

Практическая работа №9

Тема: «Мировые лесные ресурсы. Лес и лесоводство» Состояние леса и лесных ресурсов в мировой системе природы.

Цель: совершенствование навыков перевода текста профессиональной направленности с целью извлечения информации по данной теме.

Содержание работы:

1. Переписать слова по теме.
2. Прочитать текст, устно перевести.
3. Выполнить упражнения.

Запомните слова и выражения:

boreal coniferous forest	северный хвойный лес
to afforest	засадить лесом, облесить
fluctuation	флуктуация
to withstand disturbance	противостоять вмешательству
propensity for regeneration	склонность к восстановлению
to be threatened by	быть под угрозой ч.-л.
impoverishment of the ecosystem	истощение экосистемы
air pollutant (impurity)	вещество, загрязняющее воздух
to affect adversely	влиять неблагоприятно
to be exposed to loading	подвергаться нагрузке
precipitation	осадки, выпадение осадков
sulphur and nitrogen content	содержание серы и азота
needle defoliation	опадение хвои
lichen	лишайник
trunk	ствол (дерева)
lead and vanadium content	содержание свинца и ванадия
canopy	лесной полог
tree foliage	листва деревьев
critical load	критическая нагрузка
soil acidification	окисление почвы
acidifying emission	кислотный выброс
to bring under control	взять под контроль
prescribed burning	предписанное горение (сжигание)
crown	крона
to decline	уменьшаться, спадать, приходить в упадок
sample plot	пробная площадка
to constitute a stress factor	составлять фактор напряжения
to impair	вредить
to decrease	убывать, сокращать(ся)

1. Прочитайте и устно переведите текст.

Forest Health

The tree species in the boreal coniferous forest (taiga) are species that afforest open ground and that are adapted to climatic fluctuations and forest fires. They withstand disturbance from both nature itself and people rather well.

The boreal coniferous forest and its natural propensity for regeneration are not threatened by the appearance of treeless areas, erosion, monocultures, or impoverishment of the ecosystem when the forests are managed properly. However, studies on the state of the environment indicate that air pollutants are adversely affecting forests all over Europe. In Finland, the forests in the southern part of the country in particular are exposed to loading by precipitation due to long distance transportation both from abroad and from Finland. Effects of air pollution 1999-2000 in southern Finland are detection of stronger effects on vegetation. The following bioparametres have been used in the determination of the zones: sulphur and nitrogen content of needles, needle defoliation, number of needle age classes,

needle damage, diversity of lichen on pine trunks, discernible lichen damage as well as lead and vanadium content in moss.

Pan-European concern¹ for the state of health of the forests on the European continent led to the UN's² European Economic Commission and the European Union setting up a continuous monitoring programme in the mid-1980s. This involves especially monitoring the condition of the canopy and tree foliage, as well as the soil.

Despite harmful sulphur and nitrogen precipitation exceeding the so called critical load in forests close to Finland's urban centres, no acidification of the soil has been detected in studies in the regions dedicated to forestry. The critical load means the maximum possible load which over the long term does not have any harmful effects on fundamental ecosystem characteristics.

Air pollution in south- has been predicted that soil acidification will advance unless acidifying emissions and precipitation are not brought radically under control. In forest management, the progress of acidification can be hindered by prescribed burning and by increasing broadleaf growth.

According to the report, published in 1998, a steady growth in the incidence of needle and leaf loss has been observed over large parts of Europe, for which air pollutants and long periods of dryness are in one way or another responsible, particularly in southern Europe. By contrast, recently the state of tree crowns has improved in areas where the amount of air pollution has declined, or where weather conditions have been more favourable. The chemical composition of the soil leads us to believe that around 20 per cent of the sample plots may become affected by the adverse acidifying effect of nitrogen, sulphur and heavy metal precipitation from the atmosphere. It is also apparent from the state of the tree crowns that in a comparatively large number of plots the sulphur concentration is low, whereas the nitrogen concentration is high. Both national and international monitoring schemes indicate that air impurities constitute a stress factor to forests growing in Finland's extreme climatic conditions and on infertile soils. So far, the overall health of Finnish forests has been good. The main reason for uncertainty in regard to the future is the development in the amount of emissions.

In Finland, there were a few incidences of local forest damage during the latter half of the 1980s. A thorough study was launched into the reasons for this and monitoring of the development of the phenomenon began. Monitoring by the Finnish Forest Research Institute (METLA) has indicated that the main cause of the damage were abnormal weather conditions at that time.

Needle and leaf loss can occur among trees as a result of air impurities or other factors impairing the biological functioning of the trees. Trees are considered to be suffering from acute needle loss when they have lost more than 20% of their needles or leaves in this connection. According to the Finnish Forest Research Institute's study on the state of the health of the forests, the incidence of acute needle loss in Finland is among Europe's lowest. It is a fact, however, that signs of poor health exist in some forests in the vicinity of urban centres in southern Finland. In such places lichens, which have poor resistance to air impurities, have decreased and a degree of needle loss has occurred among the trees.

2. Переведите фразы, опираясь на содержание текста

appearance of treeless areas, impoverishment of the ecosystem, long distance transportation, fundamental ecosystem characteristics, forest management, increasing broadleaf growth, tree crown, air pollution, weather conditions, heavy metal precipitation, development in the amount of emissions, local forest damage, needle and leaf loss

3. Измените предложения по образцу, используя Past и Future Simple и соответствующие обстоятельства времени. Переведите полученные предложения:

Образец: A tulip **grows** from the tulip bulb.

– A tulip **grew** from the tulip bulb last summer. (**Past Simple**)

-A tulip **will grow** from the tulip bulb next summer. (**Future Simple**)

1. A tiny pine seed develops into a giant tree.
 2. The stem carries water and minerals to the leaves.
 3. Cells in a bud begin to divide rapidly during the growing season.
 4. Tall and straight trunks of coniferous trees make valuable lumber.
 5. The stems of many dicot trees divide into several large branches.
 6. Strawberries send out aboveground stems – runners – that grow along the ground.
 7. Buds on the runners develop roots and form new plants.
 8. A tree grows in height by means of cell divisions at the very tips of its trunk and branches.
 9. Bark protects the growing part of the tree from the weather, animals and other injuries.
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4. Укажите, являются ли данные утверждения истинными или ложными в соответствии с содержанием текста

1. Air pollutants are adversely affecting forests.
2. In Finland forests are mainly exposed to loading by precipitation due to a large amount of chemical enterprises.
3. A continuous monitoring programme considering the state of forest health on the European continent was launched in the 1990s.
4. No acidification of the soil in forests close to Finland's urban centres has been detected.
5. The progress of acidification can be accelerated by prescribed burning and by increasing broadleaf growth.
6. Air pollutants and long periods of dryness have caused a steady growth in the incidence of needle and leaf loss over large parts of Europe.
7. Recently the state of tree crowns has improved in areas where the amount of air pollution has increased.
8. Approximately 20% of the sample plots are affected by nitrogen, sulphur and heavy metal precipitation from the atmosphere.
9. Air impurities don't affect Finnish forests.
10. Trees are considered to be suffering from acute needle loss when they have lost more than 10% of their needles or leaves.

5. Закончите предложения, пользуясь информацией текста:

1. The tree species in the boreal coniferous forest are species that ...
2. The boreal coniferous forest is not threatened when ...
3. The Programme set up by the European Union in the mid-1980s involves ...
4. The critical load means ...
5. Taking into account the state of tree crowns, one may say that in a large number of plots the sulphur concentration is ...
6. Air impurities constitute a stress factor to forests growing in ...
7. There were a few incidences of local forest damage in the latter half of the 1980s due to ...
8. Needle and leaf loss can occur because of ...
9. Signs of poor health exist in some forests in the vicinity of ...