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REMOTE ASSESSMENT OF THE FOREST ECOSYSTEM
(TATARIV REGION, IVANO-FRANKIVSK OBLAST CASE STUDY)

The problem of deforestation is very important today, and therefore the question arises of how to control the changes, and therefore, thanks to Remote assessment methods, which are very widespread in many areas, we can use them for the Remote Assessment of the forest ecosystem on the example of Tatariv region, Ivano-Frankivsk oblast with the help of Hansen Dataset. The European Commission gave a precise definition of what deforestation is and pays a lot of attention to that environmental issue. The process continues because alternative land use usually brings increased economic returns in the short term, which is why deforestation rates remain so high in many countries [1].

Tatariv is a village and a climatic resort in Ukraine, in the Vorokhtian territorial community of the Nadvirnyan district of the Ivano-Frankivsk region. Tatariv is located in the valley of the Prut River at an altitude of 750 m. Tatariv lies within the Carpathian National Nature Park. One of the features of Tatarov is its length of 25 km along the Prut River [2].

This work uses the Hansen Dataset network in the Google Earth Engine application. Google Earth Engine is a computing platform that allows users to run geospatial analysis on Google's infrastructure [3]. The Hansen et al. (2018) Global Forest Change dataset in Earth Engine represents forest change, at 30 meters resolution, globally, between 2000 and 2018 [4].

The changes in deforestation or reforestation for the city of Tatariv between 2000 and 2018 were calculated.
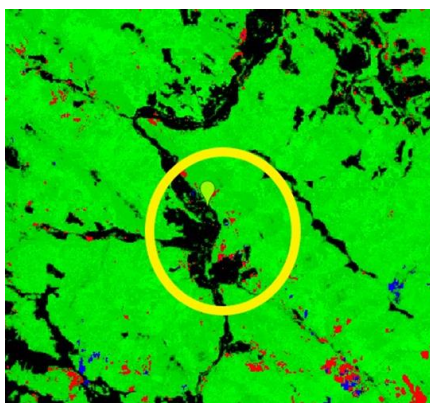

Figure 1. Calculation of global historical deforestation in Hansen Dataset for the Tatariv region

As a result of this work, it was decided that the loss of forest cover (indicated by a red indicator) is more visible in the territory, and there is also a restoration of a certain share of forest cover (indicated by a blue indicator) in the period from 2000 to 2018. We can conclude that the main causes of the problem are anthropogenic pressure and also climate change, that causes forest fires.

Conclusions: The problem of deforestation is very important today and is considered here on the example of Tatariv region in Ivano-Frankivsk oblast. This work uses the Hansen Dataset network in the Google Earth Engine application. As a result of this work, it was decided that the loss of forest cover (indicated by a red indicator) is more visible in the territory, and there is also a restoration of a certain share of forest cover (indicated by a blue indicator) in the period from 2000 to 2018.

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