



## Climate and Hydro Engineering

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### Opinion

Every natural phenomenon is the result of one and the cause of the other. So in the hydrological cycle - the water cycle. The waters that have been precipitated for millions of years, in each cycle of the circulation, when moving along the soil and rivers, dissolve minerals and organic matter in themselves, create a specific solution - a building material, and convey it to plants and animals. The construction of plant cells, animal tissues is completed by the ejection, exhalation of the remaining water. But this moisture is of a completely different quality. We see this when we hand over our waste for analysis of our health in the laboratory. Through many chemical and biochemical reactions in organisms and plants, moisture evaporates from the leaf of the plant and the breath of the animal, goes into the sky after a conscientiously performed function. Changing the quality of the waters that have passed through the biota - all organic creatures and vegetation of the planet - is the most important link in the cycle, in which a certain and significant part of the water that falls on land should be involved.

The purely individual molecular structures of the biota of each locality form a special substance in the clouds, which, over millions of years, has developed its properties in a given place at a given time. It was the main raw material in the process of production and distribution of rainfall. The natural regime of precipitation of certain volumes and the frequency of precipitation in each zone have stabilized. The proof of this is the fact of the origin of all areas of the Earth - the tropics and deserts, forests and steppes.

Humanity is changing evaporative conditions on 70 percent of the land. Plowed fields appeared irrigated agriculture, reservoirs, flood spills, squares of cities and

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buildings, ore and waste landfills, roads. Every piece of land taken away from nature becomes a source of artificial evaporation or a reflector of precipitation.

The production of almost all products and the needs of human comfort require washing, cooling, transportation, hardening, watering, drying.

All these waters, after use, are instantly carried back into the atmosphere in increasing volumes with increasing speeds. Evaporation of water that has not fulfilled its natural functions, having returned back to the clouds, has lost the meaning of its existence. A "idle" is being made - what came from the sky, then comes back. A failure in the quality of one link in the water cycle also affects the next link - the process of sedimentation. Evaporation of water that has not undergone chemical and physiological reactions in living organisms and plants can be called artificial evaporation. In nature, such vapors also exist - from stones, sand, from the surface of water bodies, but the areas of such vapors have been from the very beginning of the development of the biota.

The new mechanism of sedimentation with raw materials in the form of the same constant quality, starts to work differently. Perhaps this is the reason why the mechanism of sedimentation is changing. The dates, volumes, and places of precipitation are changing. Charts are reloading. The scale, destructiveness, frequency of natural disasters - cyclones, thunderstorms, hurricanes, and floods - are increasing. Vast areas are flooded, even more, increasing new unnatural fumes. There is a positive feedback: more spills - more evaporation.

Considering the reasons for the increase in the frequency and destructiveness of floods, it can be assumed that almost all of them are the result of an increase in the bottom of the rivers. Especially near settlements and cities and downstream. The explanation for this is simple - for many years the rivers are clogged with garbage and waste, forming

underwater dams. With a certain excess of precipitation, the waters do not have time to pass these obstacles and the waters overflow their banks, washing away and flooding everything in their path.

Existing dredging equipment is out of reach for many coastal farms and cities in terms of cost, metal intensity and energy consumption. All technological processes of bottom sediment excavation are carried out by powerful power units. For the transfer, installation and strengthening of the river bed at a given place, even more effort and fuel are required. The flow of the river itself represents a force that must constantly be overcome.

Based on several patents, a completely new principle has been developed for dredging rivers. The device has a power plant, but orders of magnitude smaller than these dredges. Technological operations are performed by the movement of water itself. Therefore, metal and energy of such volumes are not needed here. Underwater Universal Machine (PUMA) for deepening the bottom of rivers. An animated video is presented, which schematically depicts its action in dynamics. Above two vertically arranged parallel walls - conditionally shown as transparent - there are 3 main compartments. Control cabin, power unit with engine and generators. A ballast tank that can be quickly filled with air or water. The capacity between the walls is limited by the bottom of the compartments and the bottom of the river. Between the walls, the bottom and the bottom of the river, an enhanced river flow is created from back to front. Front this flow is controlled with a cross flap. Keeps afloat due to the air in the ballast tank. If necessary, this container is filled with water and the device sinks to the bottom. The river flow is constrained and intensified between its side walls. By changing the angle of inclination of the transverse damper, the entire flow is directed to the bottom of the channel. The washed out part of the bottom sediments rises and is carried away downstream. The movement of the device is controlled by the change in water in the ballast tank and by the flow of the river itself. If the flow strength is insufficient, the lead screw located at the rear of the device can be connected. After one pass along the bottom, the need for further deepening is determined and the machine, rising to the surface, returns

to its original position by means of a lead screw and washes away the second or adjacent layer.

The picture shown shows the basic principle of the new underwater machine, based on the use of current and water. Here it is possible to add all known devices for underwater work, for example, dredgers and other devices for profiling the bottom of reservoirs. The addition of a machine with a stronger power plant can make it possible to clean and process the bottom of lakes, marshes and seas.

But it is more rational to apply the principle to create new underwater technologies for lifting sunken objects, repairing underwater structures, processing bottom sediments, for example, gold mining without lifting materials to the surface.

But the most important effect of using the new principle is the prevention of floods, by reducing artificial evaporation, which adversely affects the climate. The cost, metal consumption, energy consumption are orders of magnitude less than existing analogues. The availability of the manufacture and use of such machines will allow artificial evaporation by volume is 70 times more carbon dioxide goes into the sky.

The misdirection of human efforts to save the climate is ruining the future of the planet. To stop climate change, it is necessary to return water to its natural purpose - to reduce artificial evaporation and return the quality, volume and speed of natural evaporation to the water cycle. This is the only way to save life on the planet.

Our planet is a boat in which mankind floats. In the bottom of the boat there is a "hole", which is constantly increasing. So the fight against carbon dioxide by reducing carbon dioxide emissions is scooping up water by various means. Spending time and effort on the fight against carbon dioxide and various environmental protection measures lead to a global catastrophe because they distract from the necessary actions-from "closing the hole". I invite everyone who can master and understand the essence of the proposed idea to take part in the creation of a new concept.

