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Смотр О.О. Структурный анализ лесных пожаров, динамика их развития и распространения

Проведен анализ причин возникновения лесных пожаров и особенностей их прогнозирования. Рассмотрена динамика развития и распространения лесных пожаров, на основании чего определены основные направления исследования проблемы повышения пожарной безопасности лесов. Установлено, что для повышения пожарной безопасности лесов одним из перспективных направлений есть разработка современных методов прогнозирования наступления пожароопасного сезона в лесах на основе комплексного подхода с учетом метеорологических (скорости ветра, солнечного излучения, температуры воздуха и почвы, относительной влажности воздуха), антропогенных (костров, преднамеренных поджогов, искр от электросетей и аварий автотранспорта и так далее) и естественных (пожары от молний) факторов и характеристик лесов.

Ключевые слова: лесной пожар, пожароопасный сезон, развитие и распространение лесного пожара.

Smotr O.O. The structural analysis of the forest fires, the dynamics of their growth and extension

The analysis of forest fires reasons and features of their prediction is conducted. The dynamics of the growth and spreading of forest fires is considered, on their basis the main directions of forests' fire safety increase problem are determined. It is established that the development of the contemporary methods to predict the fire hazard season in the forests by means of the complex approach with taking into account of the meteorological (speed of wind, sun radiation, temperature of air and soil, relative humidity of air) the anthropogenic (fires caused by holidaymakers, deliberate arsons, the sparks from the electric network and the motor transport crash and others) and the natural (fires caused by lightning at dry thunderstorms) factors and fire characteristics is one of the promising directions to increase forests fire safety.

Keywords: forest fire, fire hazard season, growth and extension of forest fire.

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*Аспір. Н.С. Стрямець; ст. викл. О.А. Чаплик,
канд. с.-г. наук; Г.В. Стрямець; асист. М.В. Бойчук – НЛТУ України,
м. Львів, Природний заповідник Розточчя*

ЕКОЛОГІЧНІ ПРОБЛЕМИ ЛЬВІВЩИНИ ТА ШЛЯХИ ЇХНЬОГО ПОДОЛАННЯ

Розглянуто основні екологічні проблеми Львівщини як прикордонного регіону. Охарактеризовано найбільші джерела забруднення у Львівській області. Проаналізовано основні способи та запропоновано низку можливих кроків для подолання цих проблем.

*"Treat the Earth well, it was not given to you by your parents,
it was loaned to you by your children"*

Kenyan proverb

Human is endangered now, the environmental problems having assumed global proportions. The huge problem starts from the small region that is why the environmental problems should be studied from the smallest scale. Lviv region is one of the 24 regions of Ukraine. The total area is 21.8 thousand square kilometers [5]. It is boarded by European Union that is why solving the environmental problems is one of the main tasks.

How to protect our Earth from ourselves? And what should people do? Mankind has started to think about solving those problems and it was decided to make our people live in a sustainable way.

The sustainable development is a pattern of resource usage the aims to meet human needs while preserving the environment so that these needs can be met not only at present, but in the distant future. The term was first used by the Brundtland Commission which coined what has become the most often-quoted definition of the sustainable development as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" [1].

To make out region live in the sustainable way, we need to do a lot, first of all to solve our environmental problems. The problem of finding the best way to protect our environment is one of the most difficult to solve [3].

There are a lot of environmental problems facing Lviv region nowadays. They are: air pollution; waste management and illegal waste dumps; toxic wastes and pesticides; groundwater pollution; water pollution.

The territory of Lviv region has 1920 villages and towns, and 2.7 million people live here. Annually the domestic households and industry produce 5.0 millions m². solid wastes. Only 37 % of them are managed in environmentally friendly way, the rest 63 % is being put anywhere. There is no control over the places where the wastes are placed, so we cannot say how badly it damages the environment. The total territory which is used as a waste dump is 461 ha, among them 300 ha are illegal [Bilyk G.S.]

Among the industrial enterprises of the region, the biggest air polluters are "Mykolaivcement", Dobrotvirska TES, "NPK-Galychyna". The mining enterprises, such as HK "Lvivvugillya", Stebnytsky DGHP "Polimineral", Rozdilske DGHP "Sirka" are situated on the rivers that start here and damage them [4].

Water supply is a big problem in many countries. Lviv city water supply system is old and needs repairing. Because of the old and non-effective water cleaning system, the water quality is bad and you cannot use it for cooking. The problem of water supply keeps a lot of people looking for new ways to use water better. Every time we use it, we take water away from the Earth. We now know how it flows on the surface and underground until it gets to us. If we don't spend that extra five minutes in the shower, or run the water when we are brushing our teeth, we will be able to make a difference!

How can we clean up the air in our city? Too much traffic in the city centre, factories polluting the air and too much rubbish being burned have all

contributed to the dangerously high level of air pollution in Lviv. We need to take steps before it is too late.

First of all, it would be a good idea if our government introduced a park and ride scheme. The result would be fewer cars in the city centre and less traffic overall. Another solution would be to create an industrial park in the suburbs. This would take the factories out of the city centre and result in less smoke over the city, which will make our air cleaner to breathe.

Steps could be taken to introduce a recycling scheme. This would mean that less rubbish would be burned and therefore there would be less black smoke over the city. There are many ways to reduce the level of air pollution in our city. Adopting some of these measures would certainly result in cleaner and healthier city for all of us.

According to the state regional environmental policy program, a number of measures must be taken to stop the air and water pollution:

- Development and realization of the State ecological program of the Dniester river
- Reconstruction and repairing the cleaning stations
- Ecological evaluation of the water quality
- Finding new sources of water supply
- Realization of the program of water consume reduction
- Development and realization of the solid waste disposal program
- Re-cultivation of the Lviv's city waste dumps
- Building new waste dumps
- To improve the air quality – the reconstruction of the Dobrotvirska TES
- Realization of the nature conservation program [Lviv's ecology].

The state program is urgent and every individual is responsible for solving those problems. We can help the environment by addressing the directors of the enterprises asking them to reduce the number of harmful pollutants into the atmosphere. We can use our votes to elect people who promise to improve the situation and change things for better. And of course, the environmental education must be implemented. On the initiative of Academician Yu. Tunytsia the environmental education should be done in each university of Ukraine [5]. Also the children should be taught the environmental issues.

Clearly, it will take much time to change the things for the better. If everyone helps, we would make our region a better place for ourselves and for children in future.

Conclusions. We cannot go back in time and change something, so now we have to make changes in the way of living very rapidly. Otherwise the human race will not survive and our grandchildren will not have nature at all. Each of us should think what he could do to save our Earth. A small step every day gives a big result. Less consume, do not waste water and energy – those are very simple and very effective ways to decrease a human impact on environment. Lviv region is one of the best in Ukraine, it has unique nature and biodiversity and to save it depends upon us.

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Стрямец Н.С., Чаплык О.А., Стрямец Г.В., Бойчук М.В. Экологические проблемы Львовского региона и способы их преодоления

Рассмотрены основные экологические проблемы Львовского региона. Охарактеризованы самые большие источники загрязнения в этом районе. Проанализированы основные способы и предложен ряд возможных шагов для преодоления этих проблем.

Stryamets N.S., Chaplyk O.A., Stryamets H.V., Boychuk M.V. Environmental problems of Lviv region and ways of their solution

The list of main environmental problems of Lviv Region is given in this article. The major polluters in Lviv region are characterized. The main ways of their solution as well as a range of possible steps to be taken are shown.
