



International  
Dialogue for  
Environmental  
Action



AZƏRBAYCAN RESPUBLİKASI  
TƏHSİL NAZIRLIYI



Azərbaycan Respublikası  
Ekologiya və Təbii Sərvətlər  
Nazirliyi



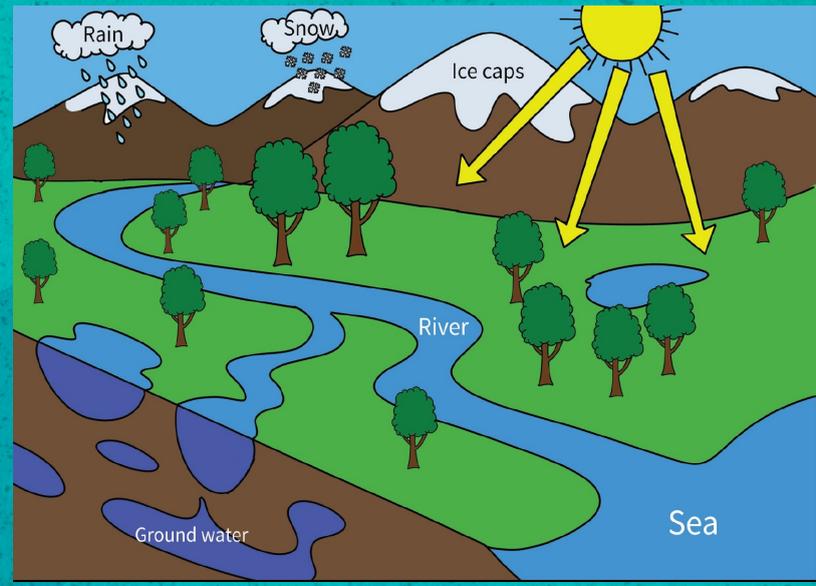
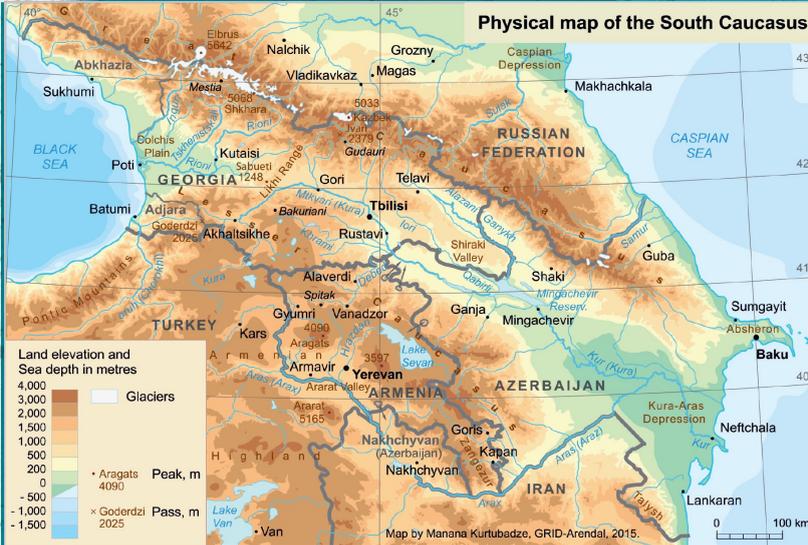
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# Rational Use of Water

IX-XI Grades



# Physical map of the South Caucasus



# Rational Use of Water and Water Conservation

The world's physical map shows that most of the planet is covered with water. More precisely 71% of the Earth is covered with oceans, seas, rivers, lakes, wetlands, and ice and snow cover. There is also seemingly invisible groundwater, which accumulates deep underground.

Though there is an abundance of water, only a small portion, just 2.5%, is good for use by man. Most of the Earth's water (97.5%) is saline, and not all of the fresh water (estimated to be 35million cubic kilometers) is accessible for use. This is due to the fact that a large amount of Earth's fresh water (68.7%) is 'trapped in' glaciers and is not accessible to humans. Groundwater accounts for 30% of the total amount of fresh water, though a large portion is not accessible to man even with the use of modern technologies. The remaining amount of fresh water consists of surface water, including rivers and lakes, and comprises only 0.3% of Earth's fresh water. This is the volume of water that is currently intensively used by humans.



# Rational Use of Water and Water Conservation

At present there is hardly any type of human activity for which water is not required, whether it be agriculture, extractive industry, production of food, paper, medicines, fertilizers or even computer circuits. People need water to maintain their health, they need it for their personal hygiene and recreational purposes. Water is also used for transportation.

As you can see, the water that we use for various purposes is an economic product. However, as water is essential for life, we cannot use the same approach as we apply, for instance, towards forest products, iron ore or natural gas. Therefore, access to potable water and sanitation is recognized by United Nations Organizations as a fundamental human right. In turn, the right to potable water and sanitation is also crucial to achieve other fundamental human rights.



## It Is Interesting

To better address the problem of water shortage, we can use the following comparison: In countries where there's absolute water scarcity, only one fifth of the amount of water accumulated in a single Olympic pool can be used per capita. Water shortages in the country can be compensated by importing products that require large amounts of water to produce and cultivate. However, this leads to an increase in dependence on the other countries, not to mention the high prices of imported products, which in turn leads to an increase of poverty.



# Rational Use of Water and Water Conservation

In search of a solution to the problem, we may take the following two options into consideration: 1) Increase water intake from existing bodies of water, and 2) Regulate demand on water through enforced water conservation. Water conservation refers to such measures that aim to reduce the demand on water, improving the efficiency of water use and reducing loss due to less efficient water use. While the first option requires significant investments to build new water infrastructural facilities (water reservoirs, water distribution network, etc.), the second option makes it possible to save and reasonably manage the water that is produced in the existing water supply network, providing remedies for losses due to leakage or other ineffective uses. Certainly, when compared with the first one, the second option is more reasonable and attractive.

Virtually every area of human activity has potential for water to be saved through introducing new and modern technologies. For instance, in agriculture, the introduction of drip and sprinkler irrigation systems, and in the domestic sector through filtering used water and recycling it, and by introducing water saving technologies (water saving domestic appliances: washing machines, faucets, showers), as well as advocating behavior change by increasing people's awareness of pertinent issues (fixing damaged pipes at home, turning off water when not needed, and taking shorter showers), and receiving fresh water from sea water by desalination.

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# Rational Use of Water and Water Conservation

## Do It Yourself

- ◆ Obtain information on the internet about the Aral Sea catastrophe and discuss the causes and effects of its degradation with your classmates. Make a poster or informational graphic (presentation/info graph) in the classroom detailing issues impacting the Aral Sea and how these concerns were caused.
- ◆ Discuss water saving opportunities (including technologies) in agriculture, households, and industry with your friends and classmates. Understand the main issues hindering utilization of these opportunities.



