

<b>FISHERY COUNTRY PROFILE</b>	<b>Food and Agriculture Organization of the United Nations</b>	<b>FID/CP/KAZ</b>
<b>PROFIL DE LA PÊCHE PAR PAYS</b>	<b>Organisation des Nations Unies pour l'alimentation et l'agriculture</b>	 <b>March 2004</b>
<b>RESUMEN INFORMATIVO SOBRE LA PESCA POR PAISES</b>	<b>Organización de las Naciones Unidas para la Agricultura y la Alimentación</b>	

**THE REPUBLIC OF KAZAKHSTAN  
GENERAL ECONOMIC DATA**

<b>Area:</b>	2 724 900 km <sup>2</sup>
<b>Inland waters area:</b>	30 000 km <sup>2</sup>
<b>Population (2002):</b>	15 533 000
<b>GDP at purchaser's value (2002):</b>	\$US 24.2 billion
<b>GDP per head (2002):</b>	\$US 1 510
<b>Agricultural GDP (2002):</b>	8.5% of GDP

**FISHERIES DATA**

**Commodity balance (2001):**

	<b>Production</b>	<b>Imports</b>	<b>Exports</b>	<b>Total supply</b>	<i>Per caput supply</i>
	<b>tons live weight</b>				<b>kg/year</b>
<b>Fish for direct consumption</b>	36 100	49 783	29 417	56 466	3.6
<b>Fish for animal feed and other purposes</b>	–	–	–	–	–

Estimated Employment (2000):	
(i) Primary sector (excluding recreational and semi-professional fishermen):	5 200
(ii) Secondary sector:	-
Gross Value of Fisheries Output (estimates, 2000):	Est. \$US 14.6 million
Trade (2002):	
Value of imports:	\$US 13 424 000
Value of exports:	\$US 14 424 000

## FISHERY SECTOR STRUCTURE

The Republic of Kazakhstan has extensive water resources, with good potential for fish production. Under the former planned economy, fisheries development was not considered a priority. In exploiting water resources, the first priorities were for irrigation sources or for hydropower. Nevertheless, two big industrial state enterprises for fish capture and processing were operating - one for the Caspian Sea and other for the Aral Sea. Also, there were numerous local fish processing facilities handling the catch of local fishermen. For the purpose of fingerlings production 14 big state farms were built.

With the transformation to a market economy, the state management element in fisheries was reduced to basic monitoring of catch quantities. The controls carried out by the former authority, Kazakhstan fish committee ("Kazrybkhoz"), were abolished. Production passed into the hands of joint-stock companies and small local groupings of fishers. (The biggest unit is a joint-stock company "Atyraubalyk" operating in the lower Ural river.)

The transformation process resulted in a sharp decline in fish catches and a reduction in stock size of several valuable species.

### Fish production

According to the Science and Production Centre for Fisheries of Kazakhstan ([NPCRH@itte.kz](mailto:NPCRH@itte.kz)), the freshwater fish production potential of Kazakhstan was estimated to the average of 50 000 t/year .

Fisheries production in Kazakhstan comes mainly from the lower Ural River, and from lakes – Balkhash; Alakol lakes group; Aral Sea – and from large reservoirs – Bukhtarma, Kapshagay, Shulba, Shardara and others. The bulk of fish production was from Ural River and Bukhtarma reservoir (about 59% and 25% accordingly in 2001).

The main species caught are sturgeons (*Acipenser stellatus*, *A. gualdenstaedti* and *Huso huso*) and roach (*Rutilus rutilus*) in the Ural basin; with bream (*Abramis brama*), carp (*Cyprinus carpio*) and sander (*Sander* (former *Stizostedion) lucioperca*) in other waterbodies.

**Table 1.** Average catch in the main fishing places of Kazakhstan (1998-2001)

Source	Quantity (tonne)	Percentage
Lower Ural river of which sturgeons	22 220 250	61.5
Bukhtarma reservoir	7 540	20.9
Balkhash lakes (including lower Ili river)	3 710	10.3
Alaklol lakes group	790	2.2
Kapshagay reservoir	600	1.7
Aral Sea	320	0.9
Shardara reservoir	280	0.8
Shulba reservoir	140	0.4
Other waterbodies	510	1.4
Total	36 110	100

Source: Science and Production Centre for Fisheries of Kazakhstan (SPCF)

In the northern Caspian Sea, fish catch was taken by 18 seiners. There were also 16 motorboats with drift nets, each boat setting 20–25 fishing nets of 700–800 m length. At present, there is no sea fleet operating in the northern Caspian Sea and fishing is limited to the narrow near-shore zone only.

Prior to the economic regress, the state company "Aralrybprom", together with 14 collective farms, were operating in the Aral sea, giving employment to 20 000 persons (40% of local working population). At present, there are three joint-stock companies (Tastubek, Akbastay and Ackespe) operating with 25-30 motorboats.

On the Bukhtarma and the Shulba reservoirs, fishing is carried out with seines and gill net, with about 3.5% caught by sport fishing. On the Kapshagay reservoirs, fishing is in the hands of about 780 fishermen with 180 motorboats, 28 seines and 3 640 nets.

On Balkhash Lake, there are about 440 fishermen with 46 seines, 6 400 nets. Hook-and-line are also used.

On the Alaklol lakes group, fishing was carried out by about 335 fishermen with 26 seines and 2 510 nets.

There were 6 seines and 216 nets on the Shardara reservoir.

On the lower Ural River, the catch comes from a joint-stock company "Atyraubalyk" and cooperatives "Atyraubaluksoyuz".

## Aquaculture

More than 95 percent of the state fish farms were privatized as part of the economic changes that followed the break up of the former USSR. Their production fell from 8 800 t in 1991 to 500 t in 2000.

Salmonid culture (mostly *Oncorhynchus mykiss* and *Salmo trutta*) in artificial ponds is limited because of water quality problems and high prices for fish feed, resulting in high fish prices.

### ***Fingerlings production***

State farms produce fingerlings of valuable species for re-stocking natural water bodies. The goals are to:

- maintain fishery viability by stabilizing the stocks of valuable species;
- increase the number of rare and threatened fish species; and
- supply fingerlings for fish farming.

There are 14 state farms to raise fingerlings (mostly carp (*Cyprinus carpio*) and silver carp (*Hypophthalmichthys molitrix*)) and 2 state farms to raise fingerlings of sturgeons. Only two of these farms work at full capacity. Production of the others is low.

## Employment

Freshwater fisheries is a major activity in the vicinity of the country's main water resource, providing full- or part-time employment and income (Tables 3).

Increasing unemployment in rural areas has resulted in increased numbers of fishermen and poaching. Annual catch per fisherman has fallen from 15–20 t the late 1980s to 2–4 t in 2000.

Table 3. Number of employed in the fishing and fish breeding area

Year	State enterprises, thousands persons	Private ownership, thousands persons	Total, thousands persons	% of total employment
1996	N/A	N/A	3.9	-
1997	N/A	N/A	3.4	-
1998	0.6	4.6	5.2	0.2
1999	0.5	5.1	5.6	0.2
2000	0.7	4.5	5.2	0.2

Source: Statistical yearbook of Kazakhstan, 2001

## Fish utilization

At 3.5 kg, the average annual *per capita* consumption of fish in Kazakhstan is low. Most fish is consumed fresh, frozen or salted. The canned products available in the market are mainly imported. With the sharp decline in food consumption in recent years, related to increasing poverty, the domestic demand for cheap fish has significantly increased. Canned, frozen and salted oceanic fish products are imported, mostly from Russia.

Since 2000, imports of fish exceeded the domestic production not only in quantity but also in prices which for imported fish were 2–3 times higher than prices for domestic fish products. Thus, in urban markets, fresh carp and sander cost about US\$ 1–2/kg, bream about US\$ 0.3–0.8/kg, salted common herring about US\$ 2–3/kg, and smoked Atlantic mackerel about US\$ 4–5/kg. Nevertheless, it satisfies to some effect the demand in large and medium-sized settlements.

Fishery product exports increased from between 15 900 and 18 200 t in 1998–2000 years to 29 417 t in 2001. Sturgeons and caviar are exported to European countries. Other exports go primarily to Russia and Kyrgyzstan.

## **FISHERY SECTOR DEVELOPMENT**

The fisheries for the Northern Caspian have a good perspective with large stocks of sprat. It is expected that some fishing vessels will be bought to exploit these stocks in the near future.

The traditional farming of fish is expected to diversify and possibly expand by commercial cultivation of more valuable fish species (especially sturgeons and trout, and perhaps sander) with better market prospects. For the fisheries sector, sustainability is expected to be reached through improvements in administration governance and economic incentives (e.g. moderate taxation and micro-credit for fish farms). Commercial aquaculture in natural lakes has good prospects. The state could offer support and promote pilot projects for newcomers through national and international funding.

The water supply of the Kazakhstan main fishery areas depends on water offtake regulation and water pollution, including need for cooperation with neighbouring countries sharing water resources.

The future development of the fishery industry will depend on the ability of all stakeholders to adapt to the new conditions imposed by Kazakhstan's transition to a market economy, provided there is sufficient support and assistance coming from the state and possibly through foreign investment involvement. However, increasing water pollution (from oil, industrial and organic pollutants) is liable to constrain fish production in the future.

## **RESEARCH**

Fisheries research is carried out by the Department of Hydrobiology and Water Toxicology of Institute of Zoology (Almaty), which focuses on water quality, bioproductivity of inland water bodies and state of forage reserves for fish, and by the Department of Zoology and Ichthyology of Kazakh National University (Almaty), which is responsible for training in the area of ichthyology and hydrobiology and research in the field of conservation of fish diversity, biology and systematics of fishes.

## **Education**

Higher education for the fisheries sector was carried out from 1960 until 1994 by the Department of Zoology and Ichthyology of Kazakh State University (now Kazakh National University (KazNU), Almaty) and Agricultural Colleges (Almaty and Astana). In 2000, higher education was carried out according to specialization: Fisheries and Hydrobiology (about 25

undergraduates). Since 2001, it has been Ichthyology, Fisheries and Fish Industry. Specialized secondary education has been available in Fisheries and Fish Breeding.

### **FOREIGN AID**

In 1996, Danish fishermen had given US\$ 200 000 for fishing gear for Aral fishermen (under the programme: "From the Kattegat to the Aral Sea").

Personnel from Kazakhstan have studied in Israel under a USAID programme (MASHAV).

Since 2000, the European Union is supporting the research project "Aral Sea". Also, since 2002, the World Bank is executing a project "Rehabilitation of the downstream of the Syrdarya River and the construction of the Kok-Aral dam".