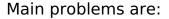
#### Содержание:



# 1. What type of ecological problems does Russia have?

Global ecological problems became more relevant than ever before nowadays, and Russia is one of the most polluted (in environmental terms) countries.



- a) Deforestation;
- b) Energy power
- c) Pollution;
- d) Household wastes.

#### 1. Deforestation:

Russia suffers from illegal and uncontrolled actions of deforestation, especially on east regions.

It is not a great economical damage, but worse - it damages the ecosystem

Poachers bring not only loss of tree species, but also make birds migrate to other places, leaving their destroyed native home behind. Deforestation damages ecosystems by increasing the greenhouse effect (it may cause global warming) and spreading arid climate around country.

Deforestation also cause accelerated topsoil destruction and weathering, landslides and flooding (on hilly terrain and mountain relief)

1.

## **Energy power**

#### **Ecology depends on three types of power generation:**

Organic power - gasoline, oil, charcoal, and wood;

Water power - Exploitation of water stream pressure converting to heat energy and electric energy

Atomic power - Exploitation of energy caused by nuclear reactions

Great amount of carbon dioxide in atmosphere and lack of vegetation cause global climate warming and greenhouse effect. Rivers are being dammed because of hydroelectric power stations building what also cause bird and animal migration.

Carbon dioxide is only one of the problems. Some harmful substances are getting into atmosphere too, causing acid rains and pollution of soil and ponds (That leads to the next kind of problem)

Arctic is in danger too, because of hard-to-reach oil and gasoline fields. To be more exact: because of people wishes to get it, what will cause global warming and melting of glaciers

Ecologist making up environmental charts, so they can see ecological problems and try to solve it

For example, they marked the most comfortable places for living in Russia:

Pskov region; Novgorod region; Chukotka; Altai; Byryatia.

Baikal is main source of drinkable water, but it is being polluted with sewage and Hydroelectric stations, what leads to next type of ecological problem

## **Pollution**

#### Different types of pollution:

- 1 Water pollution
- 2 Air pollution
- 3 Nuclear pollution
  - 1. Water pollution problem is probably the most general right now, researcher marks pollution of soil and ponds as a priority issue when they discuss deceases in populous cities.

Every year a tons of chemical and oil refinery wastes get into rivers and lakes, destroying its flora and fauna. Water in many sources became undrinkable because of soil pollution (because of toxic wastes).

Even exploitation of some canalizations is unacceptable, because sewage gets in open bodies of water, ignoring sewage treatment system, speaking of which, quality of those system leaves much to be desired. Many of them are not capable for exploitation because of obsolete equipment and malfunctions.

At this rate sooner or later Russia will meet the most troubling water stress

1. Air pollution problem has been reduced in 90s because heavy machinery industry had collapsed at the most risky moment (USSR had the highest rate of air pollution)

To increase the power production many of natural resources were used until there's nothing more to use, and massive clouds of smoke were common and they even made people proud not worried about nature and their own health.

Car fuel burning produces both carbon dioxide and highly-dispersed dust (with soot particles). This dust may cause cancer by inhalation. Even harmless at first look for human substances like Freon is harmful for atmosphere and cause ozone depletion.

By damaging the highest layer of atmosphere Freon become dangerous for climate and for humans too (may cause skin cancer and cardiovascular diseases).

Climate changes which caused by air pollution and global warming lead to reduction of suitable lands for cultivation and outright famine.

1. Nuclear pollution became a great topic for discussion after Cnernobyl nuclear power accident.

People suddenly realized that safety should be first in deals with nuclear power, in case nobody wants another nuclear power accident. Many of nuclear power stations worked well, and must be treated with new equipment.

General danger is radiation, which causes cell loss and mutations (and radiation spreads everywhere – water, food, air and skin)

Carrier won't notice that dose of radiation (at least without Geiger counter) until it's too late

There comes another type of problem: radioactive wastes, which must be disposed of.

The problem is: equipment on nuclear power stations in Russia became too old, and same tragedy may happen.

1.

### **Household wastes**

Household wastes is general problem nowadays. One Russian citizen produce  $400 \sim \text{kilos}$  hard household waste per year, and there is no really effective way to solve this problem, and recycling in Russia isn't developed to be at acceptable rate

## 2. Statistics in different regions of Russia

10 cities with the most comfortable ecological situation (according to survey)

Rank in 2019 Rate in 2018 City			Region	Rate in 2019
1	8,5	Gelendzhik	Krasnodar Krai	8,8

2	8,4	Maikop	Adygeya	8,7
3	7,9	Eysk	Krasnodar Krai	8,7
4	7,5	Essentuki	Stavropol Krai	8,6
5	8,4	Sochi	Krasnodar Krai	8,6
6	_	Evpatoria	Crimea	8,5
7	_	Guryevsk	Kaliningrad region	8,5
8	7,7	Vsevolozhsk	Leningrad region	8,5
9	7,9	Stavropol	Stavropol region	8
10	7,9	Dimitrovgrad	Ulyanovskiy region	8

9 cities with the most uncomfortable ecological situation (according to survey)

Rank in 2019	9 Rate in 2018	8 City	Region	Rate in 2019
200	2,5	Norilsk	Krasnoyarsk Krai	1,9
199	3,8	Kiselevsk	The Kemerovo area	a 2,7
198	_	Belovo	The Kemerovo area	a 3,4

197	4,7	Vorkuta	Komi	3,6
196	_	Yakutsk	Sakha	3,6
195	5,3	Pervoyralsk	Sverdlovsk region	3,9
194	5,2	Prokopyevsk	The Kemerovo area	a 3,9
193	3,4	Klin	Moscow region	3,9
192	_	Novokuibyshevs	k Samara Region	3,9

Ecological situation in cities-millionaires

Место в рейтинге Оценка в 2018 году Город				Оценка в 2019 году
	51	7	Moscow	7,2
	63	7,1	Krasnodar	7
	83	6,7	Saint-Petersburg	6,8
	84	6,8	Perm	6,8
	85	6,5	Kazan	6,8
	99	6,0	Nizhniy Novgorod	16,6
	105	6,2	Ufa	6,6

106	6,8	Voronezh	6,6
114	6,3	Rostov-na-Donu	6,4
117	6,5	Ekaterinburg	6,4
122	6,2	Novosibirsk	6,3
126	6,2	Samara	6,2
164	5,4	Omsk	5,3
168	5	Krasnoyarsk	5,2
169	4,8	Volgograd	5,2
186	4,2	Chelyabinsk	4,3

## 3. Can Russia solve those problems?

Yes, and there's a lot of work has to be done:

- Deforestation must be controlled
- Forester working conditions must be improved
- Upgrade technologies of waste recycle facilities
- Exploitation of modern and ecological types of fuel
- Introduce penalties for throwing non-organic wastes to rivers/lakes/etc.

Ecological situation is able to be improved by both usual people and government. "The choice is ours"

## **Sources:**

https://ecoportal.info

https://www.domofond.ru

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