

# NATURAL AND HUMAN BOUNDARIES AT THE CASPIAN SEA

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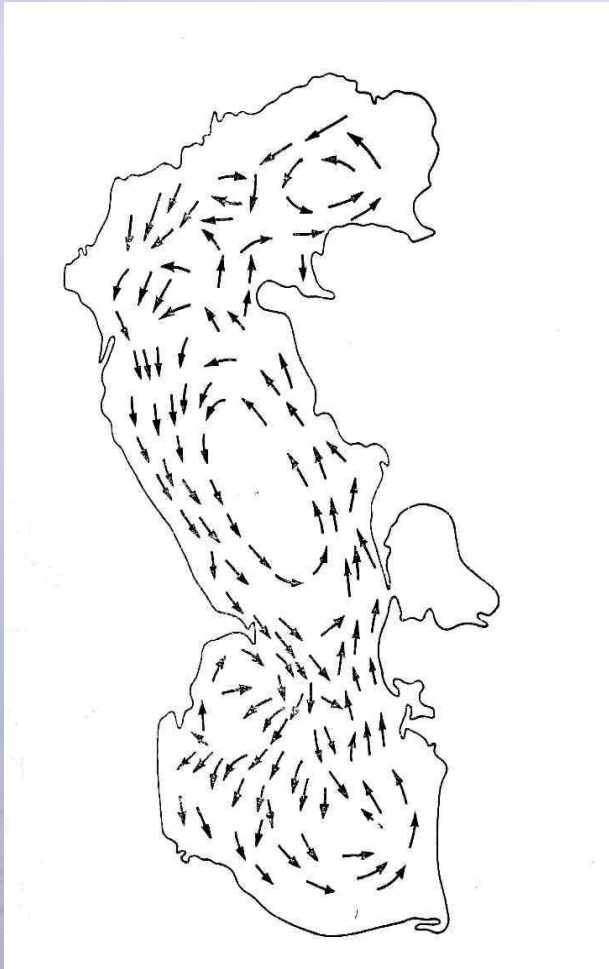
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# Sketch map of the Caspian region

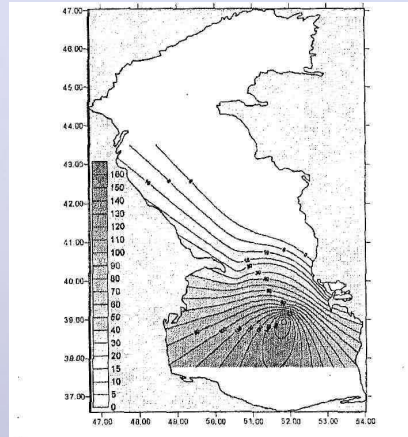


# Water circulation

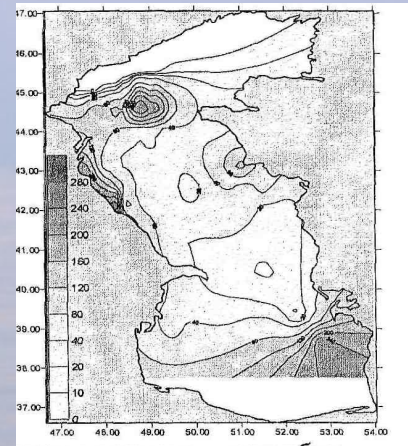


# Distribution of menemopsis

Winter, 2005



Summer, 2005



# Migrations of sturgeons



# Sources of the Caspian ecosystems diversity

**Water mass isolation**

**Flora and fauna origin**

**Bottom configuration**

**Hydrological fronts**

**Vertical stratification**

**Forms of water circulation**

**Freshwater species**

**Mediterranean species**

**Arctic species**

**Autochthonous species**

**Contemporary invasive species**



# *Ecosystem of the Caspian Sea*

Northern  
Caspian (NC)

Ecosystem of  
the eastern part  
of the NC

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Ecosystem of  
the western part  
of the NC

Ecosystem of  
desalinated waters

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Ecosystem of saltish  
waters

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Ecosystem of marine  
waters

Middle  
Caspian

Coastal  
ecosystems

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Ecosystem of main  
Caspian longshore  
current

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Ecosystem of  
pelagic zone

Ecosystem of  
depletion zone

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Ecosystem of  
accumulation zone

Southern  
Caspian

Coastal  
ecosystems

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Ecosystem of main  
Caspian longshore  
current

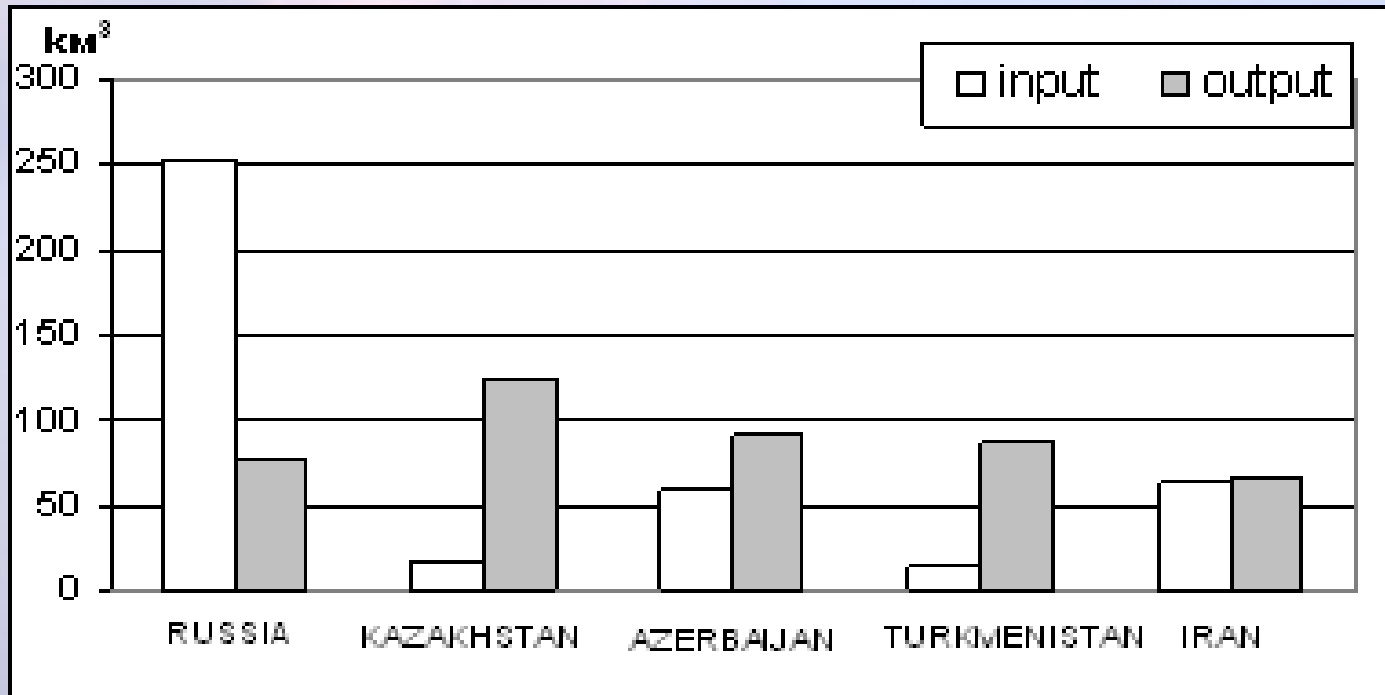
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Ecosystem of  
pelagic zone

Ecosystem of  
depletion zone

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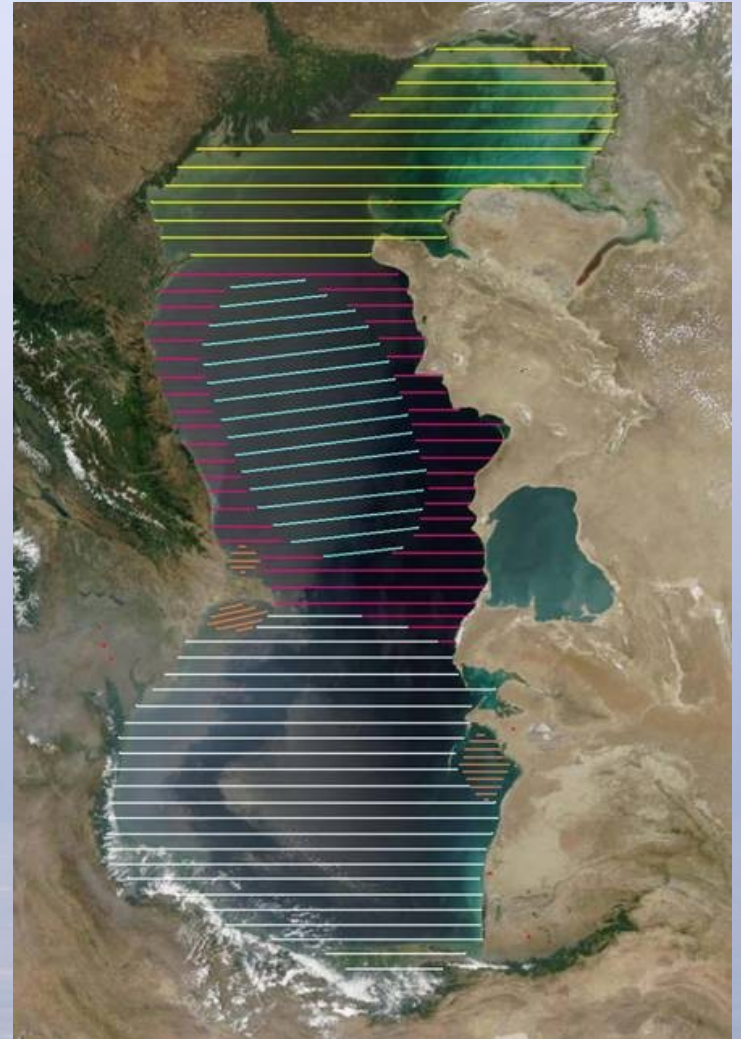
Ecosystem of  
accumulation zone



Water balance (km<sup>3</sup>) at the various national sectors of the Caspian Sea

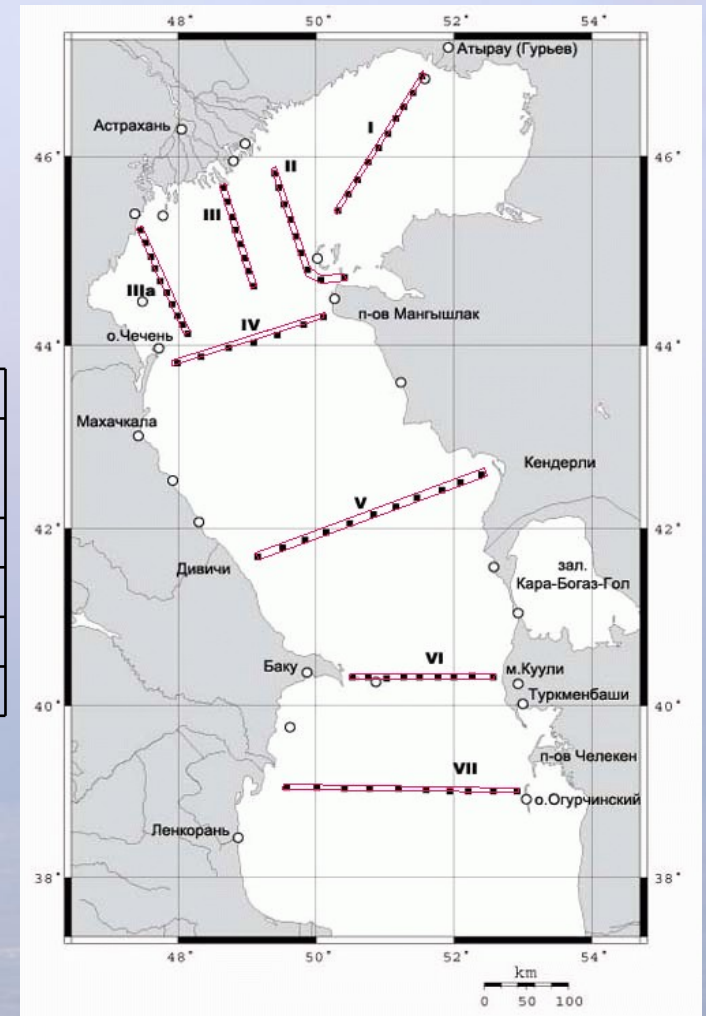


Scheme of the Caspian Sea zoning according to the peculiarities of oil pollution of the water area



## Changes of average concentration of oil products (mg/l) in high sea waters

Regions		1978-1982	1983-1987	1988-1991
Northern Caspian, Sections I-IIIa		0.24±0.19	0.14±0.14	0.14±0.14
Middle Caspian	Section IV	0.15±0.06	0.07±0.05	0.12±0.09
	Section V	0.15±0.14	0.10±0.08	0.09±0.07
Southern Caspian	Section VI	0.08±0.08	0.11±0.10	0.07±0.07
	Section VII	0.09±0.08	0.14±0.14	0.08±0.08





Suggested scheme of  
division of the Caspian  
water area



The Caspian Sea experience has confirmed that translation of environmental issues from ideological to practical sphere requires for clear boundary definition for the protected areas. It is highly desirable that these boundaries should coincide with the genuine boundaries of the natural systems.



Thank you for attention !

