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**INFLUENCE OF CLIMATE CHANGE ON POSSIBILITY OF SOIL
EROSION FORMATION**

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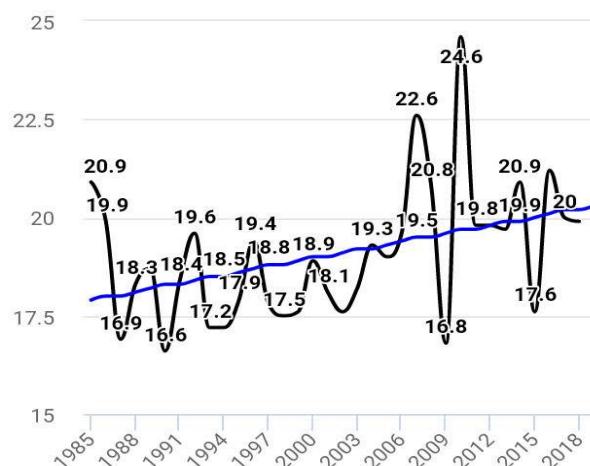
Annotation. In the article we research the possibility of soil erosion formation in the connection with climate changes. Three factors are being analyzed: temperature, precipitation and wind speed.

Key words: soil erosion, climate factors, climate changes, temperature, precipitation, wind speed.

Nature never "stood still", its climate conditions are constantly changing from one side to the other [8, 9]. So, environmental conditions are undergoing changes, especially in our days, when almost every scientific journal writes about global warming and so on [1, 2, 4, 5]. But if you look away from the global forecast, you will see what is happening on the ground, namely in the field of agriculture. In recent years, if we rely on statistical data, we understand that the probability of the appearance of a particular soil erosion has shifted quite strongly [3,7]. As the statistics shows, this phenomenon has been going on for the last 30 years, but still, what factors in the changing climate have influenced it?

Factor 1. Temperature change.

Since people have been engaged in agriculture for a long time, the air temperature has always been an important indicator both in winter and in summer. It is common knowledge that without frost and snow in the cold period, various kinds of pests do not die, and in the warm period some plants will have no conditions to germinate, and the fruits will have no time to ripen. But a sharp increase in temperature in all seasons can lead to disastrous results - the destruction of the fertile layer. And these changes are really happening, this can be judged by the average annual temperature indication documents, first in the USSR and later in the Russian Federation [10].

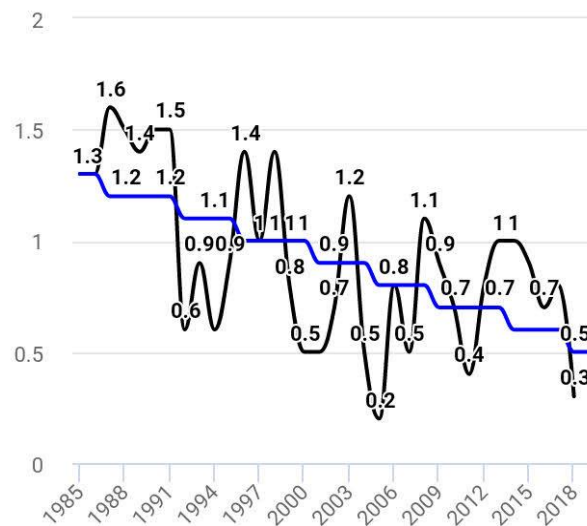


Picture 1 - The average annual temperature indications

As can be seen from the graph and the trend line, there is a fairly strong increase in the average air temperature. Especially it stands out from 2009 to 2012, and if you remember, just this period (2010) was the hottest, as a result of which there were constant fires and very strong destruction of soil.

Factor 2. Reduced precipitation.

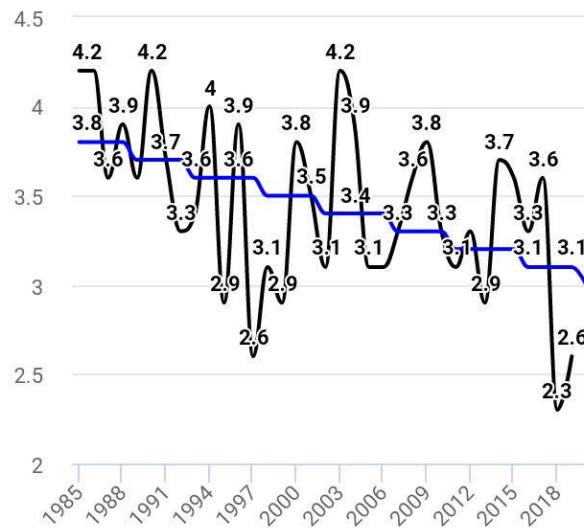
Precipitation, as well as temperature, is an important indicator, and it also determines the physical characteristics of the soil. Its amount will also show how much the fertile layer will be subject to weather conditions. And strange enough, the amount of precipitation is actually decreasing every year. This can be seen in this graph [10].



Picture 2 - The amount of precipitation decreasing

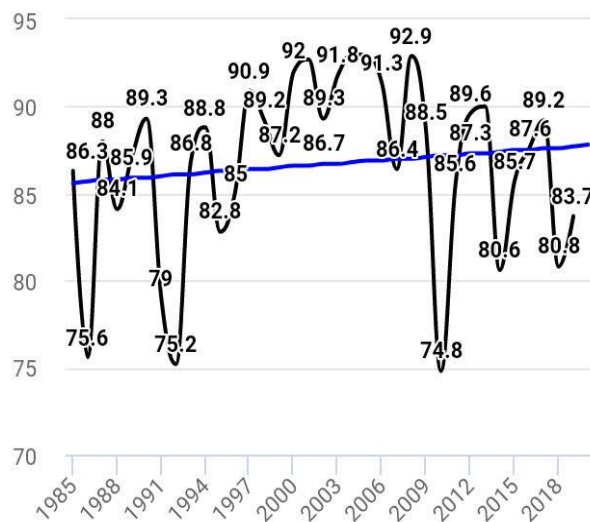
Factor 3. Change in wind speed.

Wind is the main participant in wind erosion, and taking into consideration its changing, one can assume that there should be an increase in wind speed. Though this conclusion is made logically, but paradoxically it is completely wrong. In recent years, on the contrary, the wind speed is strongly increasing, which is clearly visible on the graph [10].



Picture 3 - The wind speed increasing

Then the question arises: "How does the amount of wind erosion increase when the wind speed decreases?" To answer this question we must say that the average annual wind speed still does not take into account the season and its maximum values, but considering the number of days in the year with high wind speed, we will see a completely different relationship [10].



Picture 4 - The number of days in the year with high wind speed

This graph clearly shows how the number of days at a high rate is slowly but surely growing.

Conclusion

Analyzing the data obtained and demonstrated in the graphs above, it can still be argued that now there is a really strong climate change, resulting in the soil erosion,

the most remarkable of them being changes in temperature, precipitation and wind speed.

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**ВЛИЯНИЕ ИЗМЕНЕНИЯ КЛИМАТА НА ВОЗМОЖНОСТЬ
ОБРАЗОВАНИЯ ПОЧВЕННОЙ ЭРОЗИИ**

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Аннотация. В статье рассматривается возможность увеличения почвенной эрозии в связи с изменениями климата. Анализируются три основных фактора: температура, осадки и скорость ветра.

Ключевые слова: эрозия почвы, климатические факторы, изменения климата, температура, осадки и скорость ветра.