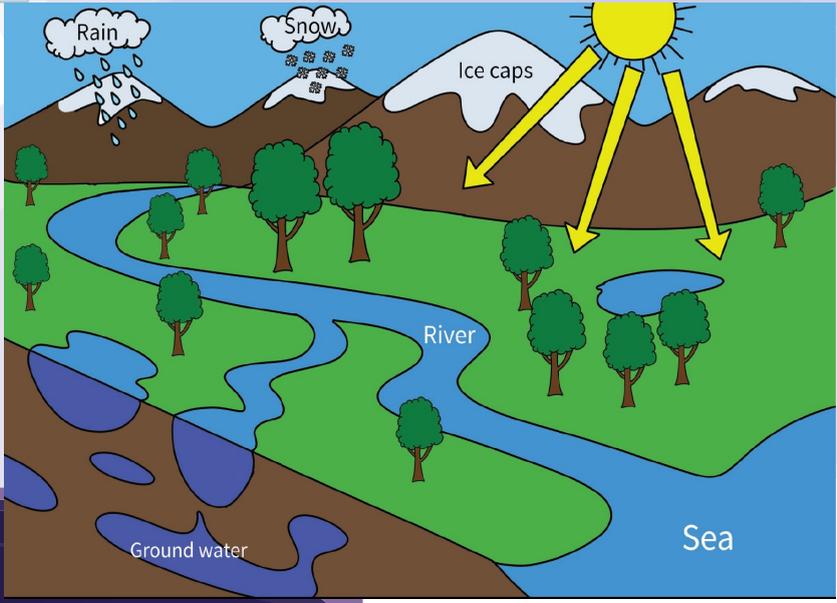
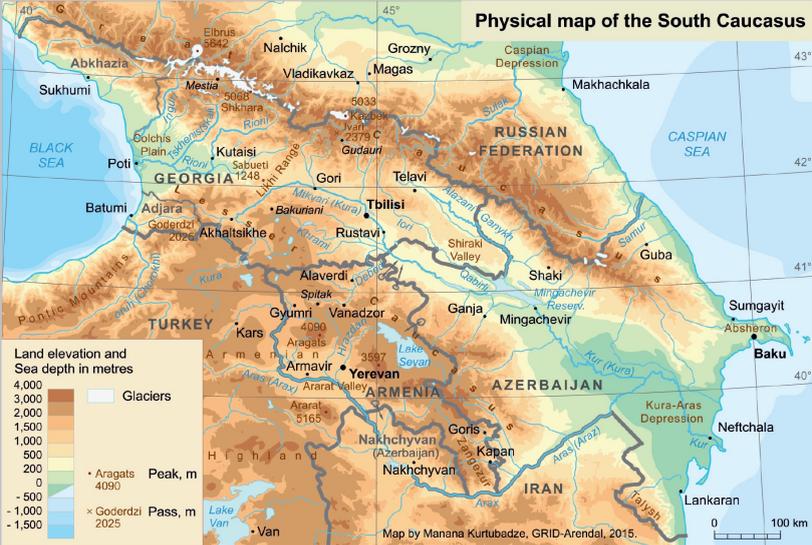




Geography of river basins

VI-VIII Grades

Physical map of the South Caucasus



Geography of river basins

“River” and “River Basin” are terms with which you are probably familiar. Let’s see what the difference is between them. We are very familiar with and understand what a river is; it is a flow of water which begins at a high point (mountain), travels to a plain and flows into other rivers, a lake, a sea or an ocean. Rivers are usually fed by rainfall and snowmelt, as well as by ground waters. As a rule, a river basin consists of several sub-basins (for instance, Ganikh, Rioni River or Aras River).



Water is in continuous movement on the Earth. It transfers from one physical state into another (solid - ice, liquid, and gas - water vapor). The Sun makes water move. When water naturally transfers from one state into another, it goes through a process, which is called the water cycle. The water cycle is a continuous process and it never stops. The water cycle is very important for nature as river basins and water bodies, such as rivers, lakes, wetlands and glaciers are the result of it.



Some rivers cross the territory of more than one country. Therefore, their river basins are located within the boundaries of different countries. Such rivers are called transboundary rivers (for instance, the Kura River).

A river basin can be conditionally divided into points downstream and upstream of a particular place in the river. The downstream water users, which are towns, villages, businesses, depend on the upstream water users to share clean water. It is easy to understand that if a river is polluted upstream, or if there is excess water intake, that will affect the downstream water users, including those in transboundary river basins.

Water resources are unequally distributed in the world. Some countries have a plethora of water resources while some countries have scarce water resources. Within the boundaries of a country it is not unusual to find that water is unequally distributed. For instance, Western Georgia has much more water resources when compared with Eastern Georgia.



Interesting Facts

Groundwater forms a significant portion of the fresh water resources on Earth. The majority of the Georgian population uses groundwater as potable water. Groundwater accumulates beneath the surface of Earth through seepage of water drops through porous soil layers and into deeper layers through downward force until it reaches impermeable rock and starts accumulating. The water that accumulates in these saturated layers is referred to as ground water. For instance, spring water and well water are ground water. Groundwater might have accumulated over thousands of years.



With the rapid increase in population and the agricultural and industrial development in recent times, the demand on water resources has invariably increased. Due to this, many countries all over the world face a scarcity of water resources. Continuing climate change worsens the situation.

Considering the existing problems, the use of water resources should be changed. It is necessary to introduce use of water resources that is focused on satisfying not only human beings with a necessary quantity of water, but also all water users, including ecosystems within the natural environment. An adequate amount of water must be assured and water quality and the effective use of this resource must also be considered. Water must be used in a way that will allow future generations an opportunity

to enjoy clean water in quantity. Protecting the resource and planning to assure future availability of water is called sustainable use or management of water resources.

It is imperative that all users in the river basin (general population, businesses, farms, etc.) participate in water resource management. Meeting the needs of all water users within a defined environment should be a priority in planning for improved water usage and sustainable management.



DO IT YOURSELF

- 💧 Use the map and locate major river basins and their sub-basins in Georgia and Azerbaijan.
- 💧 Use the map to locate Georgia's and Azerbaijan's transboundary rivers.
- 💧 Choose a river basin in Georgia or Azerbaijan on the map and identify the users of this river basin.
- 💧 Make a list of the stakeholders that you think should participate in solving the issues related to water use within the basin area. Share your opinions with your classmates. Discuss the issue with your classmates and your teacher.





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