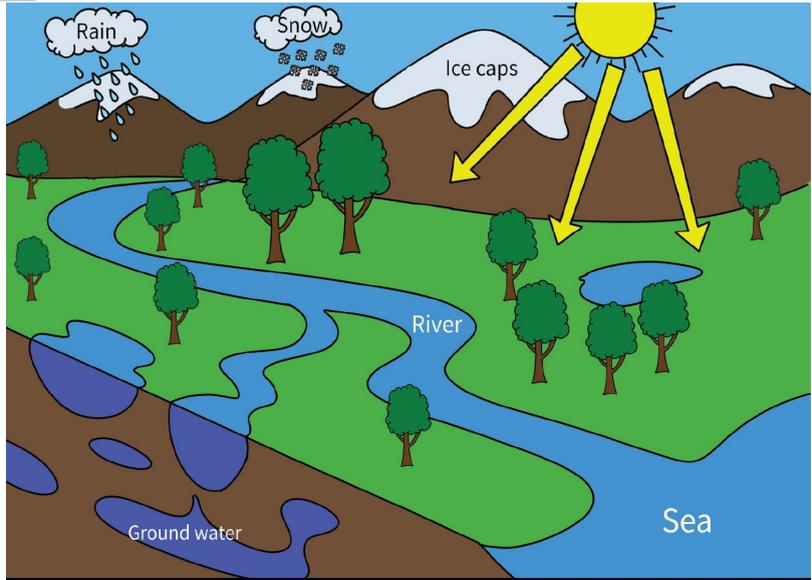
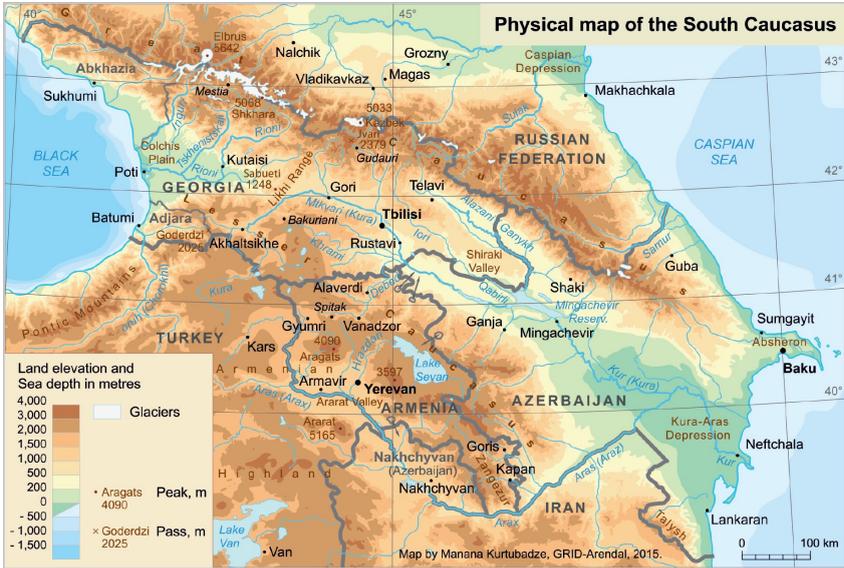




# Rational Use of Water

VI – VIII Grades







## Rational Use of Water and Water Conservation

If we take a glance at a physical map of the world, we will notice that most of our planet is covered with water. 71% of Earth's surface is covered with water, which includes oceans, seas, rivers, lakes, wetlands, ice and snow cover, as well as invisible groundwater. Since only 2.5% of the world's water is fresh, just a small amount of this water is actually available for human use. The rest of it is the salty water found in seas and oceans. Most of the fresh water is trapped in glaciers and deep in groundwater and is inaccessible. Essentially, humans use only 0.3% of fresh water, which is found in surface waters, such as rivers and lakes.



Humans have used water for growing agricultural plants, generating electrical power, and manufacturing. Although humans found more effective ways to use water through technological development, water is still used for the same purposes as it was used centuries ago in agriculture, as a force to run grain mills and irrigate crops, as well as for maintaining health and facilitating recreation.

Water is also used in transportation. Most cargo worldwide is transported on huge ships. Large rivers are also used for transportation purposes.



### It Is Interesting

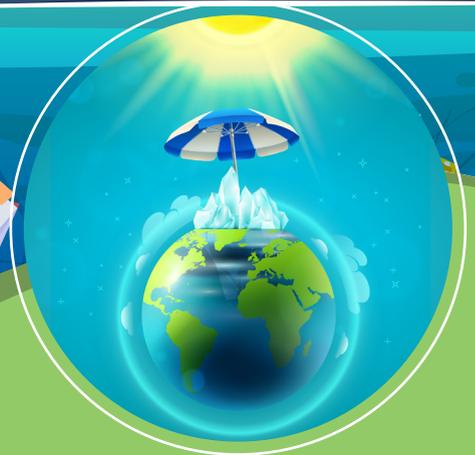
The River Danube and its tributaries are extensively used for transporting cargos. As recently as 2014, more than 40 M tons of cargos were transported on the River Danube and its tributaries.

Cargo ships and freight carriers transport large quantities of cargo, including various ores, metallurgy products, agricultural and forest products, petroleum products and chemicals. The River is also used to transport passengers between cities and countries.

Rapid growth of the population and intensive industrial and agricultural development for over 150 years put big pressure on water resources. Water use has exponentially increased across the world. Along with the increased water use, water resources have become more polluted as a result of human activities. In some cases, the degree of pollution is so high that water cannot be safely used either by humans or other living organisms. By polluting fresh water, humans further decrease availability of this essential resource.

This problem is worsened by inefficient water use. Water is lost in large quantities from potable water supply systems, agricultural irrigation canals, and in plants and factories.

Water is also lost through leakage from damaged faucets and broken water systems in individual residences.



Historically, the knowledge that mankind has obtained through observation and experience, gave a fairly complete picture of how resources and environment are interconnected. It was this knowledge that facilitated the development of water and environment protection policies. “Do not damage” is a key guiding principle that mankind has developed, applying both to the environment (nature) and to water resources. It is accompanied by scientific and technological progress, invention and introduction of new technologies. All this makes it possible for mankind to overcome problems related to the shortage of water.

Virtually every area of human activity can be modified to save water. For instance, it is possible to introduce drip irrigation systems in agriculture. In regard to potable water, it is possible to minimize leakage in water systems and the inefficient use of water. Modern technologies also make it possible to treat used water and reuse it. One of the most significant opportunities for change is increasing people’s awareness of issues related to water conservation.

Everyone needs to recognize simple principles, such as the importance of repairing a damaged water pipe, or turning off water faucets when not in use, reducing duration of water use and the quantity of water used by taking shorter showers and using less water in the bath and to wash dishes. All in all, there is a great opportunity to save water and prevent water related crises.



<http://waterfootprint.org/en/resources/interactive-tools/product-gallery/>  
(in English)



## Water Print

Water footprint is the amount of water that is used to produce various products and provide a variety of services. It may be calculated for each available product, company, individual, city, or whole country. A personal water footprint is the amount of water which one person consumes in his/her life, including the water used to prepare food or to produce the products you consume.

A water footprint helps us to calculate how much water each of us consumes. Consequently, we can strive to reduce the amount of water we use, thus reducing our water footprint.

## Do It Yourself

- Together with your teacher become familiar with the information available on the link provided below.
- Calculate your water footprint.
- Based on your water footprint, identify how to reduce the quantity of water you use.
- Choose your favorite consumer products and make a presentation about their water footprints.

[WWW.KURA-RIVER.ORG](http://WWW.KURA-RIVER.ORG)