b>89</b>
Hisarönü-Orhaniye	60	10	100
Selimiye	46	15	94
Bozburun	44	17	100
Söğüt	41	19	92
<b>Bozburun Peninsula</b>	<b>45</b>	<b>16</b>	<b>97</b>
<b>Datça-Bozburun Peninsula (N=211)</b>	<b>39</b>	<b>20</b>	<b>94</b>

## Conclusion

- Fishermen
- Fishing fleet



## Fishermen

- 41% of fishers livelihood depend only fishing
- 94% of local fishers are pessimistic/hopeless about future of fisheries
- 39% seriously think to quit profession
- 80% don't want their children become fishermen

## Economics of fishing fleet

90% of fishing boats show negative economic performance



- Viability of fishing boats and livelihoods of fishermen are under threat of...
- %32 (68) of total fishermen even failing to meet their running costs
- This is an important sign of how difficult their conditions are but...

## **Two Questions!**

- **How could fishers continue fishing if the conditions are so bad?**
- **Are they really fishermen?**

- Some fishers do not count TC of fishing, they continue fishing as long as their incomes are more than their running costs
- Fishermen who are not able to meet their running costs have alternative income sources
- **Fishing is becoming a part time job!**

### **Suggestions;**

- Local-level and area based FM
- Buy-back program also for SSF
- Better MCS
- ...

## **Overall conclusion;**

- Socio-economic monitoring is important as much as biological or ecological monitoring
- This type of studies should be conducted periodically so as to make decision makers aware of the fisheries from a broader context.

Thanks...