

About climate change

At the Paris Conference, the scientific community confirmed that carbon dioxide (CO₂) is the primary cause of climate change. Leaders in many countries have begun to implement the recommendations of this esteemed group – cutting production, reducing the burning of all types of fuel, switching to renewable energy sources, and urging everyone to conserve energy.

However, when examining information about atmospheric gases, we see that the Earth's atmosphere consists of a mixture of gases in varying proportions.

The main components are:

- 78% is nitrogen (N₂), an inert gas that dilutes oxygen.
- 21% is oxygen (O₂), which is necessary for respiration and combustion.
- 0.93% is argon (Ar), an inert gas that does not participate in biochemical processes.
- 0.04% is carbon dioxide (CO₂), which is important for photosynthesis, but its excess enhances the greenhouse effect.
- less than 0.1% are other gases: neon, helium, methane, ozone, and hydrogen.

The atmosphere also contains:

water vapor (0-4%), which is the basis of clouds and precipitation;

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Short Article

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precipitation;

- aerosols (dust, volcanic ash, sea salt), which influence climate and cloud formation.

In addition, the atmosphere contains N₂O and other nitrogen oxides, propane and other hydrocarbons, and O₃. Looking at these data, we can see that carbon dioxide is not the only gas in the atmosphere.

Water vapor is 100 times more abundant in the atmosphere than carbon dioxide. Therefore, its existence, origin, and significance deserve closer attention.

The most visible and tangible of these processes are the sources of water vapor.

Two-thirds of the Earth's surface is occupied by seas and oceans. Plants and animals have developed and spread across the remaining third of the land. However, the total area of vegetation is three times greater than the area of seas and oceans. Over the billions of years of the planet's existence, the water cycle between the atmosphere and the Earth's surface has stabilized, and this process has ensured the development and improvement of all life on the planet, including the emergence and development of humanity. Humanity has evolved so much that it has begun to influence natural processes and the water cycle.

Not everything is simple in our world. The cyclical nature of water changes with transitions into different states.

The movement of liquid, vapor, and solid matter is controlled by the seasons and atmospheric conditions. The movement of water in the atmosphere and across the earth's surface, and the process of the water cycle itself, were created simultaneously and in interaction with plants and living organisms on the planet-the movement of the main flow of water in the hydrological cycle, developed by nature over millions of years. Each link in the single chain of the water cycle performs its own work, its own production process: from the incoming raw material of steam, its molecules, clinging to each other, turn into droplets of liquid. Falling onto the soil, this liquid penetrates its depths and dissolves minerals and organic matter. Using its plasticity, it transfers these substances to plant roots, microbes, and all underground and terrestrial life. Each of these consumers, absorbing these substances, releases its moisture into the atmosphere in the form of respiratory

molecules and waste products of vital organs. Together, all these wastes become another and important link in the water cycle and rise back into the

The atmosphere, mixing, and creating a special mixture-a specific substance-forms the raw material for the next stage of the process in the clouds-the material from which droplets of new water-condense. The new condensate, with properties characteristic of each zone, pours out at a specified time and in specified volumes. However, vapors from water and solid surfaces do not perform these functions; they simply circulate-they arrive from the atmosphere and return-without changing their quality or structure, contain no information, do not alter the structure of their molecules, and do not bring any changes to the clouds. Normal vapors are those molecules that originated from a living cell, from a plant leaf.

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