



COUNTRY REPORT OF THE REPUBLIC OF ARMENIA

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Official name - Republic of Armenia

Armenia is located in the Southern Caucasus and is the smallest of the former Soviet Union republics. It is bounded by Georgia on the north, Azerbaijan on the east, Iran on the south, and Turkey on the west



Administrative and territorial unit - marz/district (11 marzes in all including Yerevan city)



Capital of Armenia - Yerevan: one of the oldest cities in the world. The earliest recorded settlement there dates back to 782 BC



- *Government Type:* **Parliamentary**
- *Independence:* **1918 (First Armenian Republic);
1991 (from Soviet Union)**
- *Constitution:* **Approved in November 2005 referendum**
- *Head of the state:* **President**
- *Territory:* **~ 30 thousand square km**
- *Population:* **3.5 million, 96% which are Armenians**
- *Religion:* **Christian, Church - Armenian Apostolic**

Terrain: high Armenian Plateau with mountains; little forest land, fast flowing rivers; good soil in Araks River valley

• ***Natural Resources*** - small deposits of copper, iron, bauxite, molybdenum, gold, silver, lead and zinc

• ***Elevation extremes;***
 lowest point: Debed River 400 m
 highest point: Mountain Aragats 4,095 m

• ***Climate:*** highland continental, hot summers, cold winters

• ***Annual rainfall:*** from 600 to 800 mm



Armenians were the first in the world to adopt Christianity as a national religion in 301 AD



405 A.D. – creation by Mesrop Mashtots of the Armenian Alphabet –the basis of written language



**The biblical mountain Ararat is in the center of historical Armenia.
According to the Bible after the Flood Noah's Ark landed on the
top of the mountain Ararat.**



Armenia is a real open-air museum both concerning monuments of nature and the cultural heritage - a country open for all.



ECONOMIC SUMMARY

<i>Currency</i>	Dram
GDP	13,460,000,000 (USD)
<i>Agricultural GDP</i>	24.1% of GDP
Import	\$US 1 988 000 for 950 tones-natural gas, petroleum, tobacco products, foodstuffs
Export	US\$ 3 171 000 for 789 tones - diamonds, scrap metal, machinery and equipment, copper ore, wine, brandy etc.
<i>Industry and construction</i>	24.5%
Trade	17.3%
Education	3.4%

WATER AND FISHERIES RESOURCES

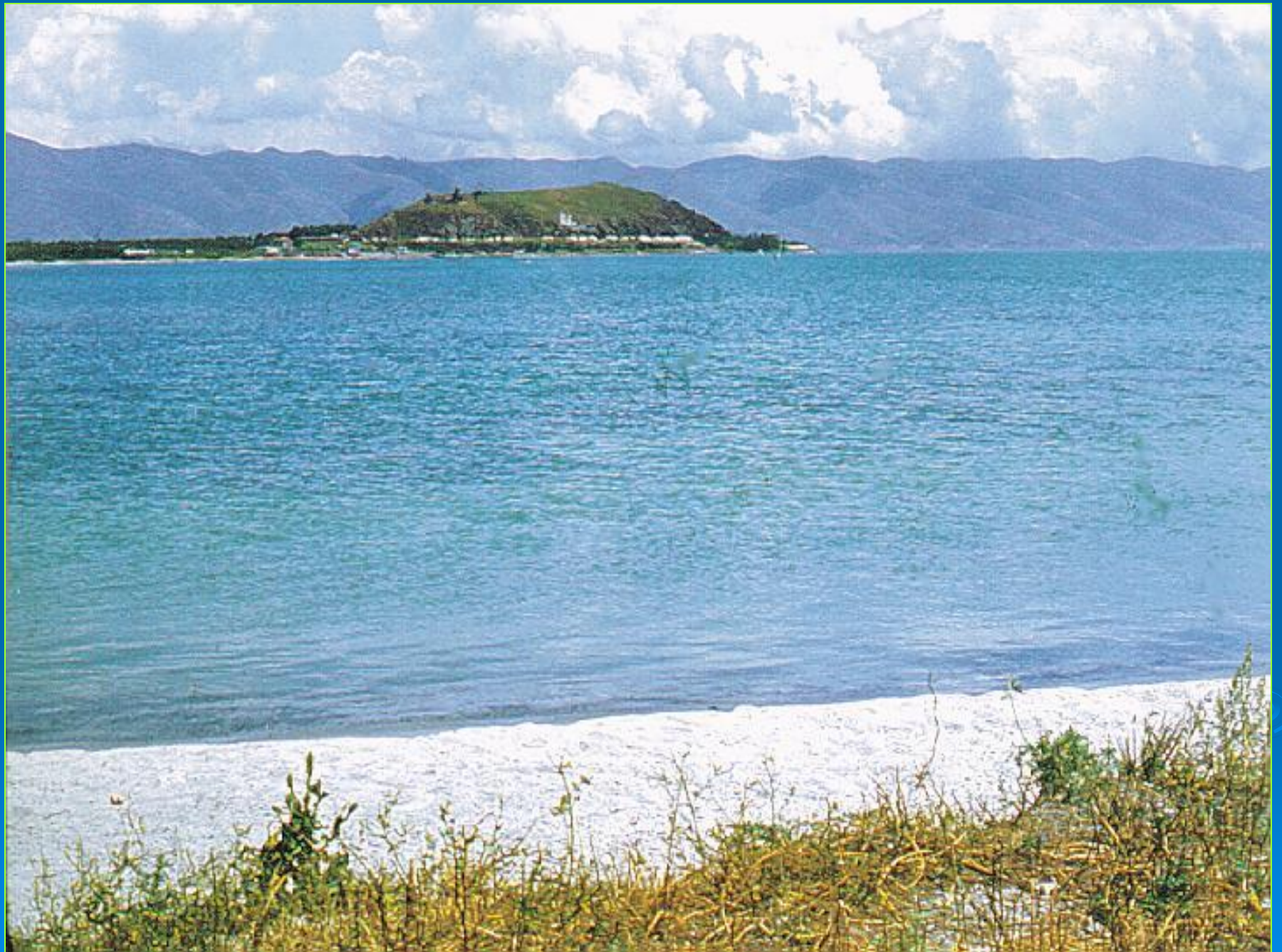
Water Area:	1 400 sq. km
Pond Area:	1 265 sq. km
Major rivers:	15
Major natural lakes:	10
Fish Species (including subspecies):	57
Commodity Species:	15

The largest natural water reservoir is Lake Sevan, which is higher than 1 900 m above sea level. It is fed by 28 streams

Main Fish Species in Lake Sevan are Sevan trout with its 4 subspecies (2 of which we consider to be disappeared), whitefish, carps and rainbow trout.

WATER RESOURCES OF ARMENIA

<i>RIVER</i>	<i>Length Within Armenia (km)</i>	<i>LAKE</i>	<i>Surface Area (km)</i>
Akhuryan	186	Sevan	124 000
Hrazdan	146	Arpi	2 200
Vorotan	119	Sev	192
Arpa	90	Akna	50
Kasakh	89	Ayghr	16
Vedi	58	Kari	12
Voghji	56	Kaputan	10
Azat	56	Parz	3
Yegheris	54		
Meghri	32		
Darb	20		



FISH PRODUCTION IN ARMENIA

Fish production has a strategic consideration for Armenia and must be implemented to meet two main achievements – ecological and economical.

Ecological: *To support and conserve the appropriate level of Lake Sevan fish resources.*

Due to a governmental project implemented in last century, in Lake Sevan have been observed a deal of undesirable changes, which were indication of breach of lake natural ecological equilibration (eutrophication process) . As a result a part of lake fish species have disappeared or are under the danger of disappearance. Besides there exists a problem of uncontrolled fishery and poaching in lake, as fishery is the main source of income for the population of that region.

Economical: Armenia has very limited land resources. Besides there is little percentage of arable areas in land balance of the republic.

Development of fish production will permit to solve a range of social issues such as:

- to increase the incomes of rural population in vulnerable regions (sub-mountainous, mountainous, frontier), which have not got appropriate land resources for agricultural cultivation;
- to reduce unemployment in the republic by establishing of new fisheries farms and thus creation of new work places which in its turn will lead to the reduction of migration;
- to expand the production of commodity fish volume to meet republic population needs.
- to make possible decreasing of fish cost by the way of improvement of technical management.

QUANTITY & CAPACITY OF FISH PRODUCTION UNITS

- *Number of fish farms :* ~ 200
- *Total Water Surface for Fish Farms:* ~ 2700 ha
- *Fish Production Capacity of Water Area:* ~ 2 t/ha
- *Production capacity of fish farms:* 20-100 t/year
- *Fish Production volume:* 5500-6000 t/year

- 30-35 % of which are herbivorous;
- and 65-70 % - carnivorous.



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CULTURED SPECIES

There are about 40 fish species and their subspecies in natural and artificial water areas of Armenia.

Only 15 of them are used for production purpose.

Endemic species:

Sevan trout (*Salmo ishchchan*) with its 2 subspecies: Gegharkuni (*Salmo ishchchan gegarkuni*) and Summer Bakhtak (*Salmo ishchchan aestivalis*)

Exotic Species

- Rainbow trout River trout (*Salmo irrideus*)
- Whitefish (*Coregonus lavaretus*)
- Japanese carp (koi)
- Sturgeons: Syberian sturgeon (*Acipenser baeri*), Russian sturgeon (*Acipenser gueldenstaedtii*)
- Common carp (*Cyprinus carpio*)
- Chinese Carps (Silver carp - *Hypophthalmichthys motitrix* , Grass carp - *Ctenopharyngodon idella* , and Bighead carp - *Aristichthys nobilis*)
- African catfish (*Clarias gariepinus*)

80 % of commodity fish are salmons and sturgeons.

SEVAN TROUT



WHITE FISH



KOI



CARP



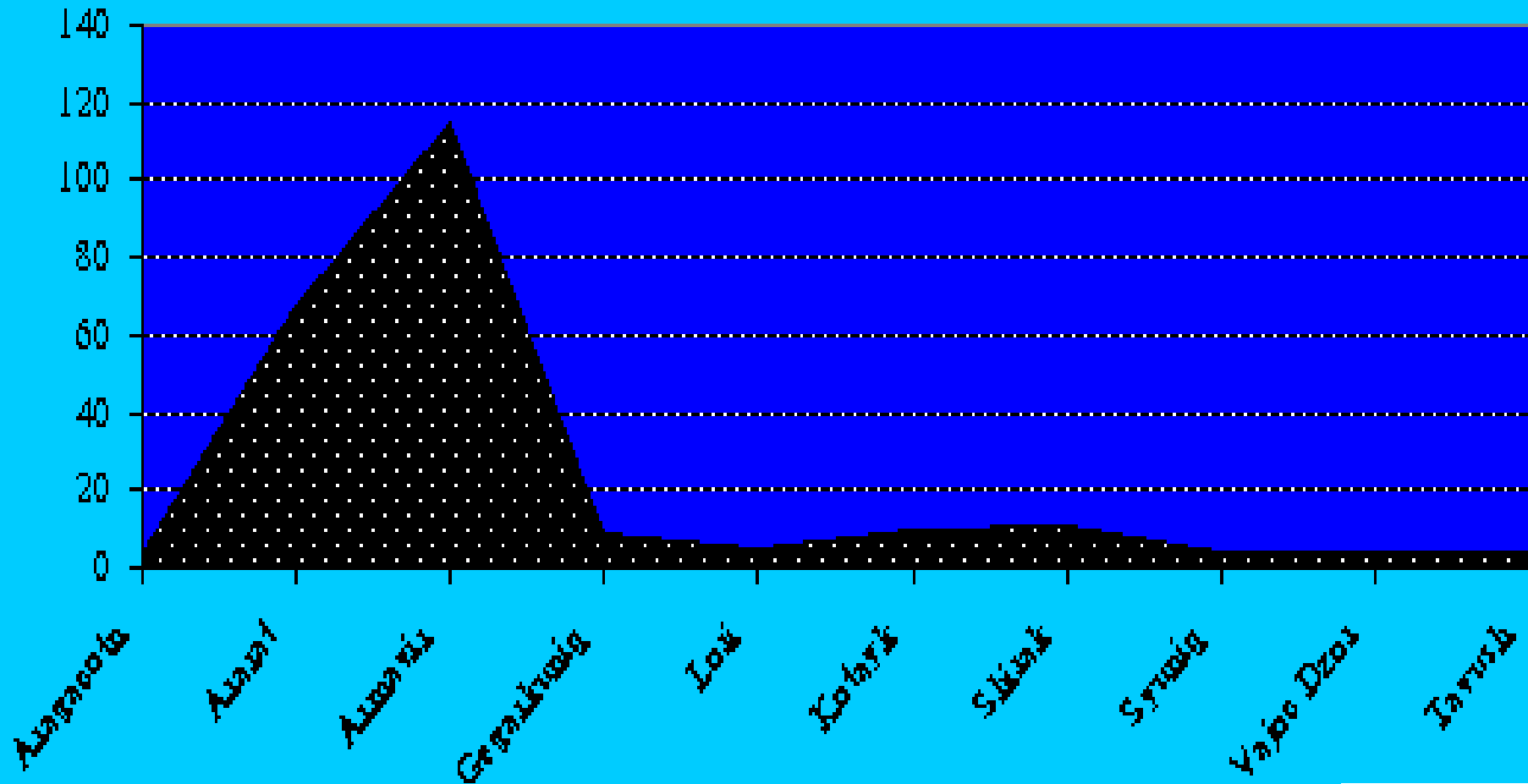
COMPOSITION OF MAIN SPECIES

- *Rainbow trout* : 1600–1800 t
- *Chinese carps* : 400-500 t
- *Sturgeon* : 200-250 t
- *River trout*: 100-150 t
- *Sevan trout* : 80-100 t
- *Japanese carp (koi)* : 5-10 t

About 90 % of the production they realize in alive state. There is some export of frozen, processed fish, caviar to USA, Russia, Georgia, Ukraine etc.

GEOGRAPHIC DISTRIBUTION OF FISH FARMS BY REGION

Number of Fish Farms



Regions

CONSTRAINTS & ISSUES OF CONCERN

➤ Lack of technical knowledge and skilled manpower:

At present only a small quantity of farmers are professionals and use modernized techniques and approaches .

➤ Difficulties connected to realization of production:

In free market condition only some farmers have regular buyers. Recently there is a tendency of association or collaboration establishment on the base of contract, which helps small scale farmers both acquire feed and sale their product.

➤ Lack of policies for exploitation of the fisheries resources:

➤ Calculations have shown that even extensive exploitation of the republic water areas, will permit to increase commodity fish production approximately 5 times. Moreover in the case of application of intensive technologies this parameter will be raised even 4 times.

Biodiversity degradation:

Due to lowering of water level of Lake Sevan some of subspecies of Sevan trout (endemic species) – bojak and winter bakhtak have disappeared. Other two subspecies – gegarkuni and summer bakhtak, as well as white fish and other species of lake are under danger of disappearance because of uncontrolled fishery and poaching.

Lack of legislation and governmental support

On one hand in its policy statement „ Programme on National Food Security Policy” the government states that so called „Food basket” should contain 30 gr of fish per day, 11 kg per year. With a population of about 3 million people, this means that the government aims to increase Armenia’s annual fish consumption to more than 30.000 t. Actual fish consumption is much lower than 11 kg/person/year.

On the other hand in terms of importance the Armenian fish production as a part of total Armenian agriculture is modest. This must be the reason that so far the Armenian government has not dedicated special attention to fish farming and fisheries. However the Ministry of Agriculture is interested in developing the local private fish farm industry.

There are many points which need to be clarified and improved regarding biodiversity conservation and water resources management, commodity fish production domain clarification and creation of favourable conditions for investments etc.

CONCLUSION

- Introduction of modern intensive technologies and improvement of manpower in fish farms combining with teaching of the personal;
- Stimulation of aquaculture development especially in vulnerable (mountainous, submountainous, frontier) regions of the republic;
- Adoption of new effective strategy for fish culture; development *(contribute to rational and effective exploitation of existing ponds as well as use new water areas for fish farms; simplify the import, export and application process of impregnated material; expand commodity fish production scale; increase production capacity of farms);*
- Collaboration with international organizations and foreign advanced fish farms;
- Raising awareness among stakeholders related to fishery and aquaculture;
- Applying necessary measures to conserve biodiversity and prevent degradation.

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SHOKRAN
THANK YOU