WATER ACCOUNTS IN ARMENIA

What are water accounts?

Water accounts are intended to provide the user with up-to-date, complete, comparable and affordable information on the availability, effective management, consumption and renewable volumes of water resources in the reporting year. Water accounting comprises a number of different accounts that capture information on physical and monetary flows of water, and the availability of water resources to reflect the integral role that water plays in human life, economic activity and environmental integrity. Accounts are expressed in economic indicators. for example, the efficient use of natural resources and the added value derived from them, the main users of which will be the policy makers and decision makers of the sector

Water accounting is an accounting approach that records, as completely as possible, the stocks and flows of water within and between the economy and the environment.

The integration of economic and hydrological information enables a consistent representation of the role and importance of water for the economy and the impact of the economy on water resources. The system of environmental-economic accounts for water will make it possible to compile a list of internationally accepted recommendations and measures that will guide economic activity.

It supports analyses of the role of water within the economy and of the relationship between the environment and water-related economic activities.

All Information on water accounts:
www.armstatbank.am

Water accounts in Armenia

Since 2015, Armstat has taken over the implementation of the "Water Accounts" component from the Environmental Satellite Accounts in the National Accounts System of Armenia. Armstat closely cooperates with the RA Ministry of Environment, the RA Ministry of Economy, Water Committee, “Hydrometeorology and Monitoring Center” SNCO and other relevant stakeholders in the preparation of water accounts.

Water accounts address to water data gaps and deficiencies in water resource management in Armenia, which also partly relate to the availability of data on water use by type of economic activity, water movement within the economy, wastewater treatment and discharge, as well as the volume and quality of water returned to the environment.

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A picture of Water accounts in Armenia, 2022

Environment

Total inflow
894.8
Upstream basins and aquifers outside Armenia

Precipitation
13,256

Groundwater

3,973.9
RENEWABLE WATER RESOURCES

Evaporation
10,177

Surface water

Total outflow
Could not be calculated due to data gaps
Downstream basins and aquifers outside Armenia

1,419.2
1,652.5
3,072.7
WATER ABSTRACTION

The figures are given in millions of cubic metres per year (mlm m^3/ y).

1 mlm m^3 = 400 olympic swimming pools!

Economy

1,154.5
1,728.1
189.1

923.2
52.9

Agriculture, forestry and fishing
2,077.7

Water collection, treatment, supply
1,729.6

Industry & services*
242.0

152.0
1.0

153.0
Households**

106.3

120.3
14.0
Sewerage

**In the statistics, households are usually not included as an economic sector.

*Industries can be equipped to treat their own wastewater, or use the town's wastewater treatment plant. Water used by hydroelectric power stations is not included.

Environment

928.3
of which: 682.9 from fisheries
Water infiltration into soil, groundwater, run-off into rivers.

600.0
Losses during transit transportation

120.3
Wastewater, of which 44.4% untreated and 55.6% treated

16.1
Direct discharge of untreated wastewater

58.7
Direct discharge of 79.2% treated and 20.8% untreated wastewater

1,723.4
RETURN TO THE ENVIRONMENT

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Legend & Vocabulary

Water abstraction : water withdrawal from surface water (rivers, lakes) or groundwater

Water supply (within the economy and supply to households): water supply is the delivery of water to end users including abstraction for own final use. For example, a manufacturing plant might require 40,000 litres of freshwater a day for cooling, operating, and cleaning its equipment. Even if the plant returns 95 percent of that water to the watershed, the plant still needs all 40,000 litres to operate.
(Source: Eurostat, statistics explained)

Water returned to the environment (direct discharge of treated or untreated wastewater, losses in irrigation canals and water supply network, etc)

Renewable water resources: Renewable water resources are recharged by the hydrological cycle, unless they are overexploited. They comprise groundwater aquifers and surface waters like rivers and lakes. Renewable freshwater resources are replenished by precipitation (minus evaporation - which is the amount of precipitation that is returned to the atmosphere by evaporation), which runs off into rivers and recharges aquifers (internal flow), and by surface waters and groundwater flowing in from neighboring countries (external inflow from upstream areas), minus outflow of surface water and groundwater to neighboring countries and to the sea. Non-renewable water resources are either not replenished at all by nature, or not before a very long time. This includes so-called fossil groundwaters.
(Source: European Environment Agency and ENI SEIS II EAST project)

Water abstracted: the process of taking water from a surface (rivers, lakes) or underground (aquifers, etc.), either temporarily or permanently. Depending on the environmental legislation in the relevant country, controls may be placed on abstraction to limit the amount of water that can be removed. Excessive abstraction can lead to rivers drying up or groundwater aquifers depleting unacceptably.
(Source: European Environment Agency)

Water used: Water use refers to the water actually used by end users (e.g. households, services, agriculture, industry) within a territory for a specific purpose, such as domestic use, irrigation or industrial processing.
(Source: Eurostat, statistics explained)
Figures in the water drop represent the amount of water used by sector.

Water consumed: Consumption occurs when water is "lost" into the atmosphere through evaporation, or incorporated into a product or plant, and is no longer available for reuse.
(*Source: World Resource Institute)*

Water returned to the environment: After use, water can be returned to the environment either through irrigation canals, water distribution systems, or direct runoff. Some of this water may be of different quality depending on the degree of contamination (agricultural, domestic or industrial) and the treatment the water underwent before being returned to the environment. The fraction of water that is not returned to the environment is the water consumed.

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