



Long Term Performance Assessment for the Turkish Seas, Recommendations for the future EBFM Policies

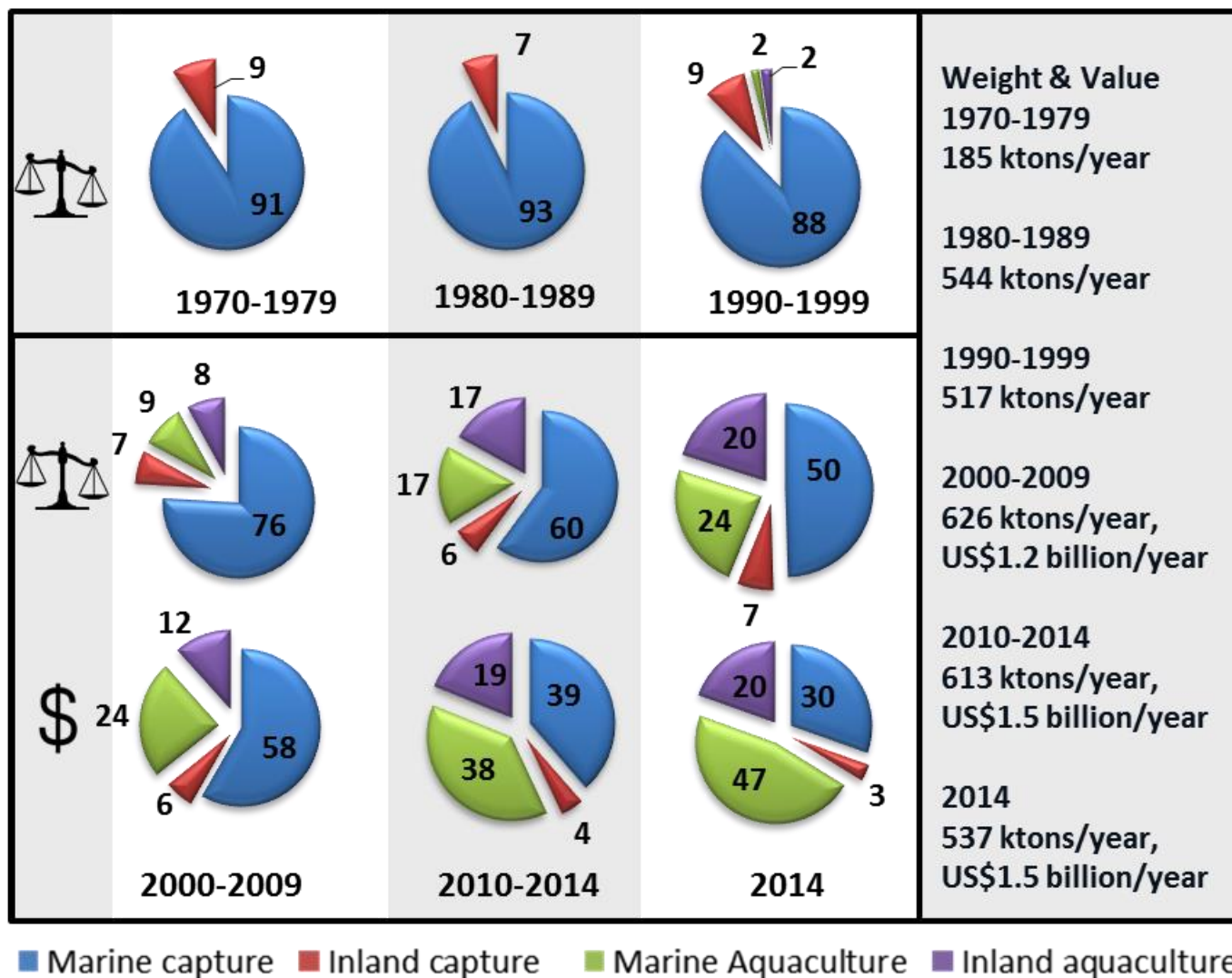
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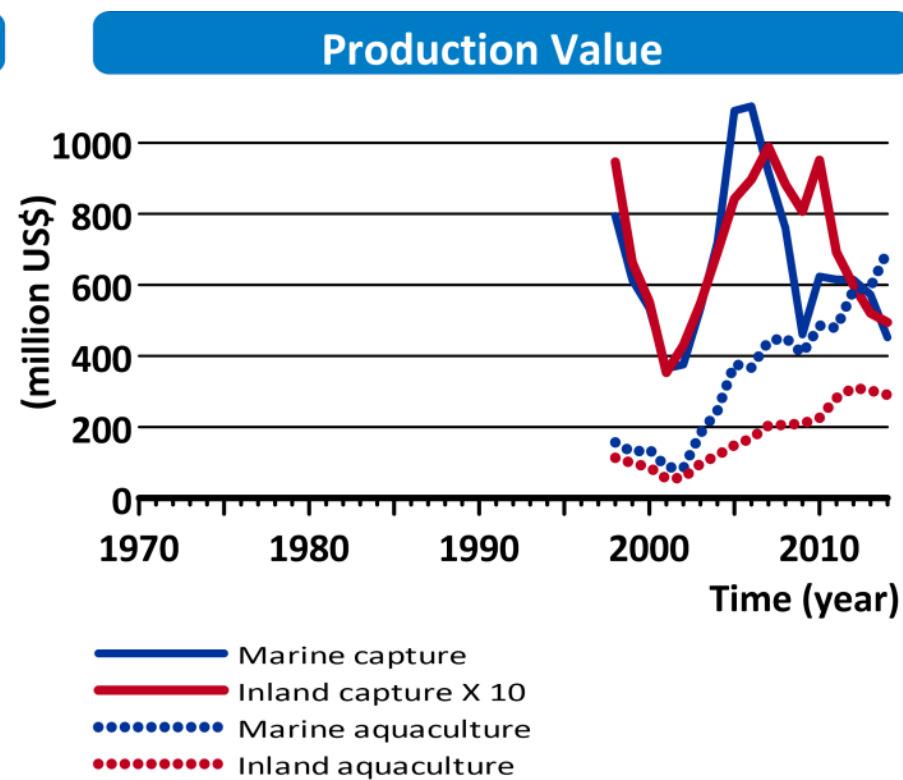
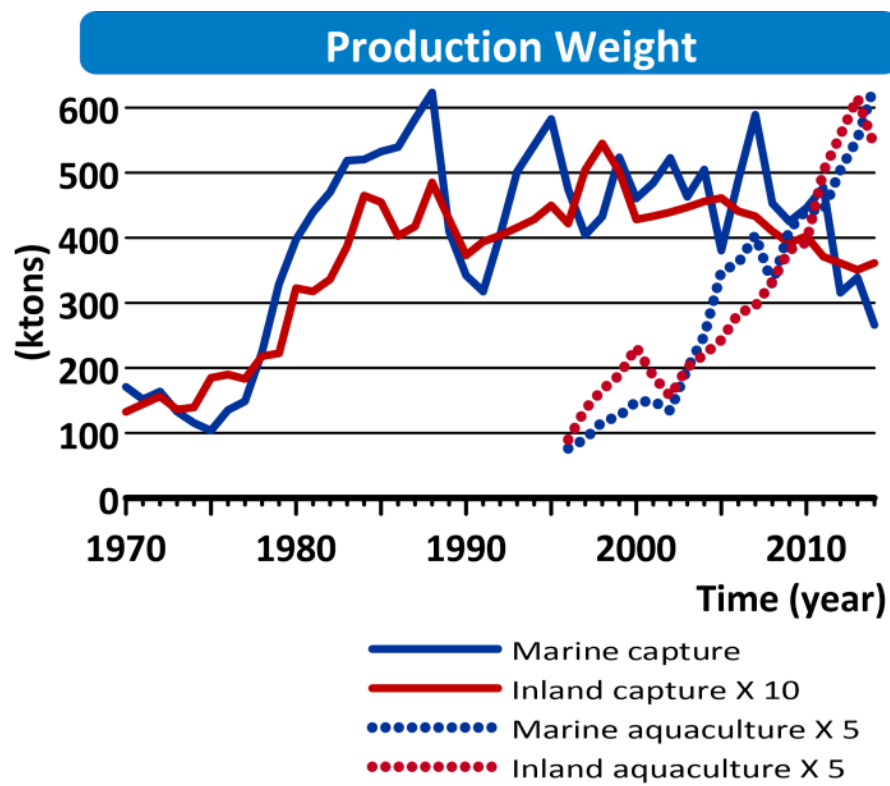
“Towards a Good Environmental Status of the Mediterranean and Black Sea Basins” PERSEUS regional stakeholder workshops

9-10 September 2015, Ankara

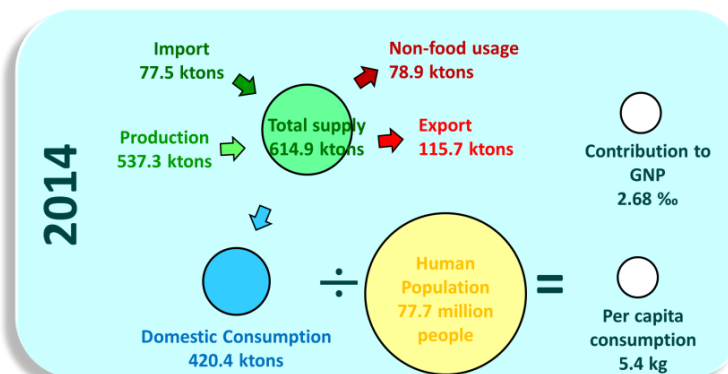
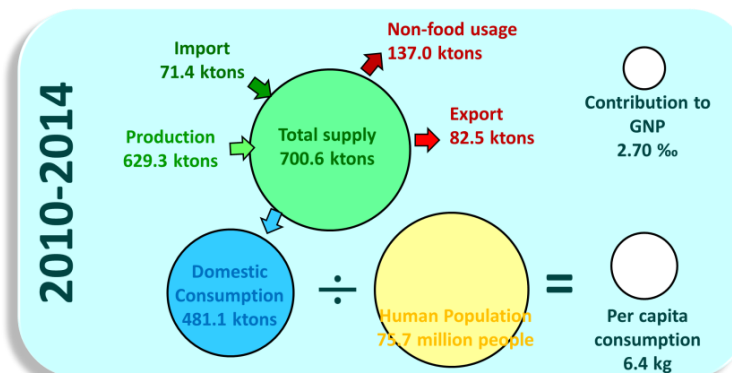
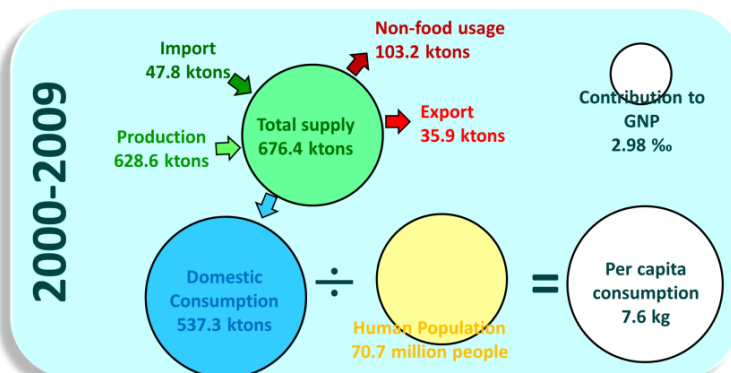
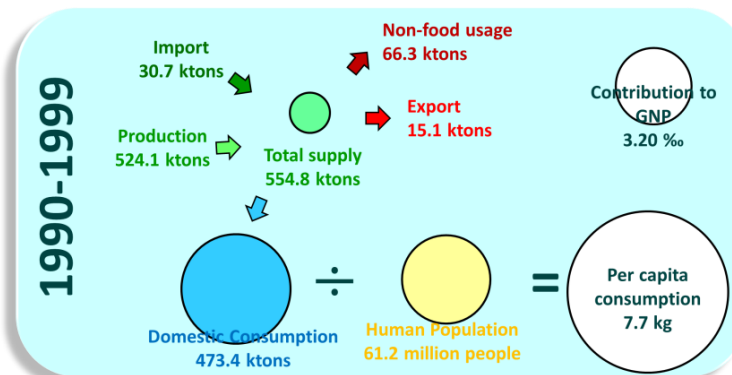
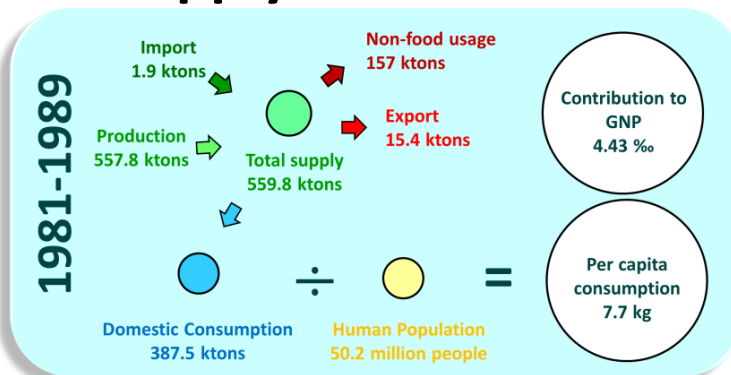
Turkey's fisheries production



Turkey's fisheries production

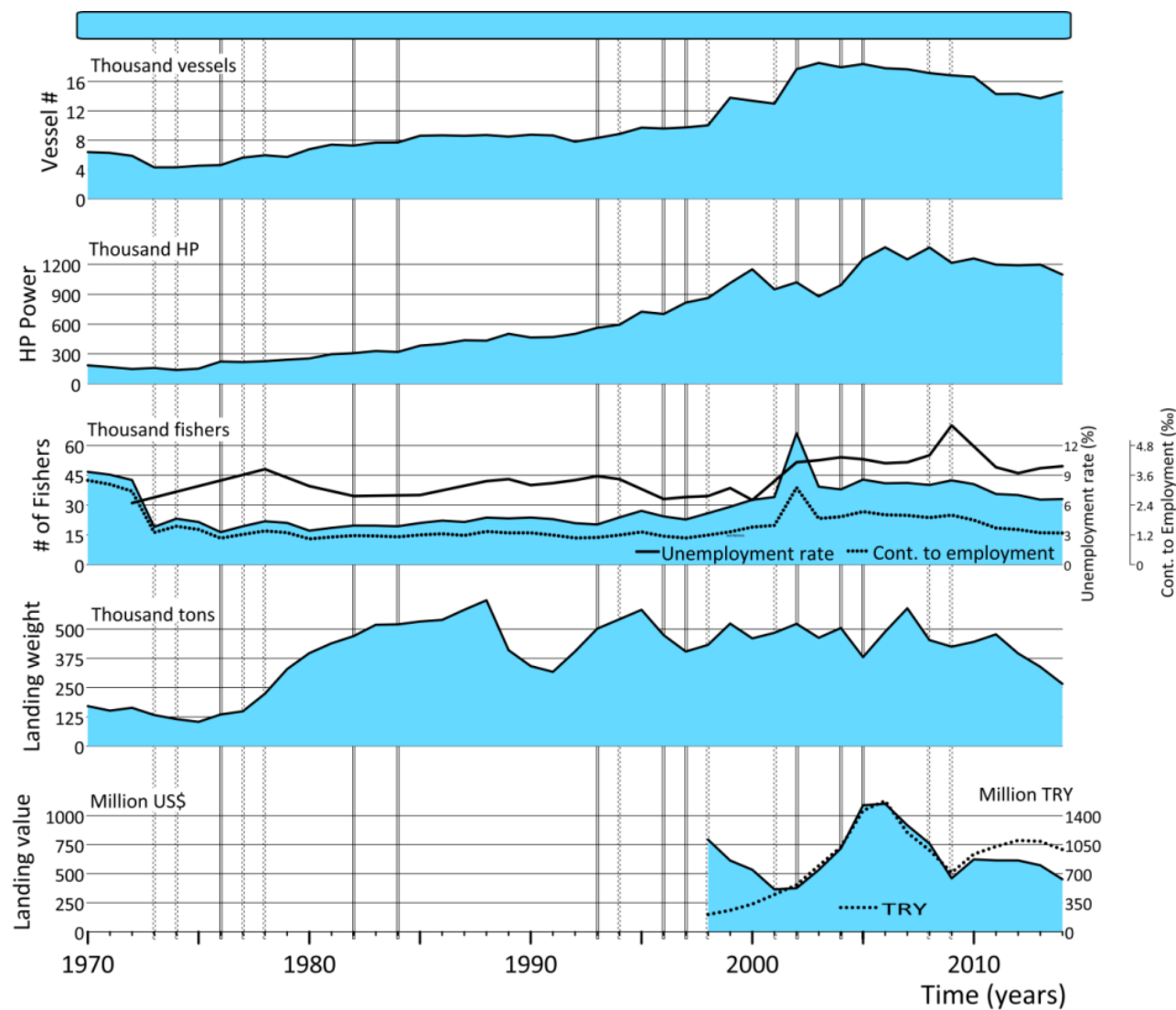


Fish food supply balance sheet



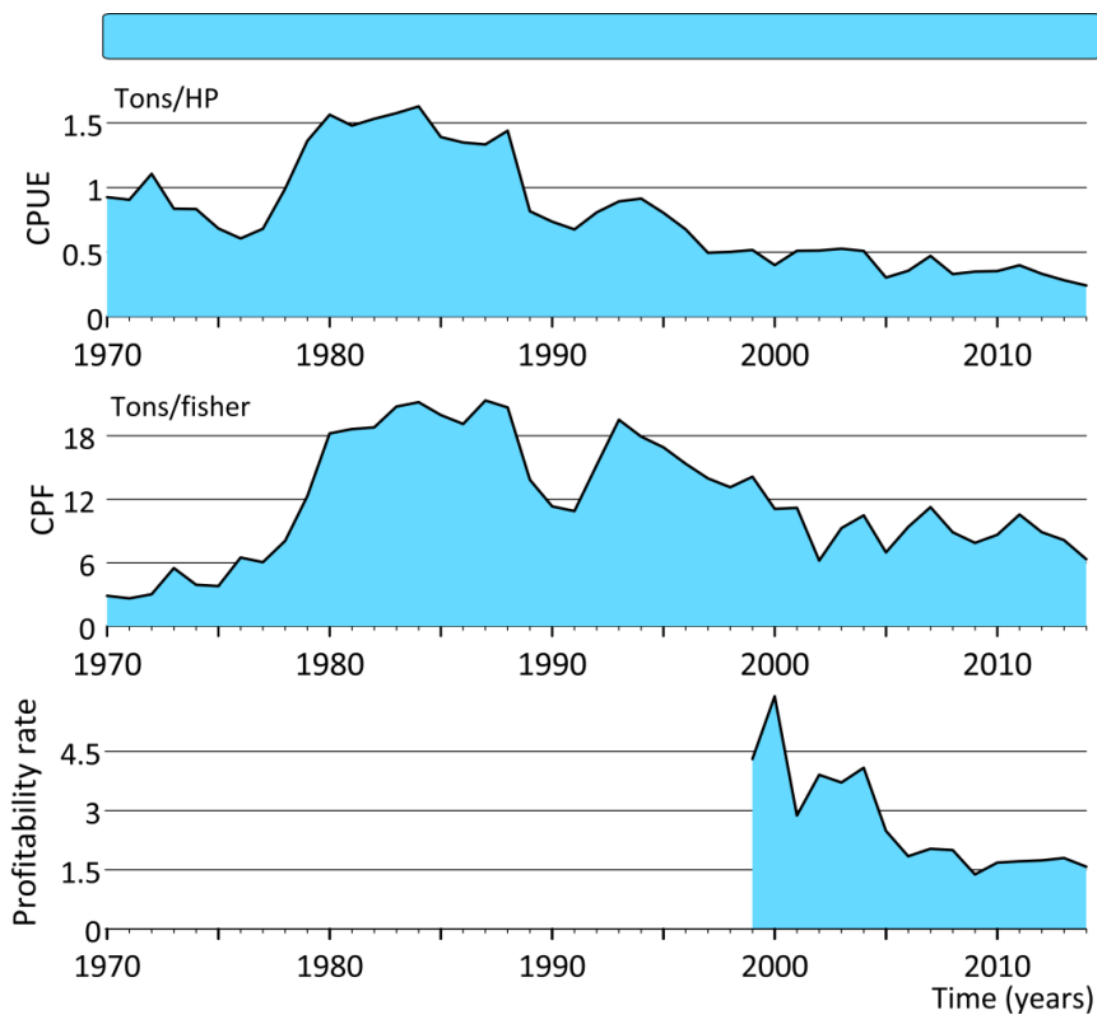


Turkey's Marine Capture Fisheries





Turkey's Marine Capture Fisheries



Long Term Performance Assessment for the Turkish Seas

Indicators used assess the status of the regional fisheries

Pressure indicators

- ✓ Yield (tons)
- ✓ Vessel number
- ✓ Fishing effort (HP)
- ✓ Fisher number

Ecological sustainability indicators

- ✓ Mean trophic level
- ✓ Mean length
- ✓ Predator/prey ratio
- ✓ Intrinsic vulnerability



Turkey's Marine Capture Fisheries

All of four sustainability indicators in the Black Sea, one of four indicators in the other regions decreased significantly

	Black Sea	Marm. Sea	Aegean Sea	Medit. Sea
Mean trophic level of the landings	-0.30	-0.30	-0.07	-0.12
Mean length of the community (cm)	-10.25	-14.29	-10.30	-6.43
Pred/Prey ratio	-0.27	-0.47	-0.30	-0.69
Vulnerability	-9.72	-9.72	-9.79	-5.09



means the change is significant

Turkey's Marine Capture Fisheries

- ✓ Significantly correlated pressure indicators
- ✓ Independent regional responses

		BS	MarS	AegSea	MedS
Yield	BS	1			
	MarS	0.554	1		
	AegSea	0.319	0.606	1	
	MedS	0.306	0.467	0.877	1
Fishing effort	BS	1			
	MarS	0.807	1		
	AegS	0.942	0.863	1	
	MedS	0.951	0.864	0.973	1
Employment	BS	1			
	MarS	0.300	1		
	AegS	0.786	0.114	1	
	MedS	0.528	0.320	0.751	1
	Unemp	0.448	0.224	0.486	0.596

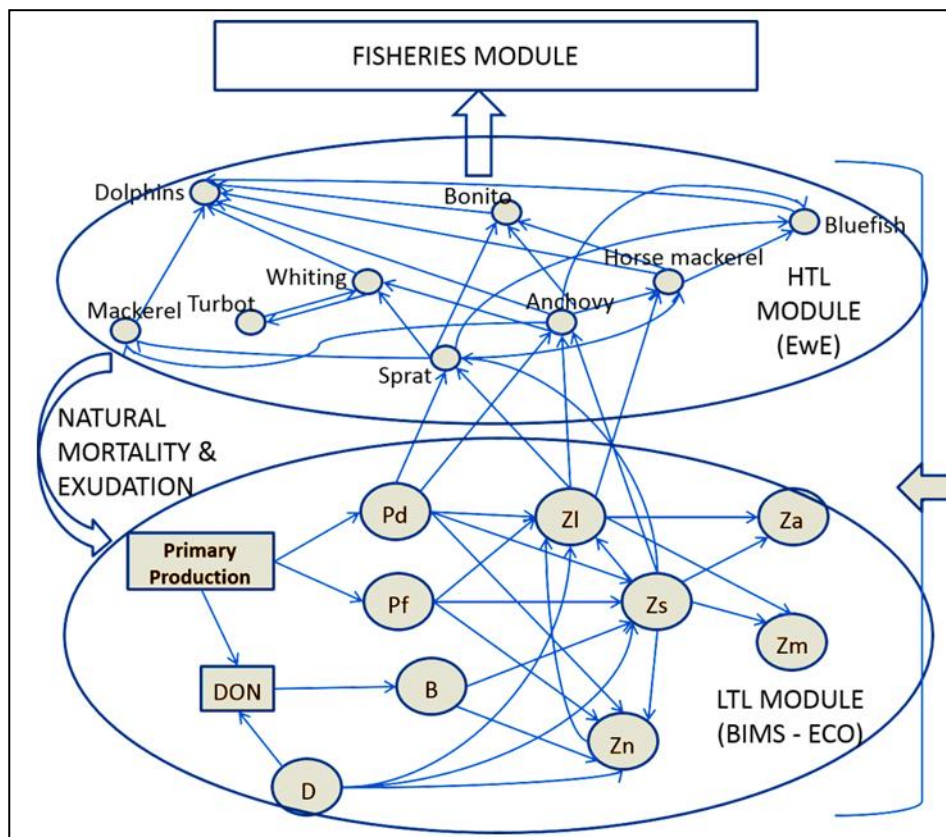
		BS	MarS	AegSea	MedS
mTlc	BS	1			
	MarS	0.246	1		
	AegSea	-0.243	-0.222	1	
	MedS	-0.030	-0.110	0.318	1
Mean Length	BS	1			
	MarS	0.430	1		
	AegS	-0.039	0.179	1	
	MedS	-0.176	0.212	0.083	1
Pred/Prey	BS	1			
	MarS	0.303	1		
	AegS	-0.168	0.127	1	
	MedS	0.039	0.061	-0.051	1
Vulnerabilit	BS	1			
	MarS	0.302	1		
	AegS	0.281	-0.044	1	
	MedS	-0.222	0.114	0.195	1

Values in bold are different from 0 with a significance level $\alpha=0.05$ (Spearman)

Exploration of the Ecosystem Based Management Strategies

How to manage our seas to achieve and sustain the Good Environmental Status (GES) under changing climatological conditions?

Ecopath with Ecosim (EwE) coupled ecological-economical-societal modelling tool

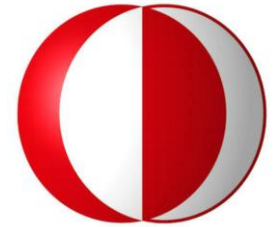


To investigate the impact of environmental and climate change on primary production, fish stocks and human

- Optimizing profits (adjusting fishing effort, targeting valuable species)
- Optimizing social benefits (increasing employment, jobs/value of catch)
- Maximizing ecosystem structure (promoting ecosystem maturity)



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THANK YOU!