

How could we convince fisheries stakeholders to establish No-Take-Zones

-Lessons from small-scale fishery in Gökova Bay (Eastern Mediterranean), Turkey-

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Contents of presentation

- Characteristics of the area and fisheries
- Fisheries regulations-Notification
- Requirements for new approaches
- Decision process of establishing NTZs
- Conclusion



Gökova Bay



Borders of Gökova Bay Special Environmental Protection Area

Gökova Bay Special Environmental Protection Area (SEPA) located in the southwest of Turkey, and established in 1989 by Environmental Protection Agency for Special Areas, covers **827 km²** marine and 270 km² land area.

The economy of the region depends on tourism, agriculture and **fishing**.



So many projects were carried out in Gökova Bay!



Türkiye'nin Deniz ve Kıyı Koruma Alanları Sisteminin Güçlendirilmesi Projesi



AKDENIZ KORUMA DERNEĞİ Mediterranean Conservation Society



Gökova Projesi



Biodiversity

Detailed report based on two years field work ICZM; Tourism, Agriculture, Transportation, Fishing.. Fishery

Fishing gears, methots, catch, value etc. Fishing fleet, vessel characteristics etc. Illegal fishing, ghost fishing etc. **Fishermen and other stakeholders**

Socio-demographic and economics

Fishery Co-operatives

Characteristics and problems of cooperatives Success and failure of fishery cooperatives

- According to the biodiversity project (Okus et al., 2006) in Gökova MPA, **644 macroscopic species** were determined belongs to 17 systematic group of Fauna.
- The area has rich biodiversity. It provides habitats for Mediterranean monk seal (*Monachus monachus*), one of Europe's most endangered species, and Sandbar Shark (*Carcharinus plumbeus*) as well as 34 protected species.
- *Posidonia oceanica* covers 7 km² in the area.
- Conflicts and problems are increasing in fisheries.



Characteristics of fisheries in the area



- Number of fishing boat: 100
- Number of fishers: 150-160
- Number of crew : 1-3
- Days at the sea per year : 200

Longliners (%29) Gillnetters (%10) Gillnets and longlines (Alternately-%61) Purse seiners (only 2) Anglers (No official data)



Vessel characteristics





- Length of vessel (m) : 8.2
- Power of engine (HP) : 30.6
- Age of vessel (years) : 11.1
- Vessel material : wooden

Characteristics of fishery cooperatives



There are 3 fishery cooperatives located in Gökova SEPA

- Mean years in operation: 21
- Mean number of cooperative members : 28
- Total number of fishery cooperative members : 84
- Major activities : fishing, marketing, lobbying



Fishermen whose livelihood depend only fishing: (%56)





Having social security: %59

Married: %87

Mean age of Experience: 24



Dependent family members: 2.5



Hauseowner:%64

Fisheries Management

- Input based FM: Yes
- Local level or right based FM: No
- Closed season for SSF: No
- Closed areas for SSF by July, 2010: No
- FMP: No, Capacity or effort limitation: No
- Council Reg. (EC) No 1967/2006: No

Main Problems of Fisheries in Gökova Bay

- No limitation on fishing effort
- Illegal fishing (Coast Guard was considered insufficient (56%) by fishermen).
- Existence of large scale fishery
- Decreasing CPUE and VPUE
- Weak MCS
- Rising conflicts amongst fishers
- Impacts of Lessepsian migration on fishery (Lagocephalus sceleratus, Siganus siganus etc)
- Lack of EBFM approach and No-Take-Zones

Commercial and Recreational Fishing Notification



Closed areas for purse seiners





Closed season for large scale fisheries

- Fishing with bottom trawl is prohibited between April 15 and September 15.
- Fishing with purse seiners is prohibited between April 15 and August 31.





Longline fishing

 It is prohibited to use hooks with gape size smaller than 7.2 mm



Legal catch sizes-MLS



- Drift net: Banned
- Monofilament gillnets: Banned
- Trawling: Banned
- Regulations on hook sizes: Yes
- Purse seiners: Permitted in certain areas

A question?

Are these regulations and management strategies good enough for ensuring sustainable fisheries?

Happy fishermen? Healthy fish stocks? Sustainable marine ecosystem?

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Common name	Latin name	Landing volume (kg)	Landing volume (%)	Landing value (TRL)*	Landing value (%)
Goldblotch grouper	Epinephelus costae	170	1	3729	1
White grouper	Epinephelus aeneus	2905	11	100782	31
Dusky grouper	Epinephelus marginatus	56	0.2	1038	0.3
Caramote prawn	Penaeus kerathurus	1106	4	33516	10
Common octopus	Octopus vulgaris	3842	15	27762	9
Common pandora	Pagellus erythrinus	1549	6	24778	8
Common sole	Solea solea	824	3	24643	8
Sea bream	Sparus aurata	938	4	23295	7
Two-banded sea bream	Diplodus vulgaris	792	3	10113	3
Striped mullet	Mugil spp.	900	3	10499	3
Dentex	Dentex dentex	148	1	5036	2
Goldband goatfish	Upaneus molluccensis	761	3	7538	2
European hake	Merluccius merluccius	1642	6	5711	2
Barracuda	Sphyraena sp.	1517	6	5084	2
Other species		8901	33.5	40636	12
Total		26051	100	324160	100

Landing volume and values in Gökova Bay, 2006.

Common name	Latin name	Landing volume (kg)	Landing volume (%)	Landing value (TRL)*	Landing value (%)
Goldblotch grouper	Epinephelus costae	95	0.8	3390	1.4
White grouper	Epinephelus aeneus	755	6	33975	11.8
Dusky grouper	Epinephelus marginatus	20	0.2	600	0.2
Caramote prawn	Penaeus kerathurus	2	0	90	0
Common octopus	Octopus vulgaris	800	6.3	12000	4.2
Common pandora	Pagellus erythrinus	2550	20.2	63750	22.1
Common sole	Solea solea	20	0.2	600	0.2
Sea bream	Sparus aurata	1200	9.5	42000	14.6
Two-banded sea bream	Diplodus vulgaris	380	3	5700	2
Striped mullet	Mugil spp.	2100	16.7	63000	21.9
Dentex	Dentex dentex	500	4	20000	6.9
Goldband goatfish	Upaneus molluccensis	550	4.4	13750	4.8
European hake	Merluccius merluccius	250	2	3750	1.3
Barracuda	Sphyraena sp.	235	1.9	3525	1.2
Other species		3152	25	21434	7.4
Total		12609	100	287564	100

Landing volume and values in Gökova Bay, 2009



Comparison of catch amount in Gökova SEPA by year (2006-2009)

Despite all the prohibitions®ulations;

FM and habitat protection were failed...

It was time to focus on new tools; establishing NTZs

AND

new management approaches;

fisheries co-management...





Consideration of key species





Consideration of biodiversity



Consideration of fishers community





Source: Okuş et al., 2006

Consideration of traditional knowledge and fishers' experiences











Getting consultancy from international scientific community

- Advanced course on "Establishment and Management of Marine Protected Areas for Fisheries"
- Organized by CIHEAM-IAMZ, Zaragoza (Spain)







Visited Columbretes Marine Reserve







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TEBLİĞ

<u>Tarım ve Köyişleri Bakanlığından :</u> 2/1 NUMARALI TİCARİ AMAÇLI SU ÜRÜNLERİ AVCILIĞINI DÜZENLEYEN TEBLİĞDE DEĞİŞİKLİK YAPILMASINA DAİR TEBLİĞ (TEBLİĞ NO: 2010/25)

MADDE 1 - 21/8/2008 tarihli ve 26974 sayılı Resmi Gazete'de yayımlanan, 2/1 Numaralı Ticari Amaçlı Su Ürünleri Avcılığını Düzenleyen Tebliğ'de yapılan değişiklik gereğince

"(16) Gökova körfezinde;

(a) Akbük limanında; (37° 01, 431' N - 28° 06,863' E) ile (37° 02,108' N - 28° 06,915' E) koordinat noktalarını birleştiren hattın batısında,
(b) Akyaka'da; (37° 03,041' N - 28° 18,600' E) ile (37° 01,540' N - 28° 18,600' E)

koordinat noktalarını birleştiren hattın doğusunda,

koordinat noktalarini birleştiren hattın doğusunda,
(c) Çamlı limanında; Çapa burnu (37° 00,044' N - 28° 13,250' E) ile (37° 00,240' N - 28° 14,731' E) koordinat noktasını birleştiren hattın güneyinde,
(ç) Boncuk koyu- Karaca limanında; (36° 59, 016' N - 28° 11,828' E) koordinat noktası ile Dedek burnunu (36° 56, 967' N - 28° 11,618' E) birleştiren hattın doğusunda,
(d) İngiliz limanında (Değirmen Bükü) (36° 56, 170' N - 28° 08,358' E) ile (36° 56,812' N - 28° 09,542' E) koordinat noktalarını birleştiren hattın güney-doğusunda,
(e) Bördübet limanında; (36° 49, 800' N - 28° 02,649' E) ile (36° 48,156' N - 28° 03,176' E) koordinat noktalarını birleştiren hattın döğusunda,
her tirlü iştihşal yaşıtaşı ile şu ürünleri avcılığı yaşaktır "

her türlü istihsal vasıtası ile su ürünleri avcılığı yasaktır."

In conclusion

- Fishermen are not against to NTZs, MPAS.
- We should choose the right instruments and attitudes to convince them!

Recommendations

- 1. Spend time and money for meetings
- 2. Share success stories and experiences with fishers

at meetings

- 3. Inform and encourage fishers at meetings
- 4. Develope **good cooperation-relations** with not only ishers but also decision makers
- 5. Ensure the better enforcement in NTZs

