ACTA SCIENTIFIC MICROBIOLOGY (ISSN: 2581-3226)

Volume 3 Issue 2 February 2020

Short Communication

Rivers and Climate

Oleg Khalidullin*

Kazakh National University, Kazakhstan

***Corresponding Author:** Oleg Khalidullin, Kazakh National University, Kazakhstan.

DOI: 10.31080/ASMI.2020.03.0488

Received: December 16, 2019

Published: January 10, 2020

Rivers on our planet are the most important link in the water cycle in nature. The water circuit is not the simple picture that we were introduced to in childhood. More precisely, this is a picture of the cycle without a man and his crimes before nature.

Water from heaven falls on a variety of different areas, and, depending on this, performs various functions. And with the advent and development of mankind, water functions have increased. The quality of the area changes, which precipitates. We have killed 70% of the land inhabited by arable land, reservoirs, ore and landfills, deforestation, asphalt, concrete, and we accelerate this process every day. Once in degraded areas, water evaporates without changing its structure, as it came from the sky in the form of H_2O and evaporated back. Natural fumes began to yield to artificial fumes in quality, volume and speed in such a way that the latter began to affect the climate. More details can be found in: https://www.actascientific.com/ASMI/pdf/ASMI-SI-01-0009.pdf

The remaining 30% of the water is collected in the rivers and its movement in the channel of the rivers is not just replenishment of the seas and oceans, but the main link in the hydrological cycle of water - the main purpose of water on earth is the technological process. There is a dissolution of mineral and organic substances from the coastal layers of the soil, and the supply of biota with these substances. They are necessary for all growing organisms and plants. In the process of water movement, continuous contact with new layers of soil is necessary, therefore the rivers constantly meander - erode the banks. The particles of soil washed away from the shore roll along the bottom, come in contact with the currents, gradually release soluble substances, then close with layers of other soil elements, react with them and new products enter the water. So there are continuous and slow chemical transformations and the movement of rapids, erosion of the banks and mineralization of water.

With the advent of man and the development of industry and cities, water has become a raw material and a means of satisfying the needs of the "master in the workshop" ... and an opponent in terms of conquering a place under the sun. We began to fill reservoirs with water, to dump agricultural and industrial waste, utilities, various garbage into rivers, to take water for our many needs. We take up to 10% of the runoff of all the rivers of the world from open and underground sources.

Figure 1

Cities, roads and bridges along the banks of the rivers required protection from river destruction. I had to influence the movement of water. The riverbeds were straightened and bounded by stone and concrete walls, let down through canals and pipes.

Solid waste and garbage discharged into the rivers accelerate the increase in the level of the river bottom and form bottom garbage landfills. As a result, the waters leave the banks in floods and with heavy rainfall. Destructive floods are becoming more frequent. With weakening flows, summertime contacts with the soil decrease, water seepage into underground channels decreases, and water quality changes.

This, perhaps, is one of the factors leading to the extinction of animal and plant species, and the increased speed of passage through straightening's and channels increases the level of the oceans and lack of water in the summer. Man solved the last problem with the device of giant dams, which caused even greater harm to nature

from increasing the evaporation areas of the reservoirs themselves and irrigation, soil destruction, stagnation of water, and interruption of fish migration routes.

If we really want to extend life on the planet, we must return to water its natural functions. To do this, return all areas to their original state.

Otherwise, nature will do it herself when it destroys the parasite on its body - humanity. She is forced and has already begun to defend herself. Natural disasters are growing, the climate is changing. And these are just warnings.

No adaptation and decarbonization will save humanity. The fight against carbon dioxide only distracts mankind from the necessary direction, moreover, it leads to the destruction of future life on the planet because it distracts funds, efforts and time. You don't have to play with nature, you have to compromise before it's too late? The above link shows a dozen of the most important measures to return water to its natural functions.

Here we will consider and solve one of the problems - the return to the rivers of their natural functions. If you look at the rivers along the entire length, you can find that each has many floodplains with high banks and wide channels. The heights of the coasts of the floodplains are different, from 1 - 10 to hundreds of meters. At their bottom, rivers occupy a small part of the width of the floodplain, up to 2 - 50%. Everything else is bare stones and sand.

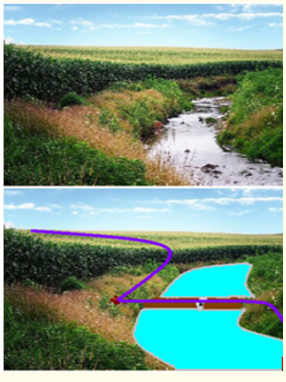

Figure 2

Rivers must be returned to their original state. Perfectly. It will not work, but we must go to this. The formation of deep floodplains is a person's impact on the course of rivers: enhanced water withdrawal, river clogging, channel straightening. There must be a contrasting and regular combination of stretches and rifts. The salvation of rivers is seen in cleaning the bottom of the rivers, deepening the reaches and raising the rifts.

Maximum possible The first level should not exceed the coastline of the floodplain, so as not to flood the foreign territories and not create the risks of accidental erosion.

Thus, rivers in zones of deep floodplains can form chains of lakes, but not like cascades of hydroelectric power plants with flowering and decaying water, but with moderately moving water washing the natural shores. Slides - coming to the surface of the river - small submarine dams, may not even come to the surface, but they support given down-waters. The riffles coming to the surface can be concreted for transport, equipped with access devices for ships, fish. Reaches - depths between dams, contain volumes of water sufficient to preserve water between low water - in the summer and to rotate turbines of hydroelectric power plants located downstream and feeding water through pipes. You can see in more detail the inventions of V. Bodyakin.

To carry out work to deepen reaches and increase rifts, you can use existing technologies, conventional earthmoving equipment. Depending on the parameters of the river. Deep and wide rivers may require the use of drags. But the cost of their work, the consumption of fuel and labor resources are quite high, and productivity, on the contrary, is low.

Invented methods and means for deepening the bottom of the rivers through the current itself. For example: file:///C:/Users/%D0%9E%D0%BB%D0%B5%D0%B3/Downloads/JAMB-06-00155.pdf.

Devices for depths of 2-5 meters can be manufactured in universal metalworking workshops. The main driving force for changing the profile of the river bottom is the strength of the river. For rivers with a steady flow, a low-power propulsion system with a lead screw is used to move, as well as to activate the sedimentation of bottom sediments.

The transformation of rivers in floodplains will create a chain of small lakes for navigation, fisheries, crossings to the other side, preservation of water for summer consumption, conditions are created for the dissolution of soil components - contact with the soil of both banks is achieved. A slow current reduces the rate of destruction of the coast. Most importantly, the need for high dams with flooding of large areas disappears, which means that it is possible to return degraded territories to nature with a decrease in artificial fumes. At the scale of the dams of the entire planet, there will

be a significant contribution to measures to halt climate change. Devices with this principle of operation can be designed for many other works. For example, to form a channel, search for sunken objects, for gold mining without taking out waste rock and deposits to the surface. Rivers with greater depth will require additions with a control cabin underwater. They can also be used for bodies of water with standing water and on the seabed.

The devices are designed as patents. Research and development work is needed to create a new direction in hydraulic engineering.

I invite you to cooperation on the implementation of innovations to deepen the bottom of the rivers.