

St Sofronii Vrachanski Primary School, Bulgaria



Erasmus+



**FINAL SURVEY
ABOUT CLIMATE
CHANGE**

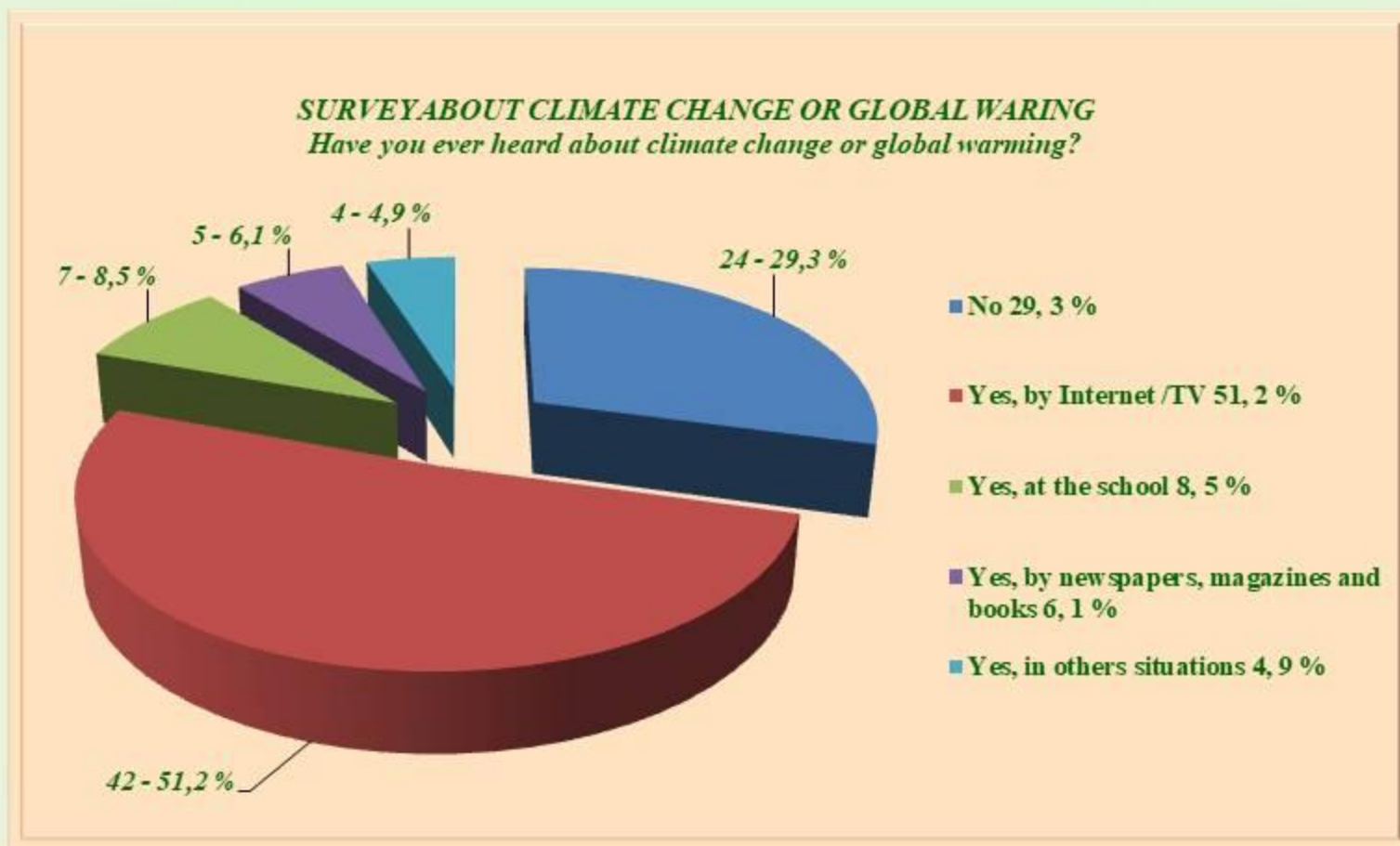


Vratsa 2019

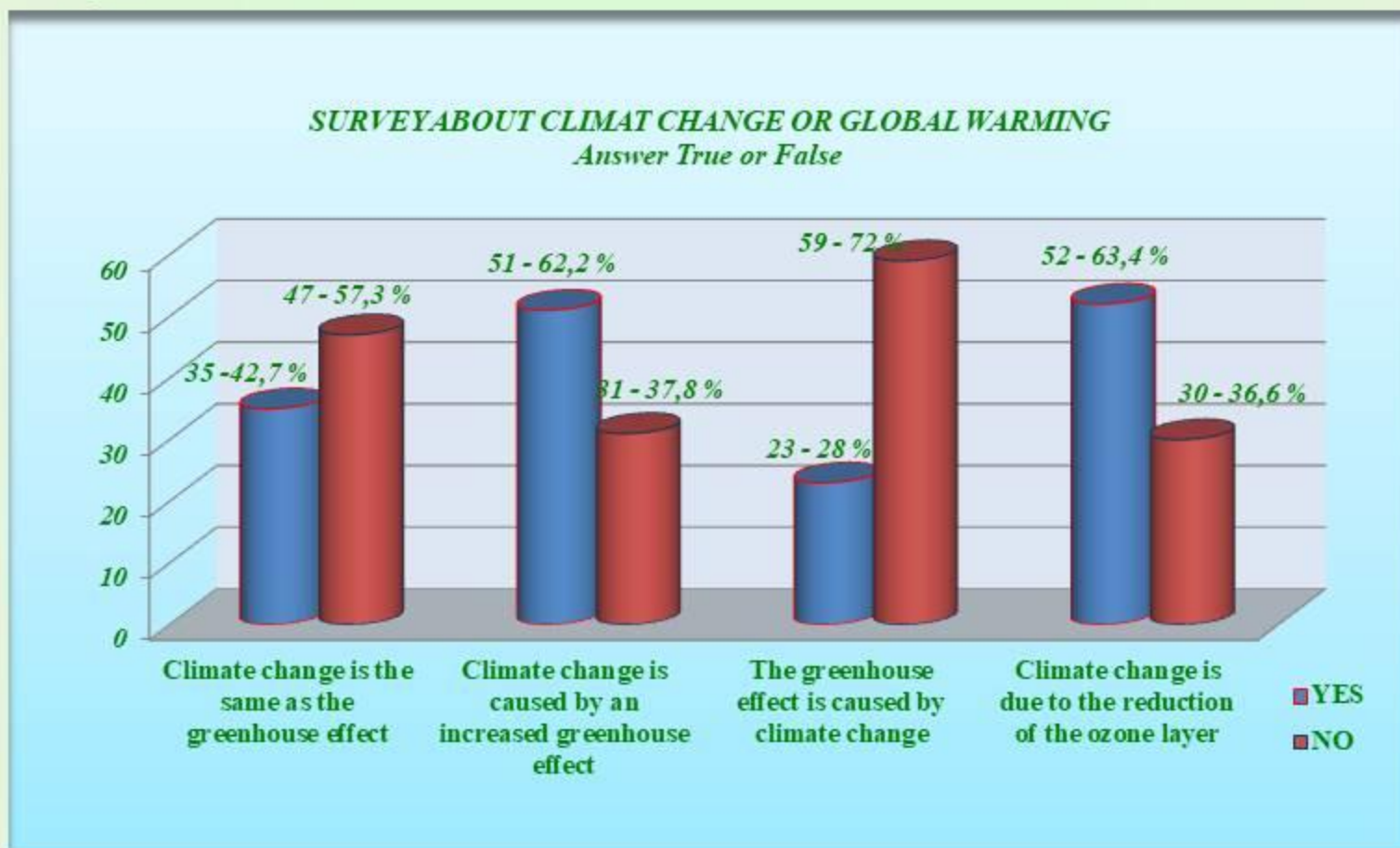
REPORTING THE RESULTS OF THE SURVEY ABOUT CLIMATE CHANGE AND GLOBAL WARMING

This survey aims to examine to what extent pupils are knowledgeable about the issues of climate change and global warming. The participants are total 82 aged between 7 and 9 years.

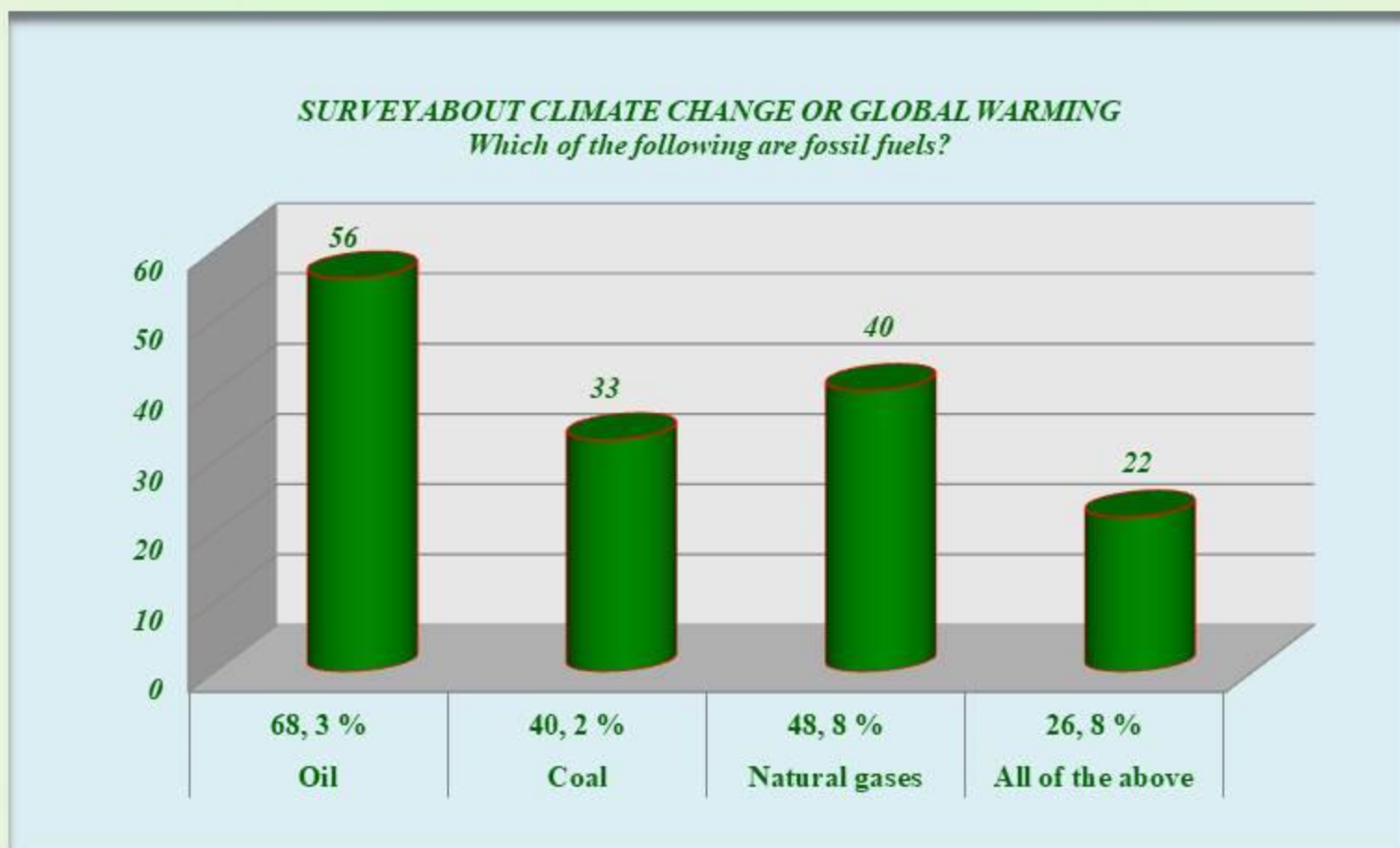
Pupils learned about the existence of the global warming in different ways. The process of climate change and global warming 24 pupils – 29,3 % do not yet know anything, 42 pupils – 51,2 % find out about it from the Internet, 7 students – 8,5 % of school, 5 pupils – 6,1 % of newspapers and magazines and 4 pupils – 4,9 % of their family.



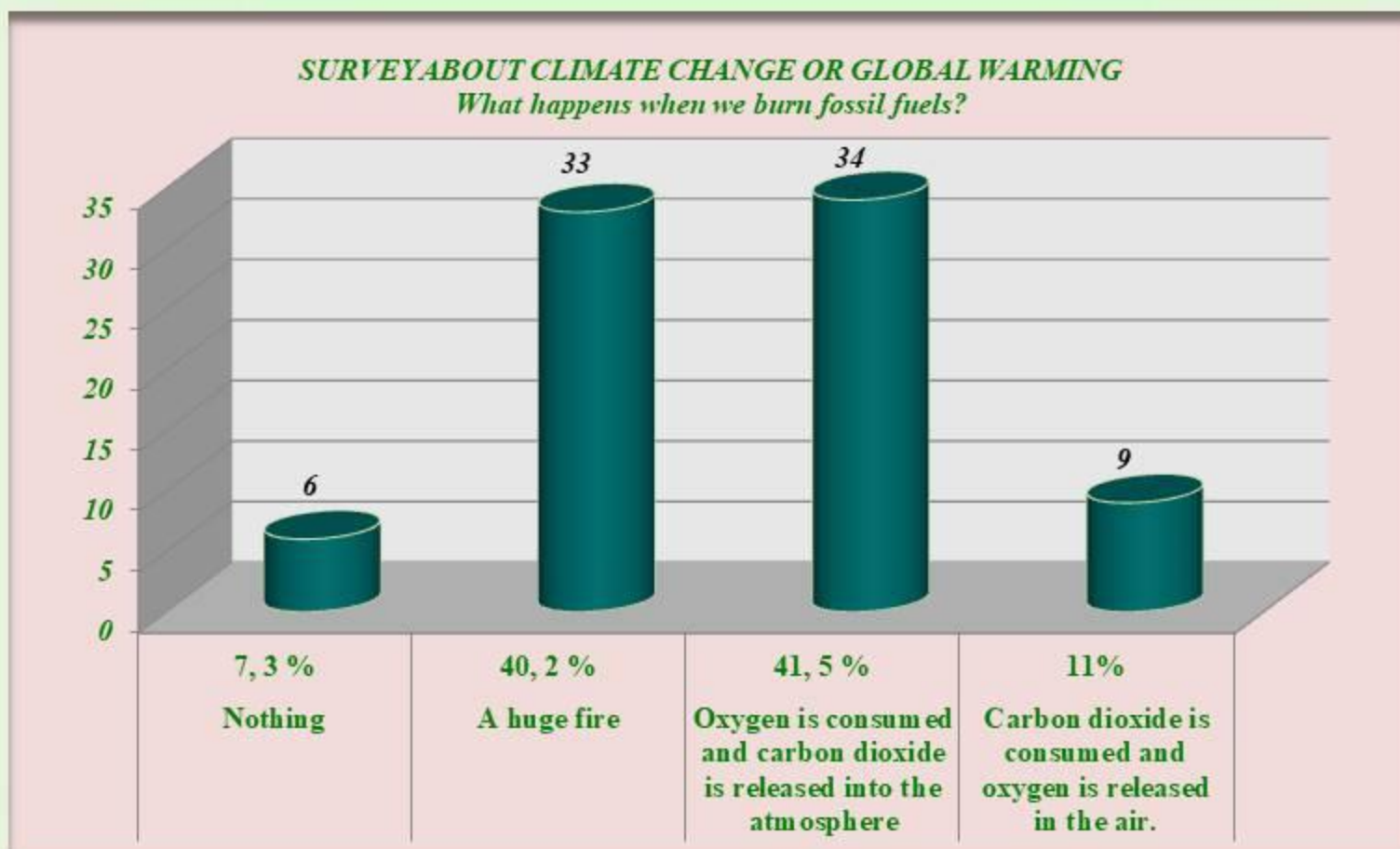
Statements of occurrence of the process greenhouse effect are also different. That climate change and the greenhouse effect are the same believe 35 pupils – 42,7 %, and 47 – 57,3 % don't , 51 pupils – 62,2 % admitted that climate change is caused by greenhouse effect and another 31 pupils – 37,8 % think it isn't. According 23 pupils – 28 % greenhouse effect is caused by climate change, but according to 59 pupils – 72 % aren't. Climate change due to the reduction of the ozone layer is true for 52 – 63,4 % of pupils and 30 - 36.6 % reject.



About the question which of the fossil fuels are - 56 pupils – 68,3 % indicated only oil, 33 - only 40,2 % coal, 40 pupils - 48.8 % classified as only fuel gas and only 22 pupils – 26,8 % have noted that all listed are fuels.

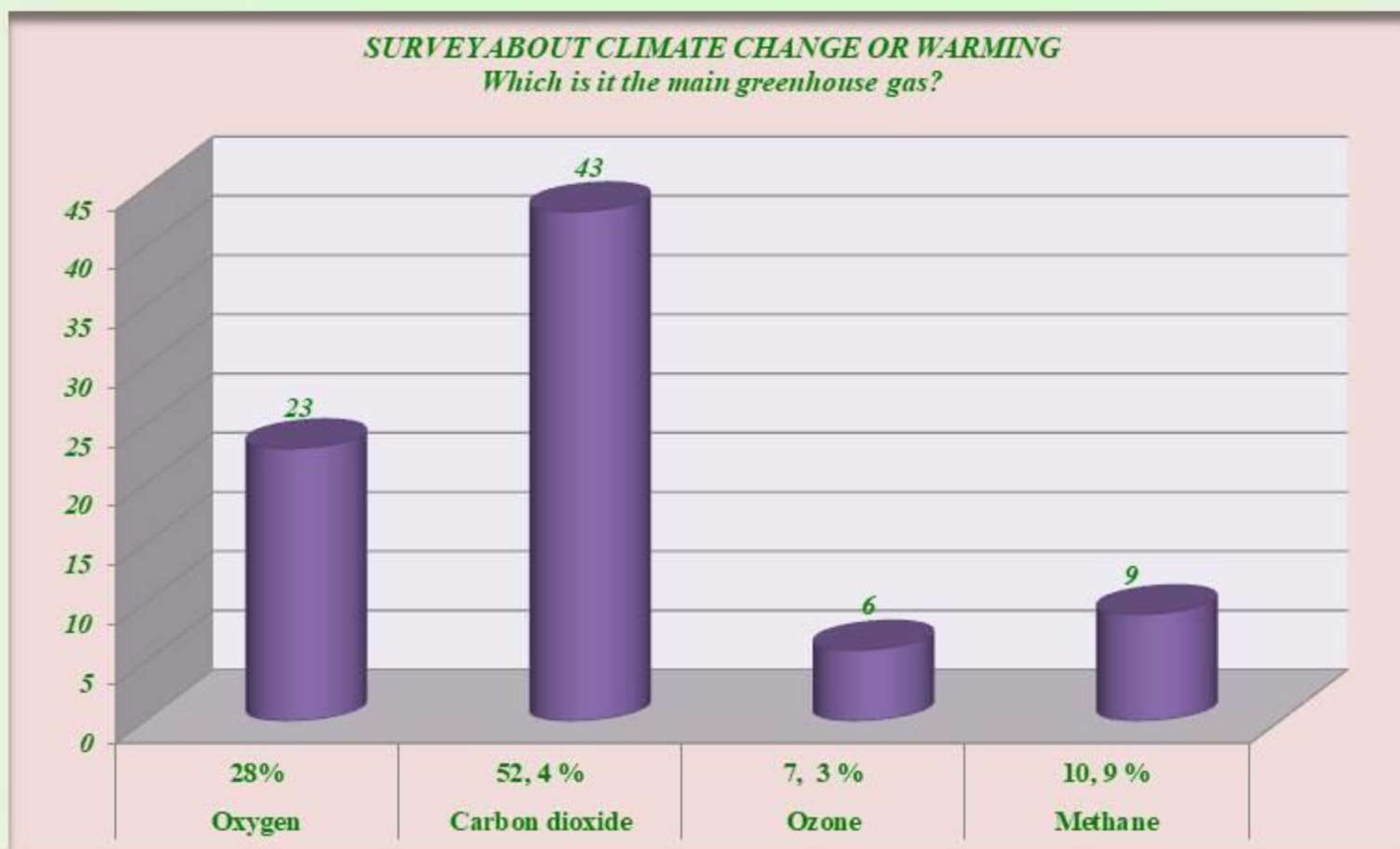


According 6 pupils – 7,3 % will not happen anything if flammable fossil fuels, 33 pupils – 40,2 % suggest that you will become a great fire, 34 pupils – 40, 2 % say that oxygen is destroyed and atmospheric carbon dioxide and 9 pupils – 11 % responded that carbon dioxide is destroyed and the air is released oxygen.

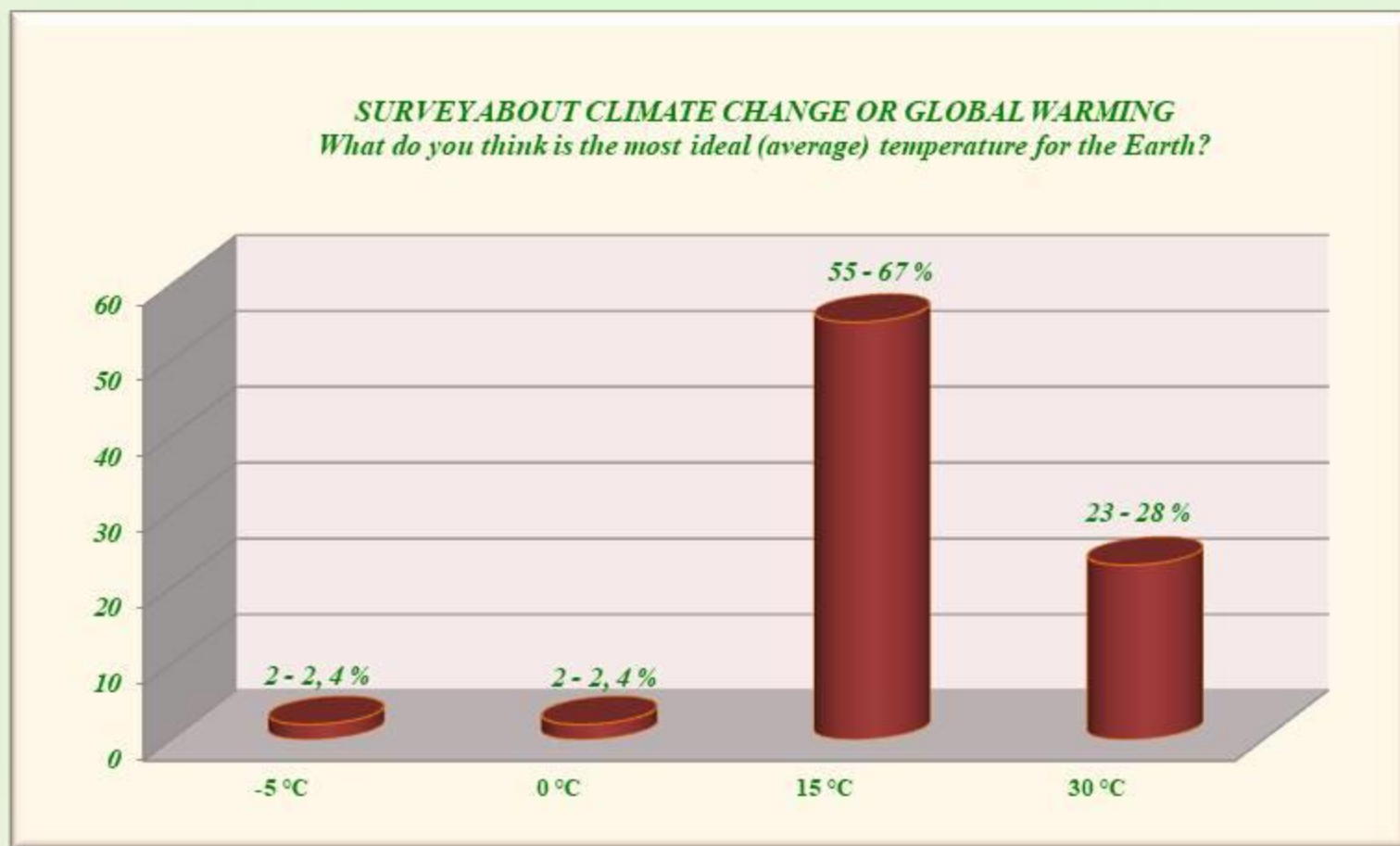


*Effective
educational resource
for
active learning*

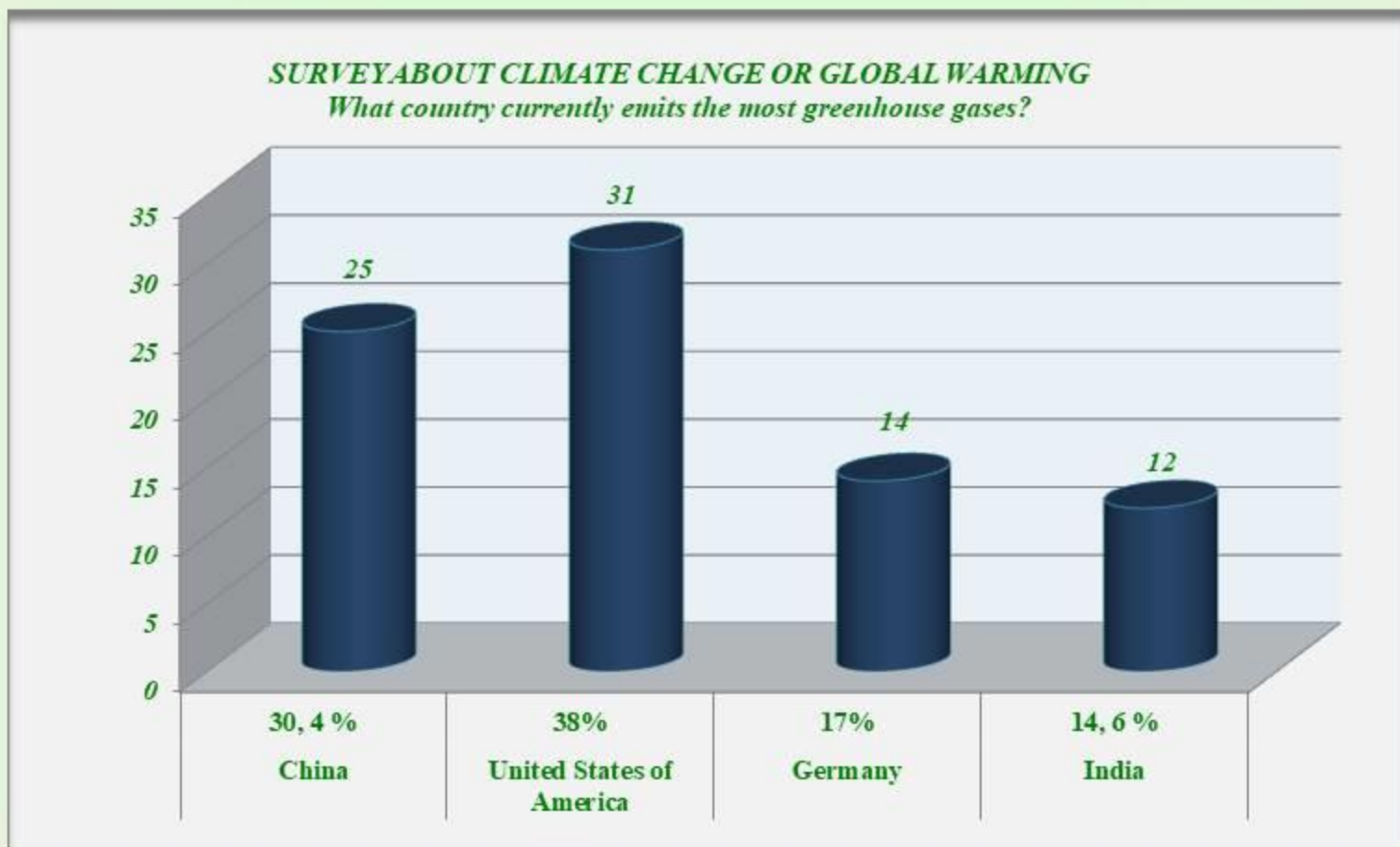
As a major greenhouse gas 23 pupils - 28 % indicate the oxygen, another 43 pupils - 52,4 % say it is the carbon dioxide, 5 pupils - 6 % believe that it is the ozone and 7 pupils - 8.5 % identify methane as greenhouse gas.



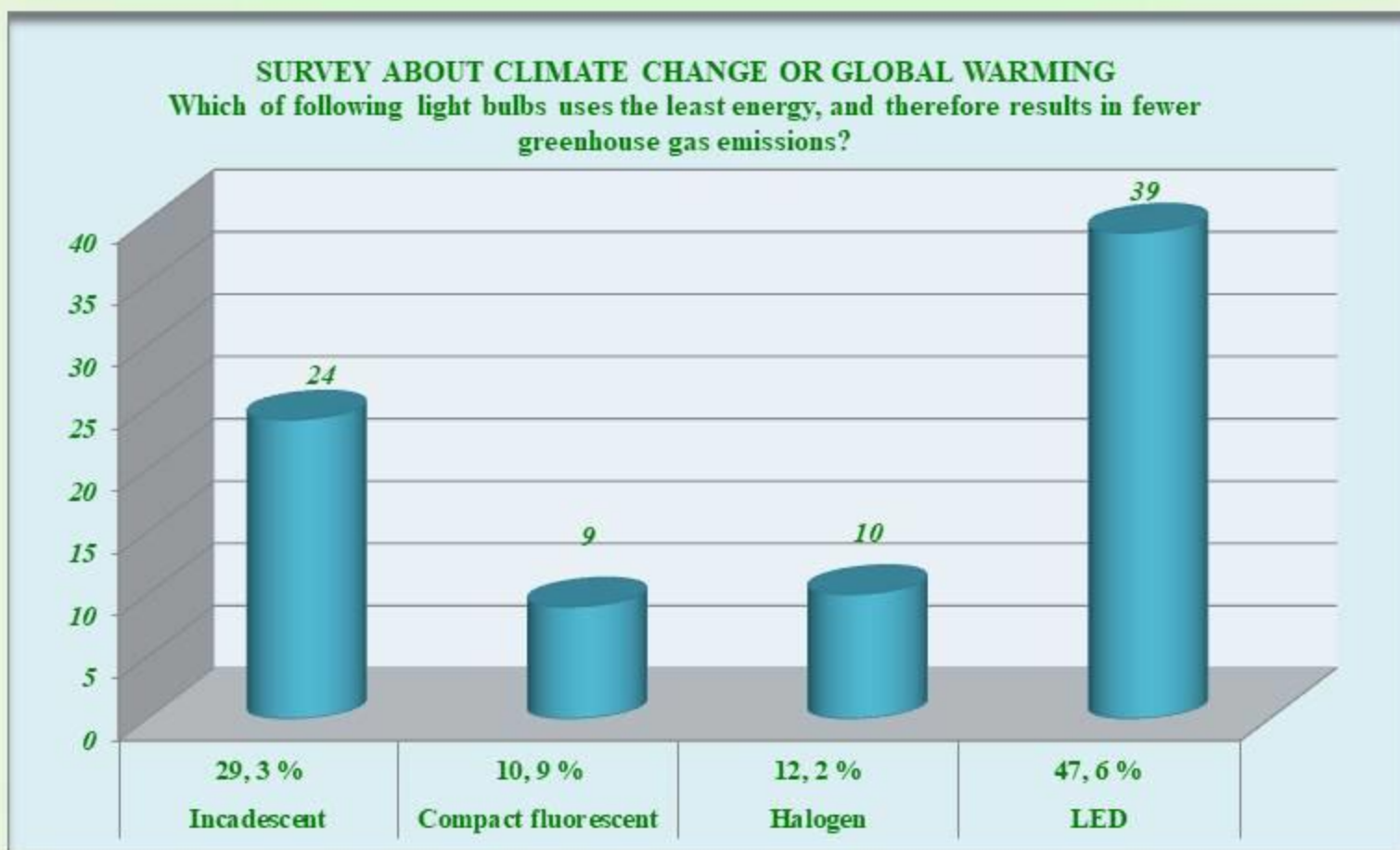
As the best / medium / temperature of the Earth 2 pupils – 2,4 % think it is -5°C , 2 pupils – 2,4 % - 0°C , 55 pupils – 67 % indicate 15°C , and 23 – 28 % pupils - 30°C .



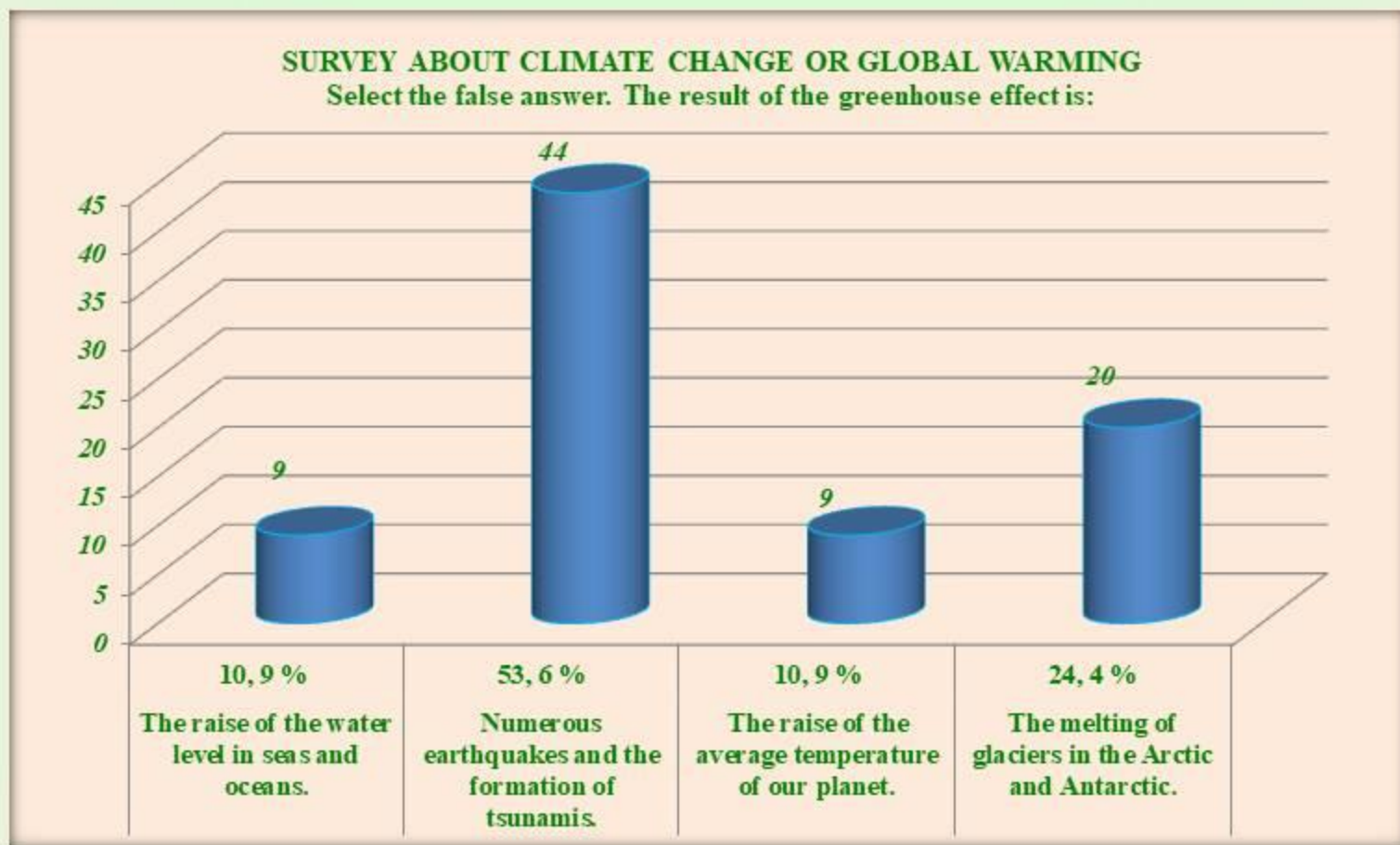
For the country which the largest air pollutant , 23 pupils - 28% indicate China, 28 – 34,1 % set US, 14 pupils - 17% - Germany and 12 pupils - 14,6% - India.



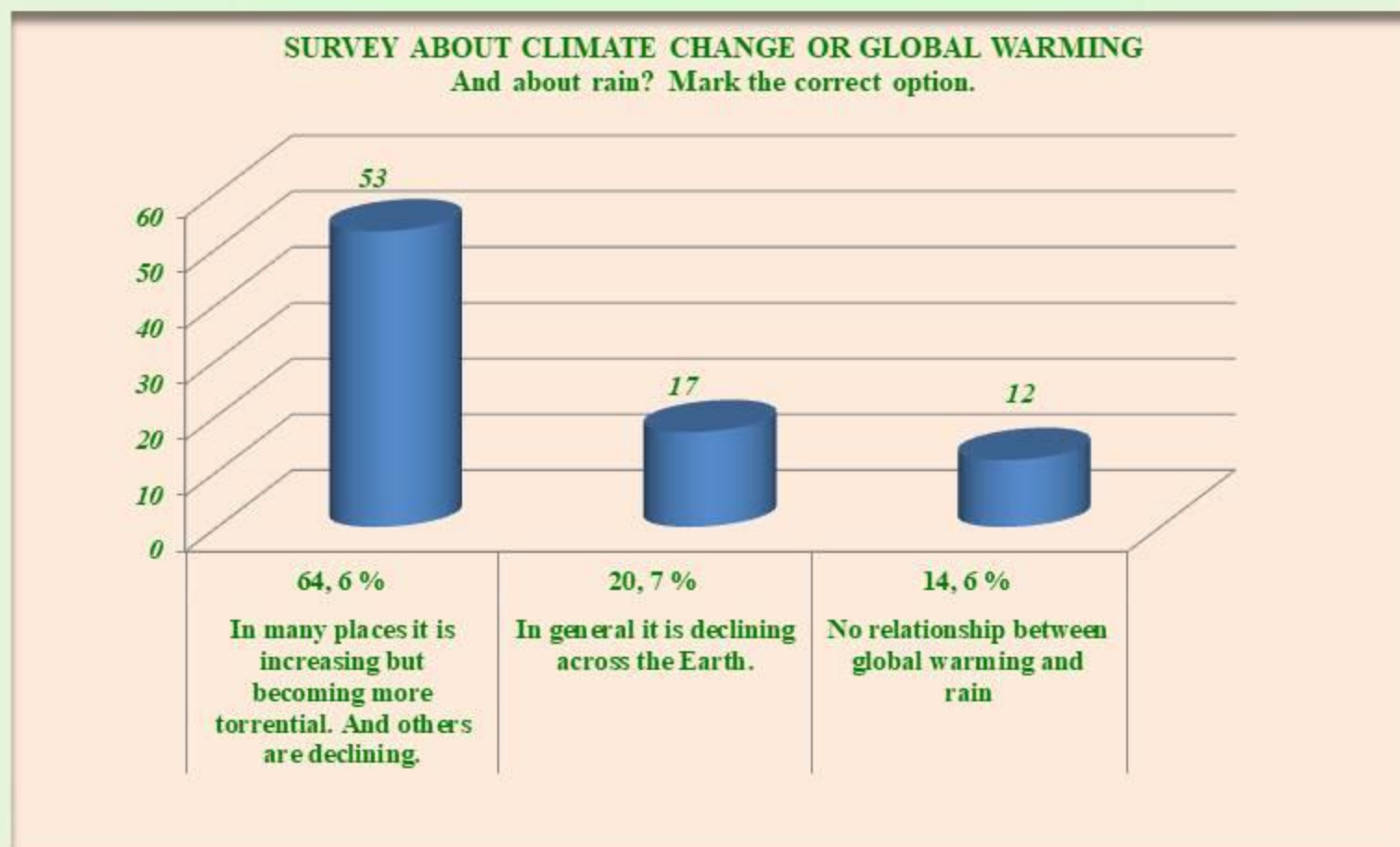
According to 24 pupils - 29.3 % incandescent bulbs use at least energy, fluorescent lamps are marked by 9 pupils – 10,9 %, and halogen lamps are indicated by 10 pupils – 12,2 %, other 39 pupils - 47,5% say that they are LED lamps.



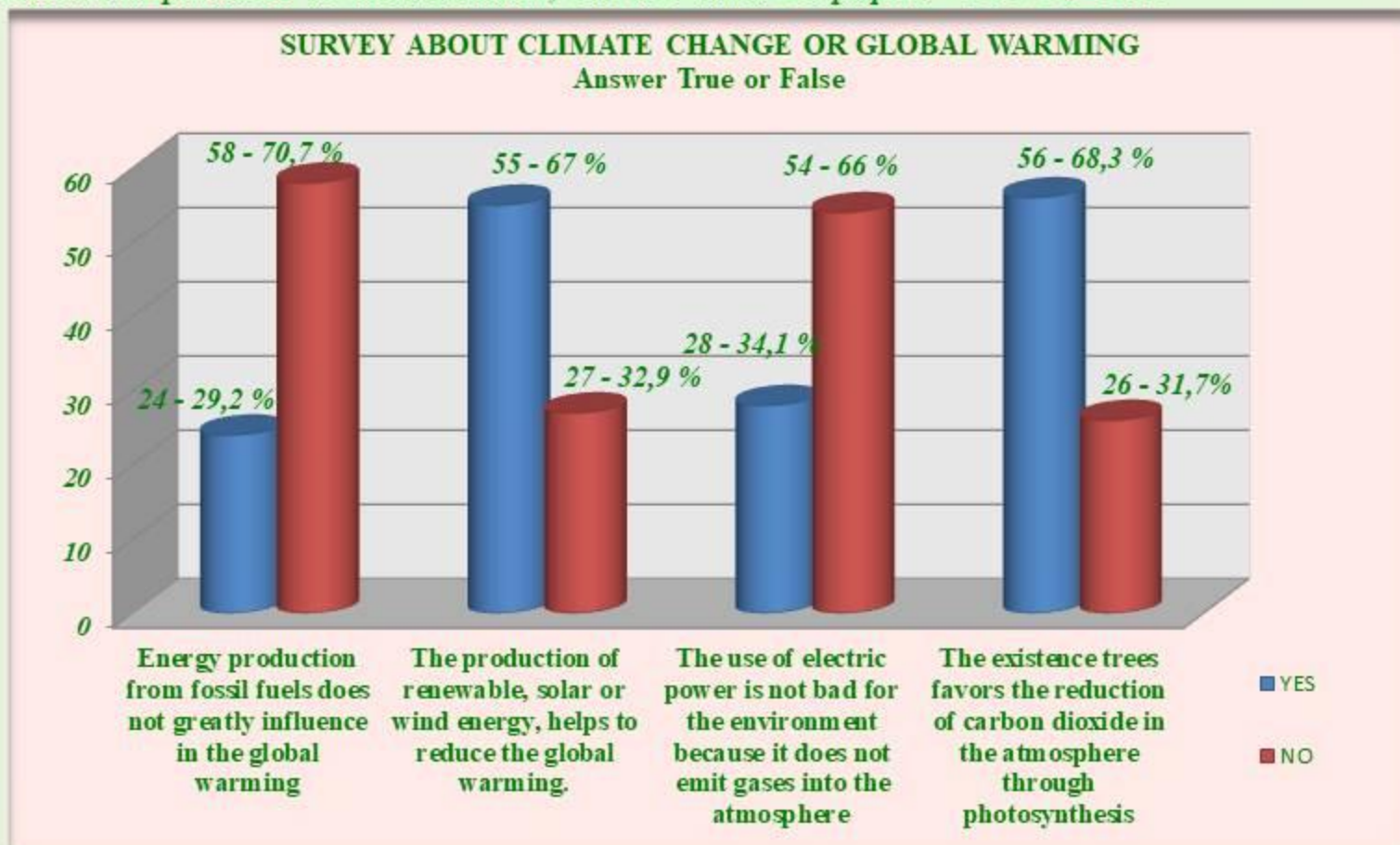
9 pupils - 10,9 % responded that he has no influence on raising the water level in seas and oceans, 44 pupils - 53,6 % do not think that the greenhouse effect is responsible for increasing the number of earthquakes and tsunamis, 9 pupils - 10,9 % responded that it does not affect the increase in the average temperature of our planet, another 20 pupils - 24,4 % do not think he is the cause of strengthening the melting of glaciers in the Arctic and Antarctica.



The most pupils think that there is a connection between global warming and the rainfall on Earth. 53 pupils – 64,6 % say it influences the allocation of the rains on the ground for their gradually increase or decrease, 17 pupils – 20,7 % are of the opinion that the rains decreased throughout the planet, and 12 pupils – 14,6 % see no connection between global warming and rain.



The production of energy from fossil fuels strongly influences global warming say 58 pupils - 70,7 %, and 24 students - 29,2 % have the opposite opinion. Production of energy from renewable sources that is good for the planet accept 55 pupils - 67 %, and 27 pupils - 32,9 % deny his favor. According to 28 pupils - 34,1% in the use of electricity does not affect bad for the environment and the other 54 pupils - 66 % think that there is a negative impact. The majority of students 56 - 68,3 % attach serious importance to afforestation, but the other 26 pupils - 31,7 % - not.



Do not give important meaning to the green places and afforestation yet. The majority of pupils 76 - 93 % in the nothing contributed to reducing the effect of global warming. Actions related to mitigate this effect made 6 students - 7 % who participated in cleaning the riverbed, but clean playground or planting trees, shrubs and flowers.

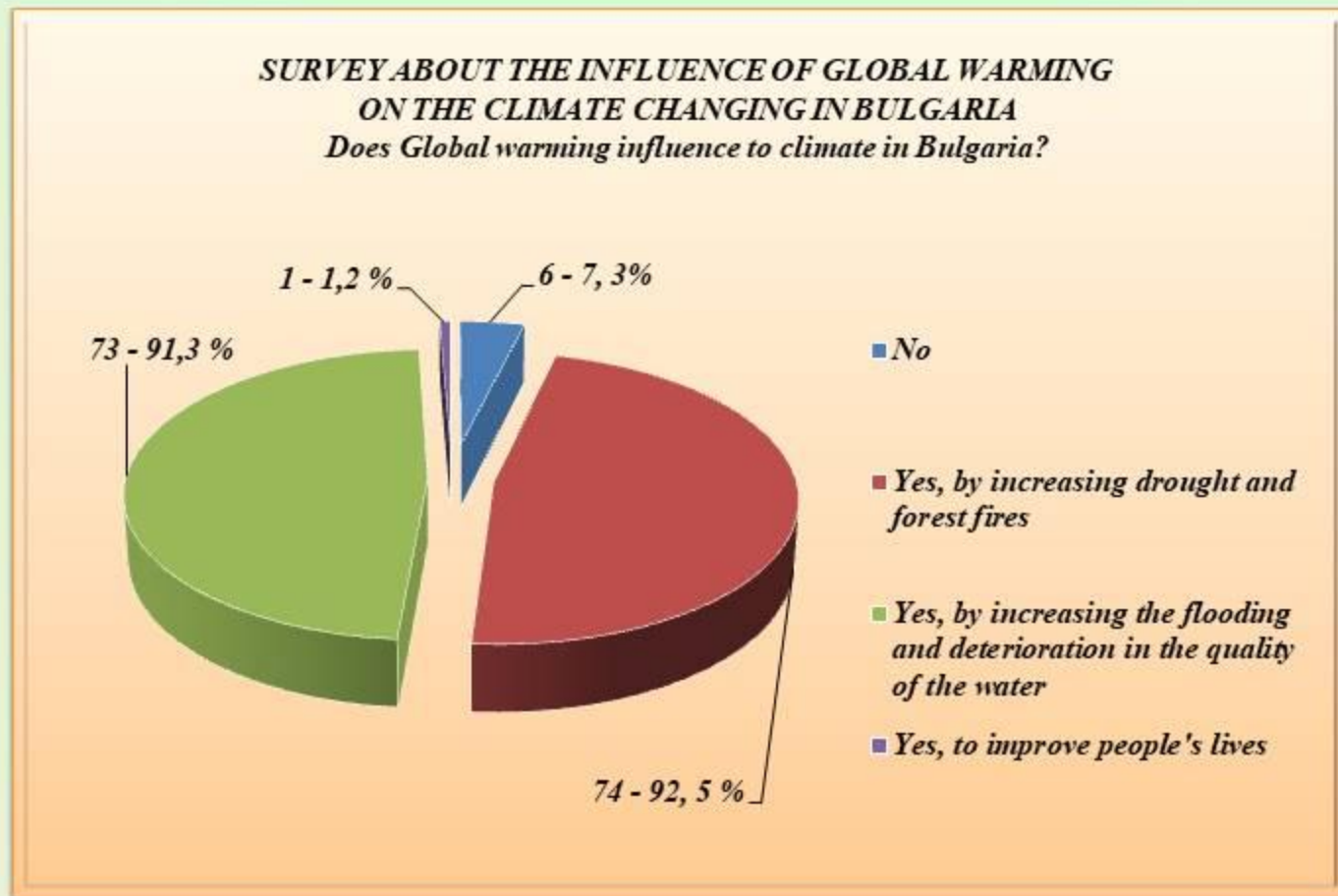
SURVEY ABOUT CLMATE CHANGE OR GLOBAL WARMING
Have you ever done anything consciously ro reduce the effects of climate change?



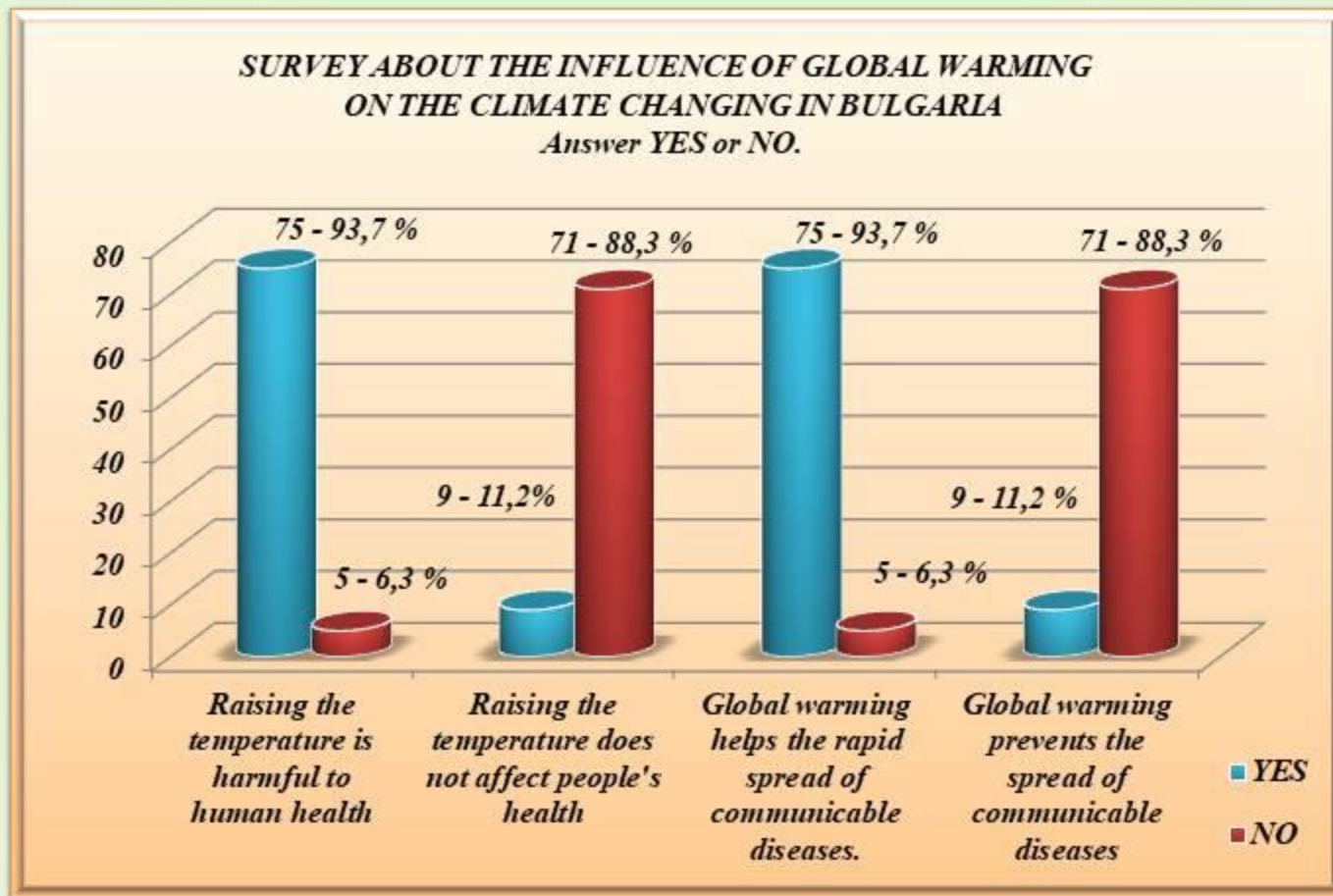
*Reporting the results of the
survey for the impact
of the global warming
climate change in Bulgaria*

The participants are total 80 pupils aged between 7 and 9 years.

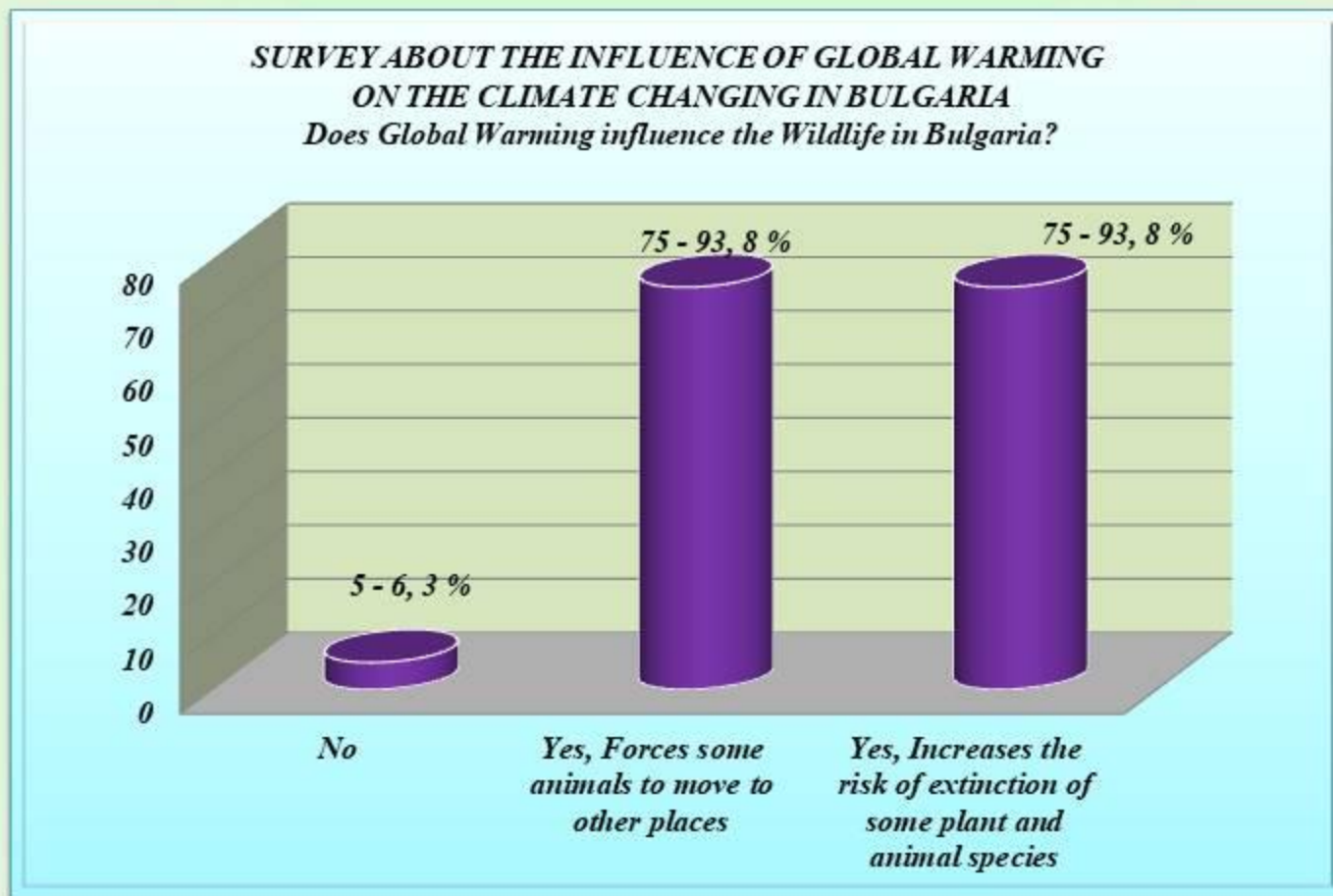
Participants in the second poll explore the influence of global warming on the climate in Bulgaria. They observed various phenomena and 73 pupils (91,3%) concluded that the impact of global warming is expressed by drought and forest fires or floods and deterioration of water quality - 74 pupils (92,5%) and only 6 pupils (7,3%) didn't find any connection.



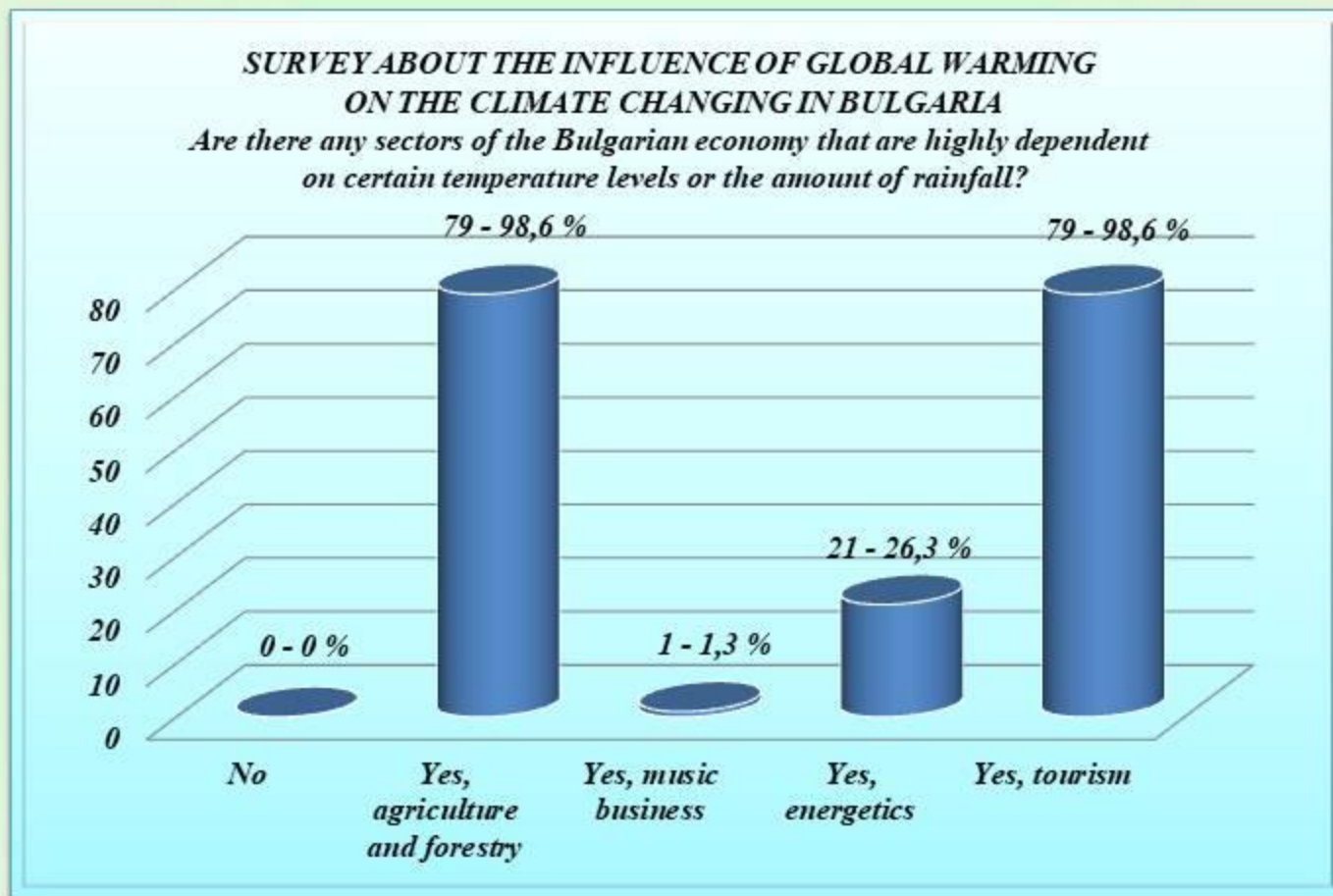
In discussing the impact of global warming on human health, 75 pupils (93.7%) have opinion the rise in average temperatures was harmful to human health and contribute to the rapid spread of infectious diseases and 5 pupils (6.3%) - they don't think influence on human health is big.



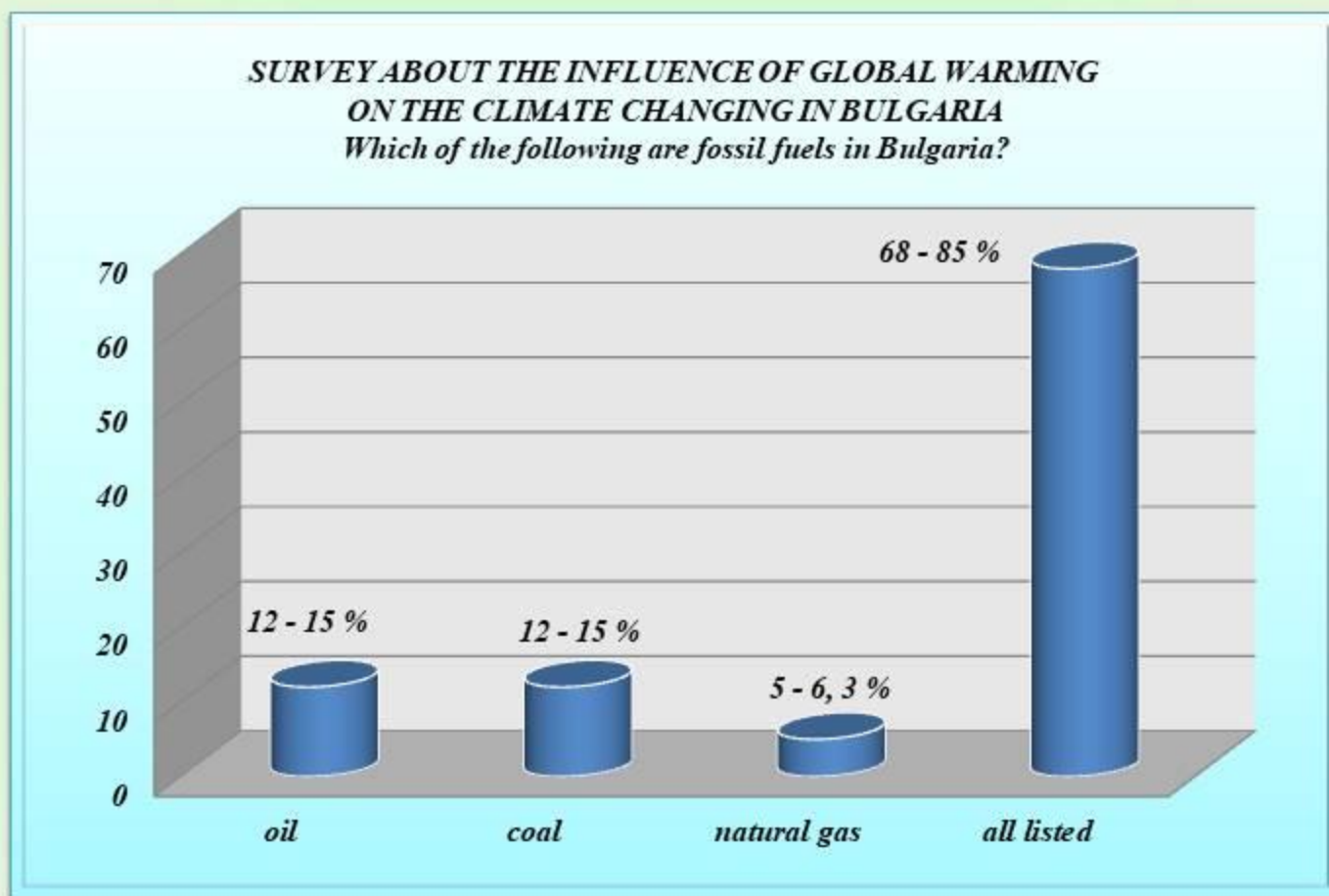
Asked the pupils if global warming in Bulgaria affects the wild world 75 of the pupils (93,8%) expressed the opinion that it increases the risk of extinction of some plant and animal species and forcing some animals to move to other places, and 5 pupils (6,3%) are not danger.



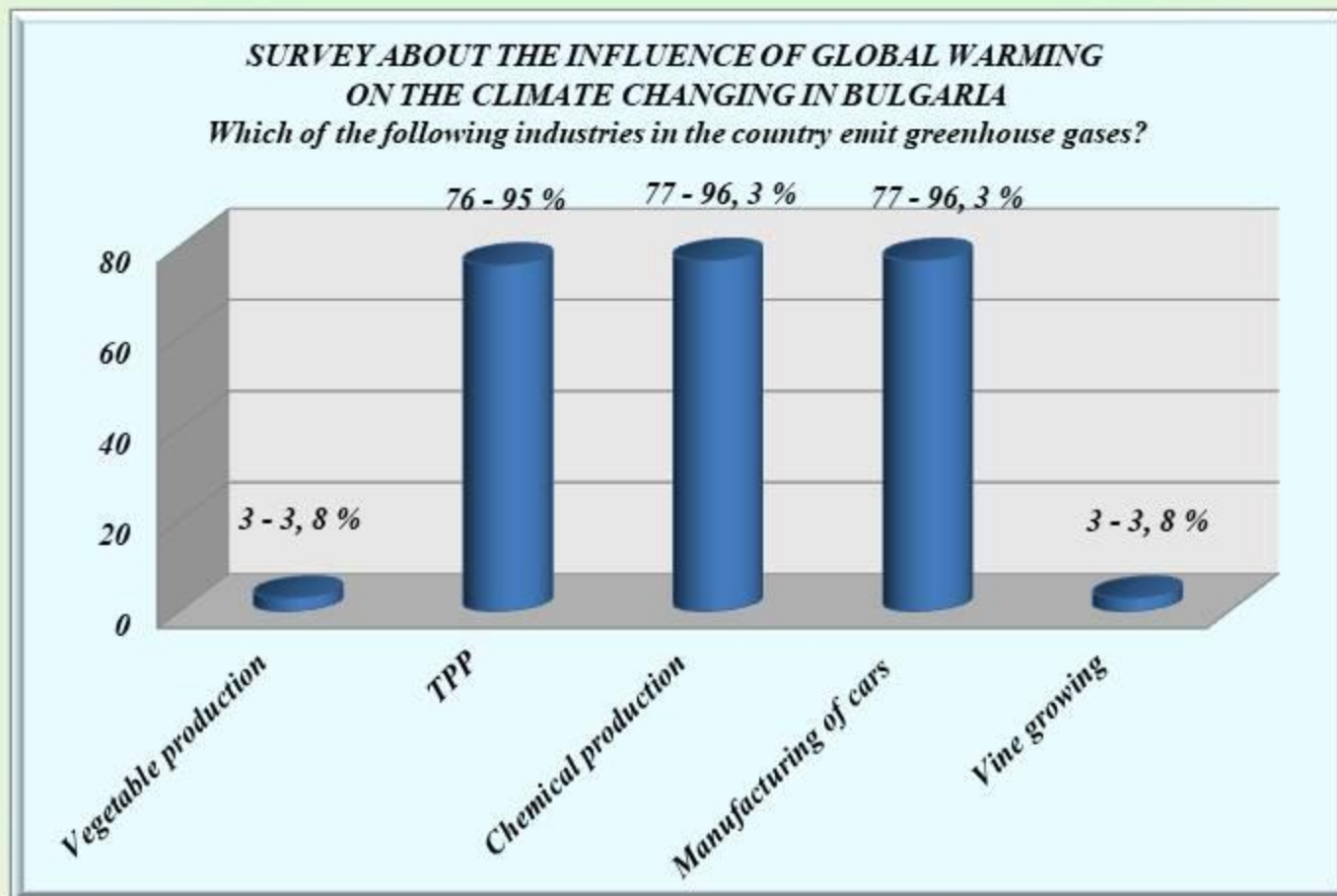
When asked if there are sectors of the Bulgarian economy that are highly dependent on temperature changes or rainfall, 79 students (98.6%) noted that agriculture is the most dependent, 78 students (97.5%) of tourism and 21 students (26.3%) - the energy sector. Only 1 student (1.3%) included the music business in the affected sectors. Only 1 student (1.3%) included the music business in the affected sectors.



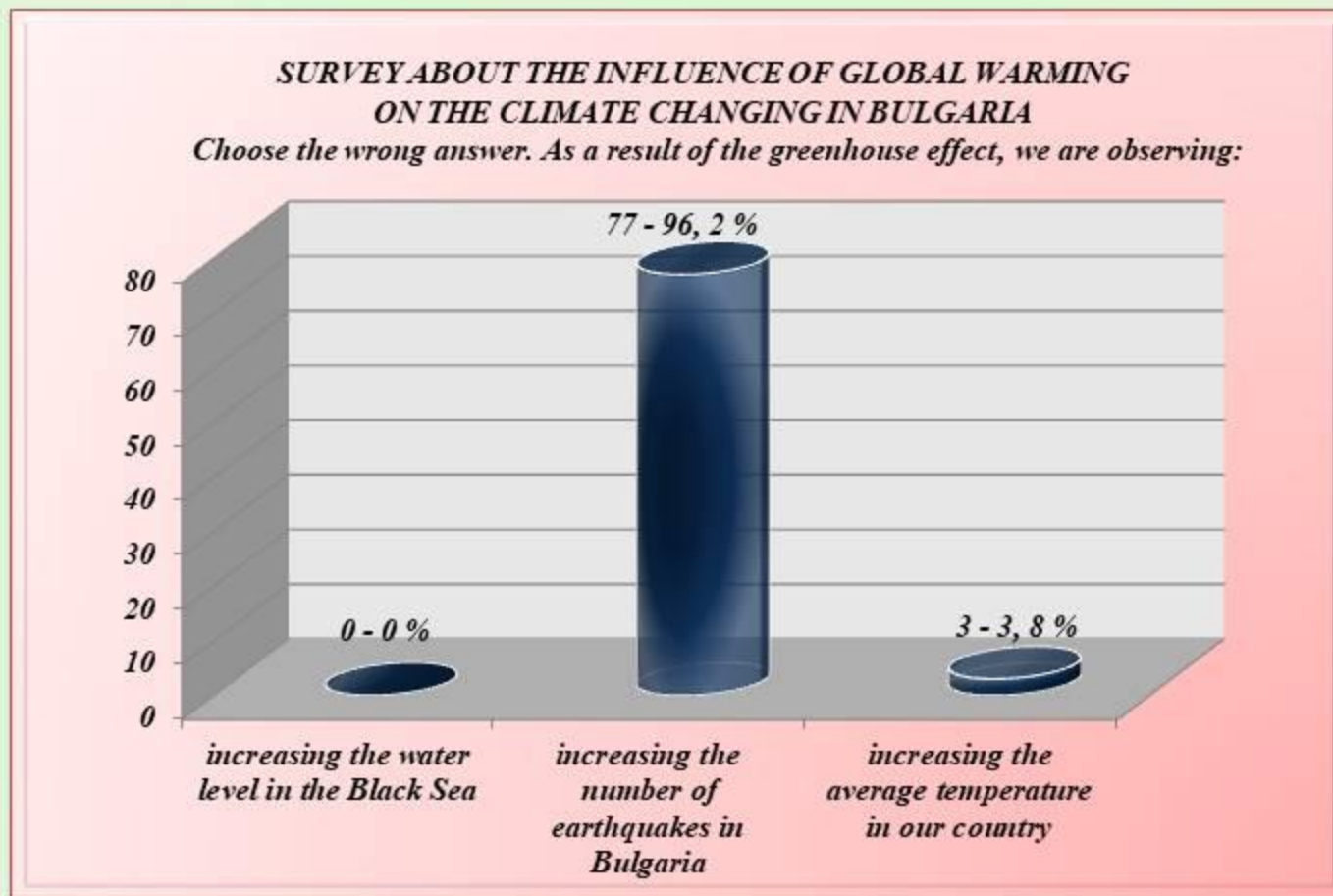
The pupils followed the listed fossil fuels and 12 pupils (15%) indicated oil and coal, 5 pupils (6.8%) - natural gas, and when reading the final criterion - 68 pupils (85%) noted all the above.



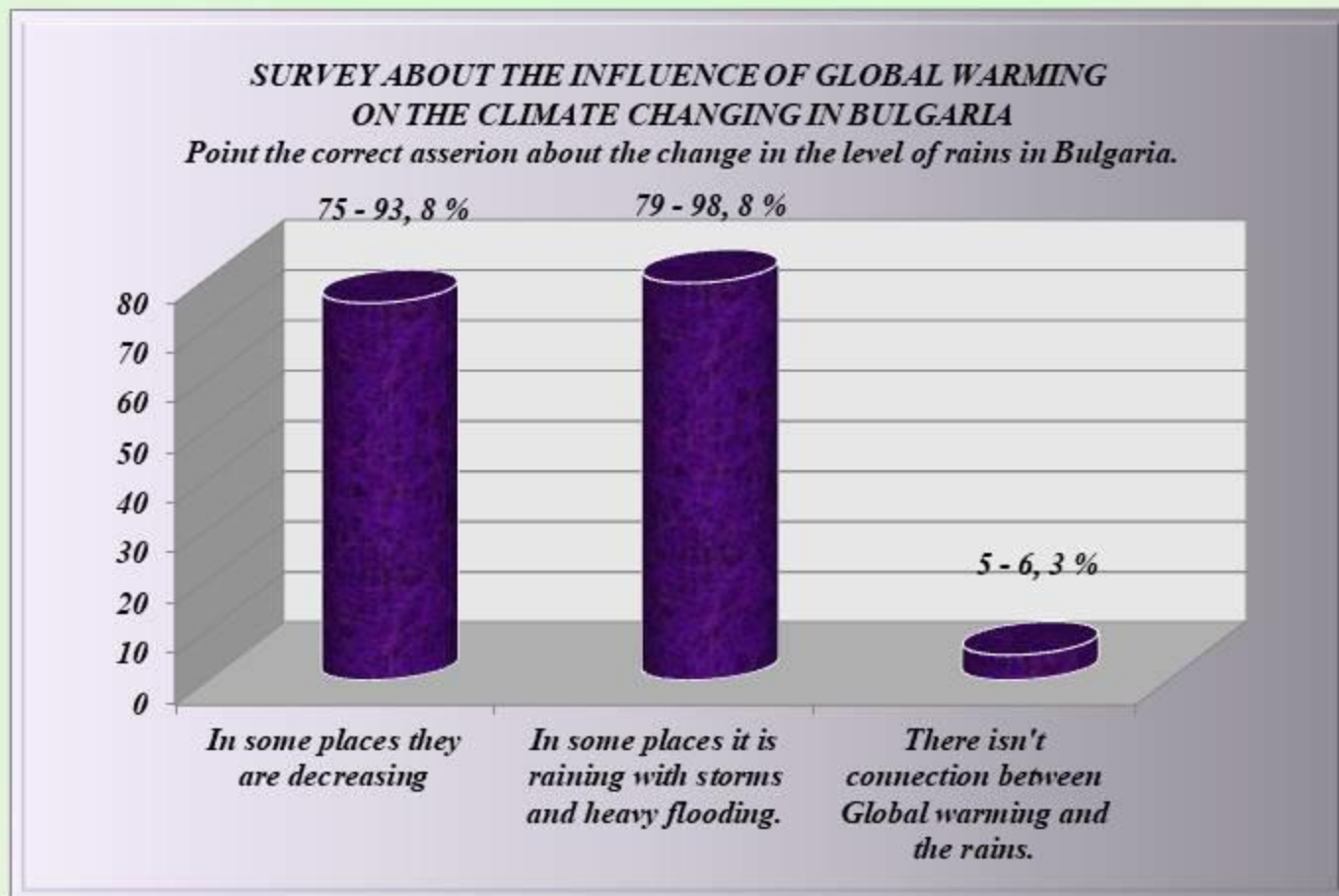
Regarding which sectors of the economy emit harmful greenhouse gases, 77 pupils (96.3%) indicated the chemical industry and the production of cars, 76 pupils (95%) - TPPs and only 3 pupils (3.8%) - viticulture and vegetable production.



When we put the condition for choosing of wrong answer to the question of what we observe as a result of the greenhouse effect, 77 pupils (96.3%) showed an increase in the number of earthquakes in Bulgaria and 3 pupils (3.7%), the average temperature in the country.



After long observation of the climate change, 75 students (93,8%) concluded that in some places the rain in Bulgaria is decreasing, 79 students (9,8%) consider that elsewhere there are storms and heavy floods, 5 pupils (6,3%) think that there isn't connection between global warming and rainfall.

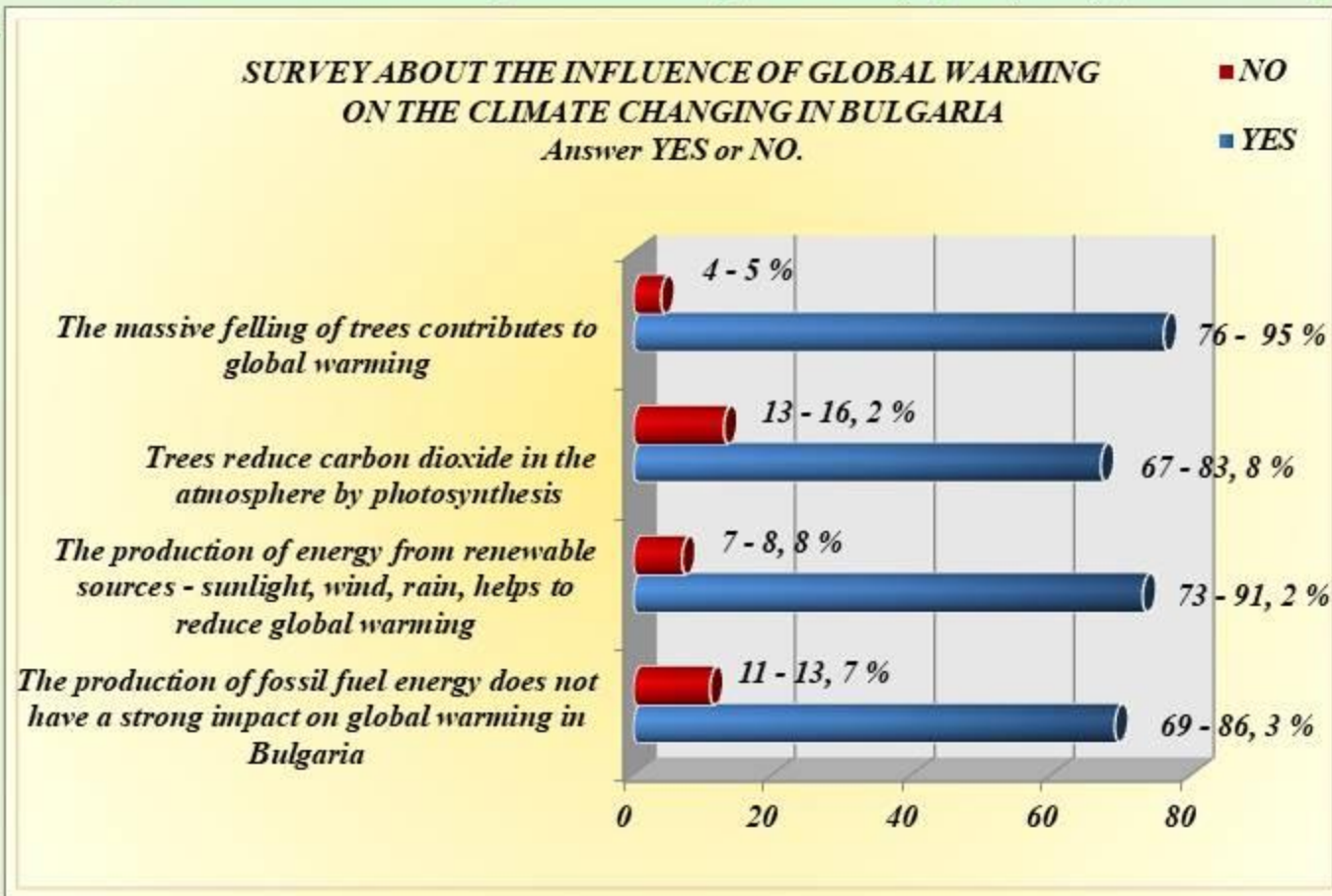


Fossil fuel production has a strong impact on global warming in Bulgaria, 69 pupils (86.3%) say and 11 pupils (13.7%) do not support this claim.

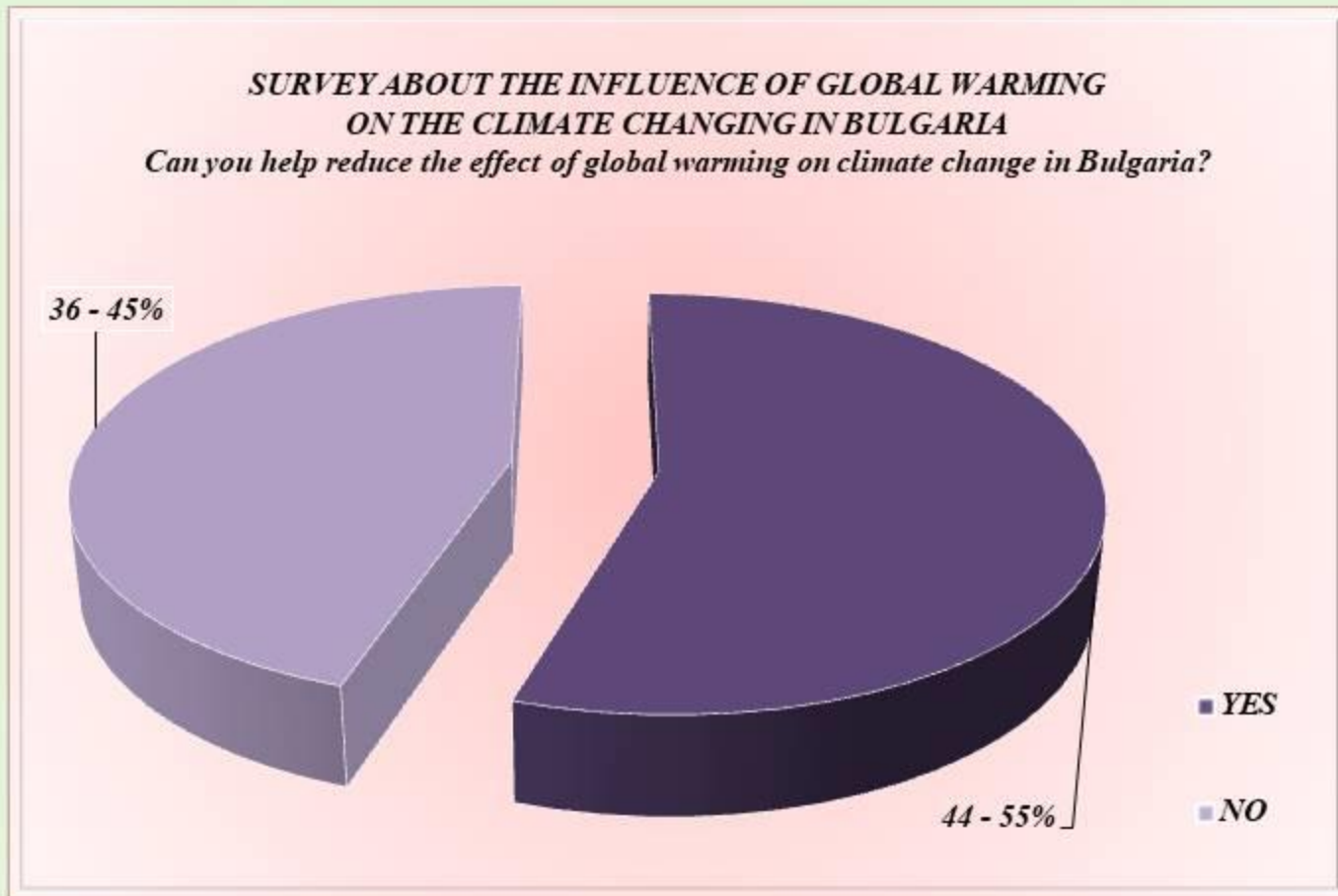
73 pupils (91.2%) are agree that the production of renewable energy helps to reduce global warming, while another 7 pupils (8.8%) are not.

67 pupils (83.8%) are of the opinion that trees reduce carbon dioxide in the atmosphere, but 13 pupils (16.2%) don't share it.

The massive felling of trees contributes to global warming, think 76 pupils (95%), but other 4 pupils (5%) don't think so.



Particular important are the pupils' suggestions how to reduce the effect of global warming in Bulgaria. 44 pupils (55%) have some suggestions, but 36 pupils (45%) haven't.



THE SUGGESTIONS:

*Reducing cars with
harmful gases.*

*Collecting waste in
the designated
locations.*

*Making more houses
for birds and take care
of them.*

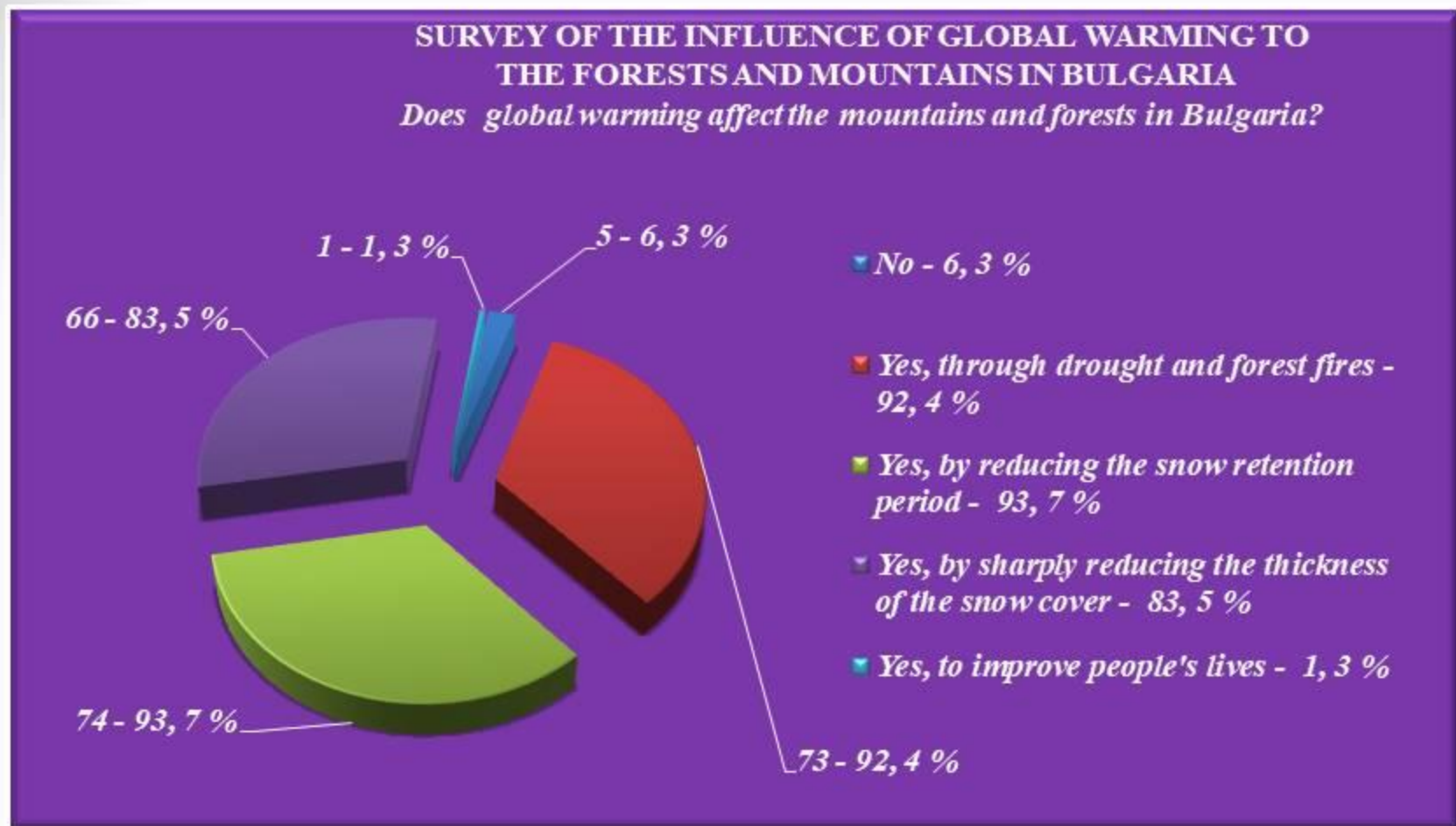
*Making suggestion to
the mayor of our town
for afforestation and
protect the forest.*

***REPORTING THE RESULTS OF THE
SURVEY
OF THE INFLUENCE OF GLOBAL
WARMING ON THE FORESTS AND THE
MOUNTAINS IN BULGARIA***

This survey aims to examine to what extent pupils are knowledgeable about the issues of climate change and global warming. The participants are total 79 aged between 8 and 11 years.

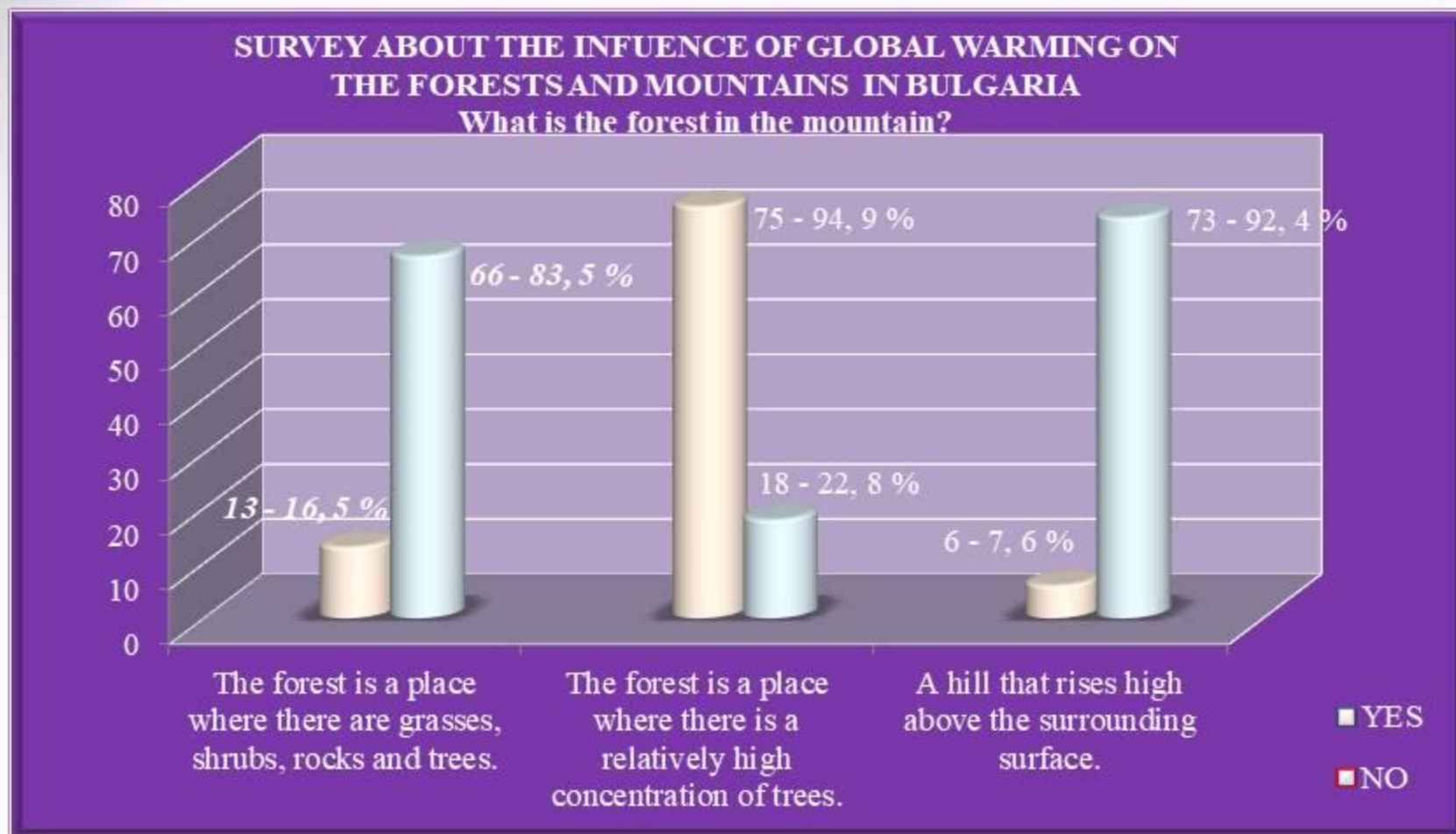
They visited and watched different natural areas and 73 students (92.4%) expressed opinion that the influence was expressed by drought and often forest fires but 5 pupils (6.3%) expressed the opinion that there was no influence.

After a thorough observation of the snowfall in Bulgaria, 74 students (93.7%) came to the conclusion that under the influence of global warming the snow retention period was reduced and 66 students (83.5%) found decrease in the snow cover thickness. Only 1 student (1.3%) thinks that sustained temperature increases will improve people's lives.



To find out how students understood the concepts of forest and mountain, they had to consider and confirm or deny a few statements.

They analyzed them and 13 students (16.5%) determined the forest as a locality where there are grasses, shrubs, rocks and trees, and 66 students (83.5%) denied this claim. According to 75 students (94.9%), the forest is an area where there is a relatively high concentration of trees and 18 pupils (22.8%) disagree. The claim that the mountain rises high above the surface is supported by 73 disciples (92, 4%) and denied by 6 students (7, 6%).



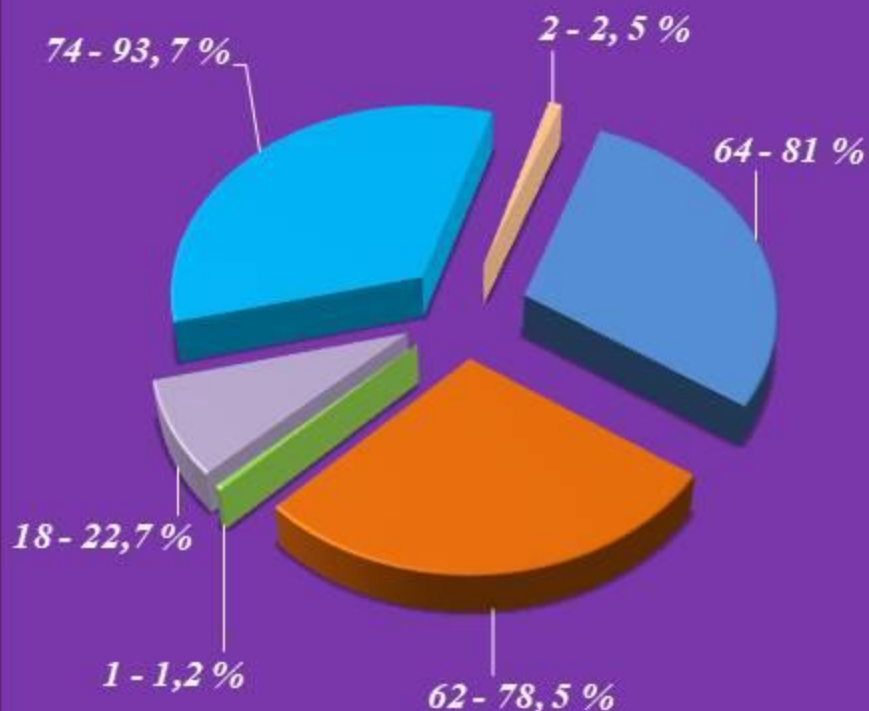
Students had to study the origin and state of forests in Bulgaria.

According to 64 students (81%) There are about 83 species of trees in Bulgaria, 62 students (78.5%) claim that deciduous forests have a natural origin and 74 students (93.7%) are sure that Tree Juniper, Tissue, Horse chestnuts are only part of the protected species.

There are also students - 18 (22.7%) who claim that coniferous forests are predominantly artificial, and two pupils (2.5%) think that global warming prevents the spread of contagious tree diseases.

SURVEY OF THE INFLUENCE OF GLOBAL WARMING TO THE FORESTS AND MOUNTAINS IN BULGARIA

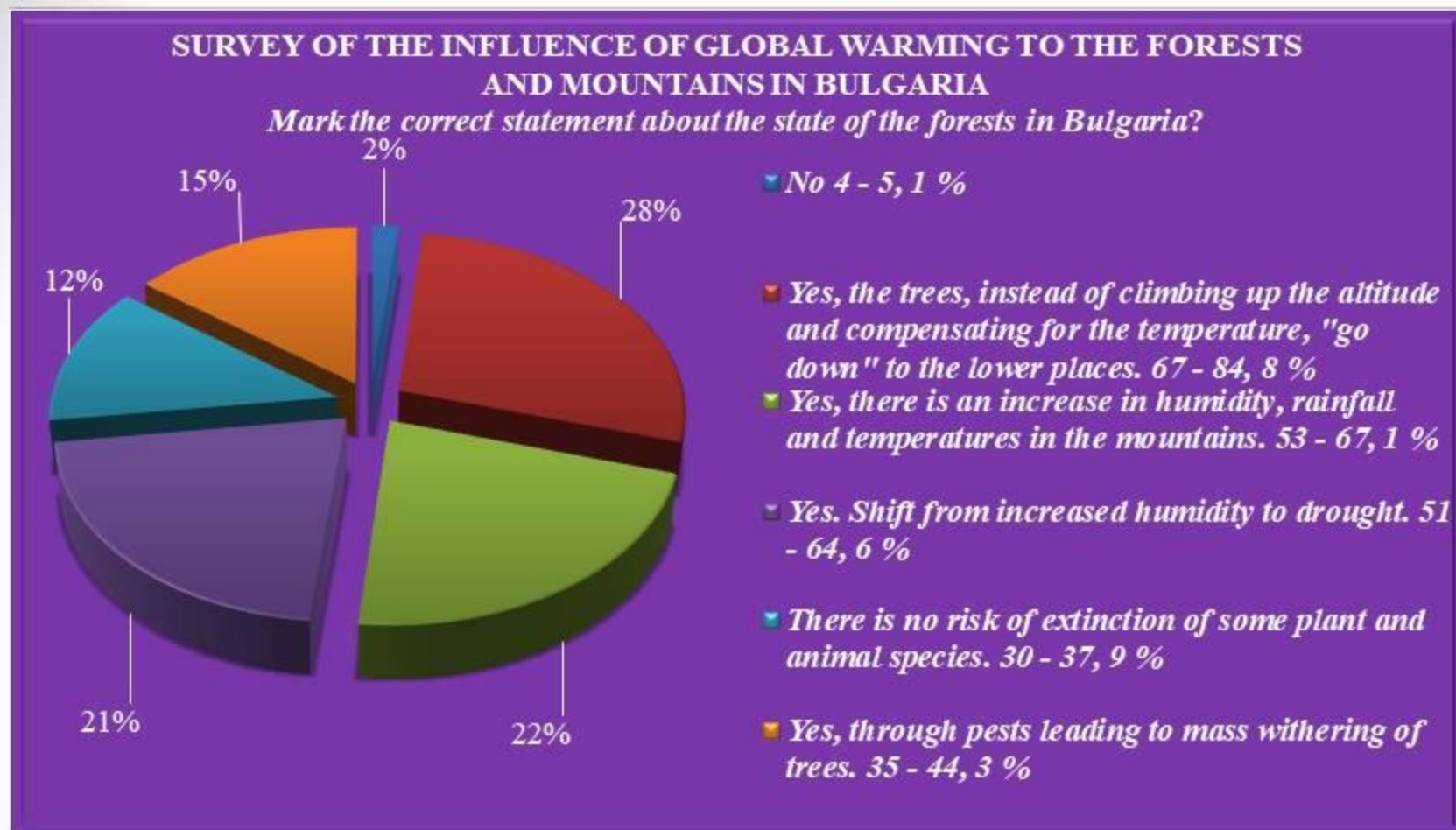
Mark the correct statement about the state of the forests in Bulgaria.



- *There are about 83 species of trees in Bulgaria. 81%*
- *Broadleaved high-stem forests are of natural origin. 78,5%*
- *Pine and beech are the rarest trees in Bulgaria? 1,2%*
- *Coniferous forests are mostly artificial origin. 22,7%*
- *Juniper tree, yew, horse chestnut are just some of the protected species. 93,7%*
- *Global warming prevents the spread of infectious diseases in trees. 2,5%*

Asked how global warming affects mountains and forests in Bulgaria, 67 students (84, 8%) replied that the trees, instead of "climbing up" the altitude and compensating for the temperature, "go down" to lower areas. 53 students (67.1%) noted a very sharp change up from humidity, precipitation and temperatures in the mountains to a sharp shift from increased humidity to drought by 51 students (64.6%).

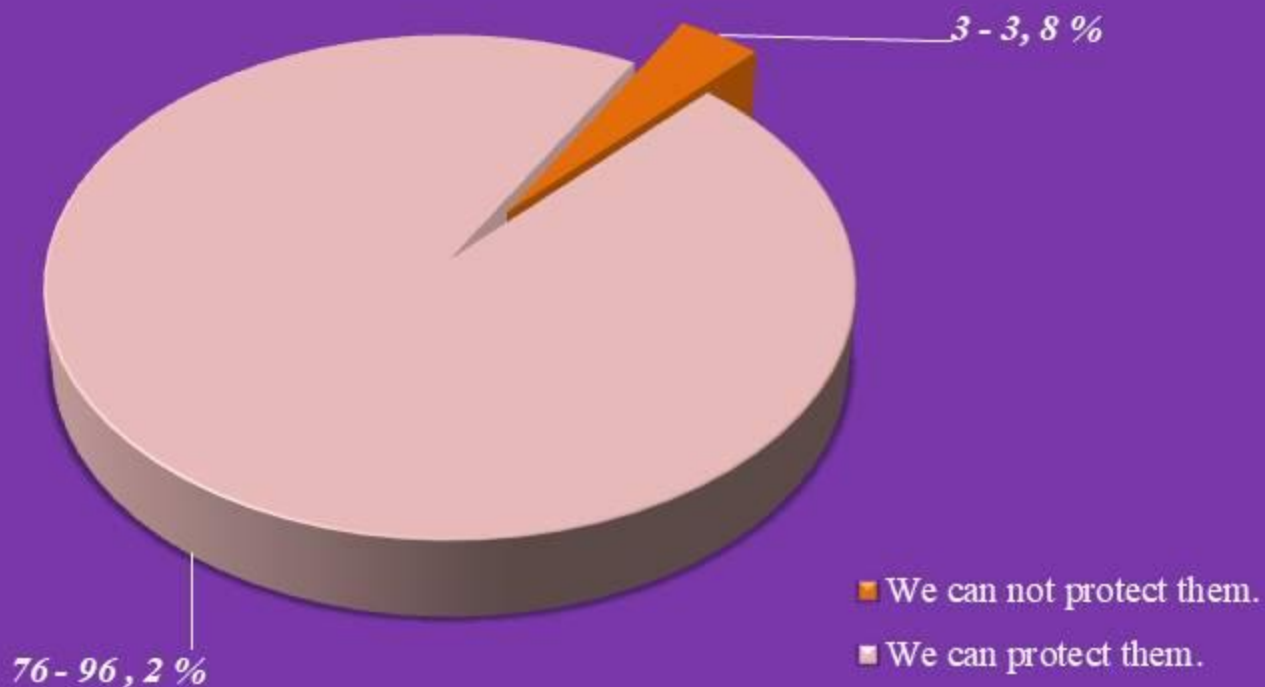
Only 35 students (44, 3%) realize that the pests can cause trees to wither, and the remaining 30 students (37, 9%) do not think there is a risk of extinction of some plant and animal species and 4 pupils (5, 1%) has no effect.



The conclusion is that 76 students (92.6%) feel the changes in the climate and realize that nature must be protected and its preservation is entirely dependent on people.

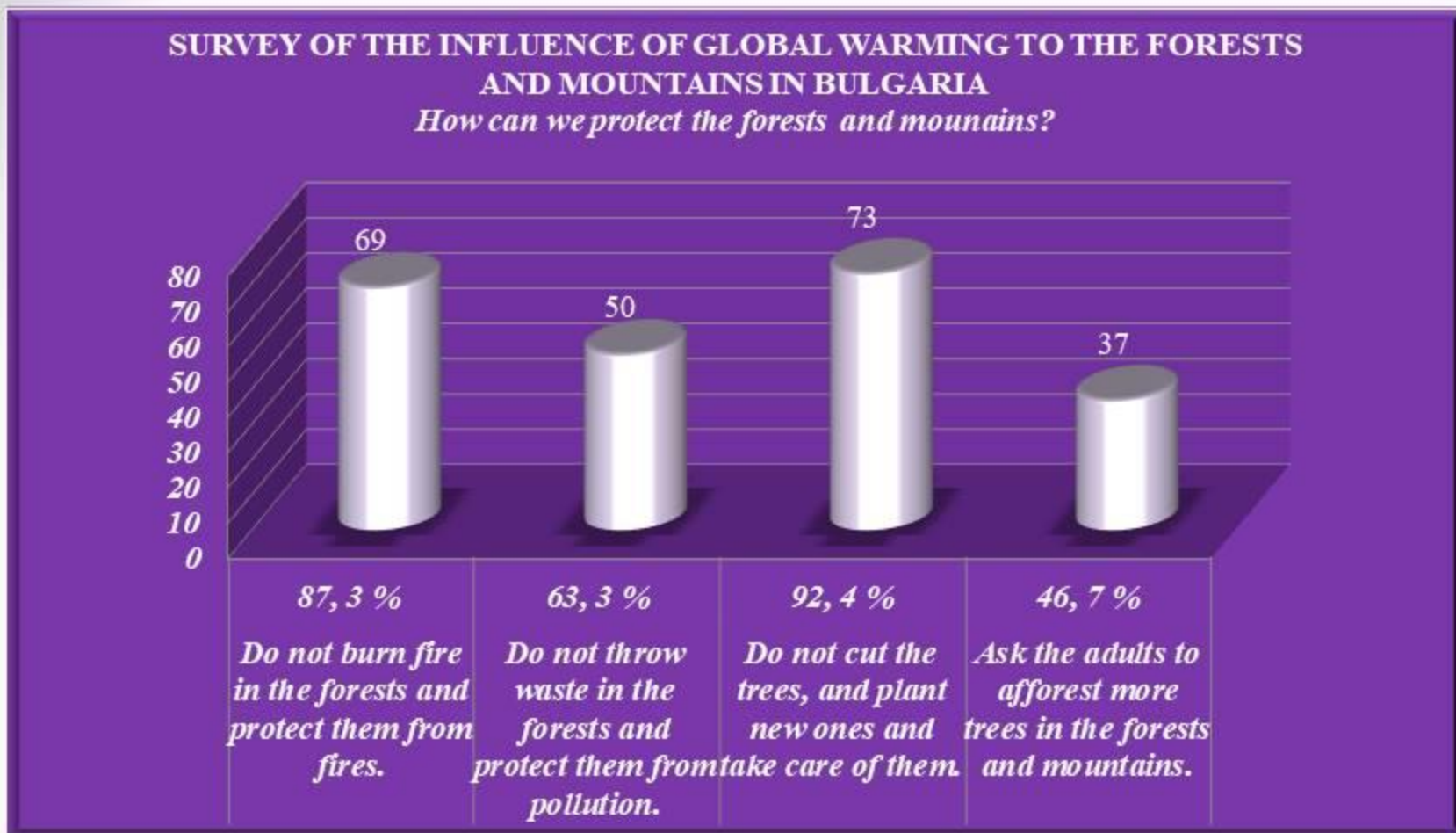
SURVEY OF THE INFLUENCE OF GLOBAL WARMING ON THE FORESTS AND MOUNTAINS IN BULGARIA

Can we protect the forests and mountains?



They offer different ways such as:

1. Do not ignite fire in the forests and protect them from fire - 69 students (87.3%).
2. Do not throw waste in the forests and protect them from pollution - 50 students (63.3%).
3. Don't cut the trees, plant new trees and take care of them - 73 students (92.4%).
4. Ask all adults to more afforest our native mountains and forests - 37 students (46.7%).

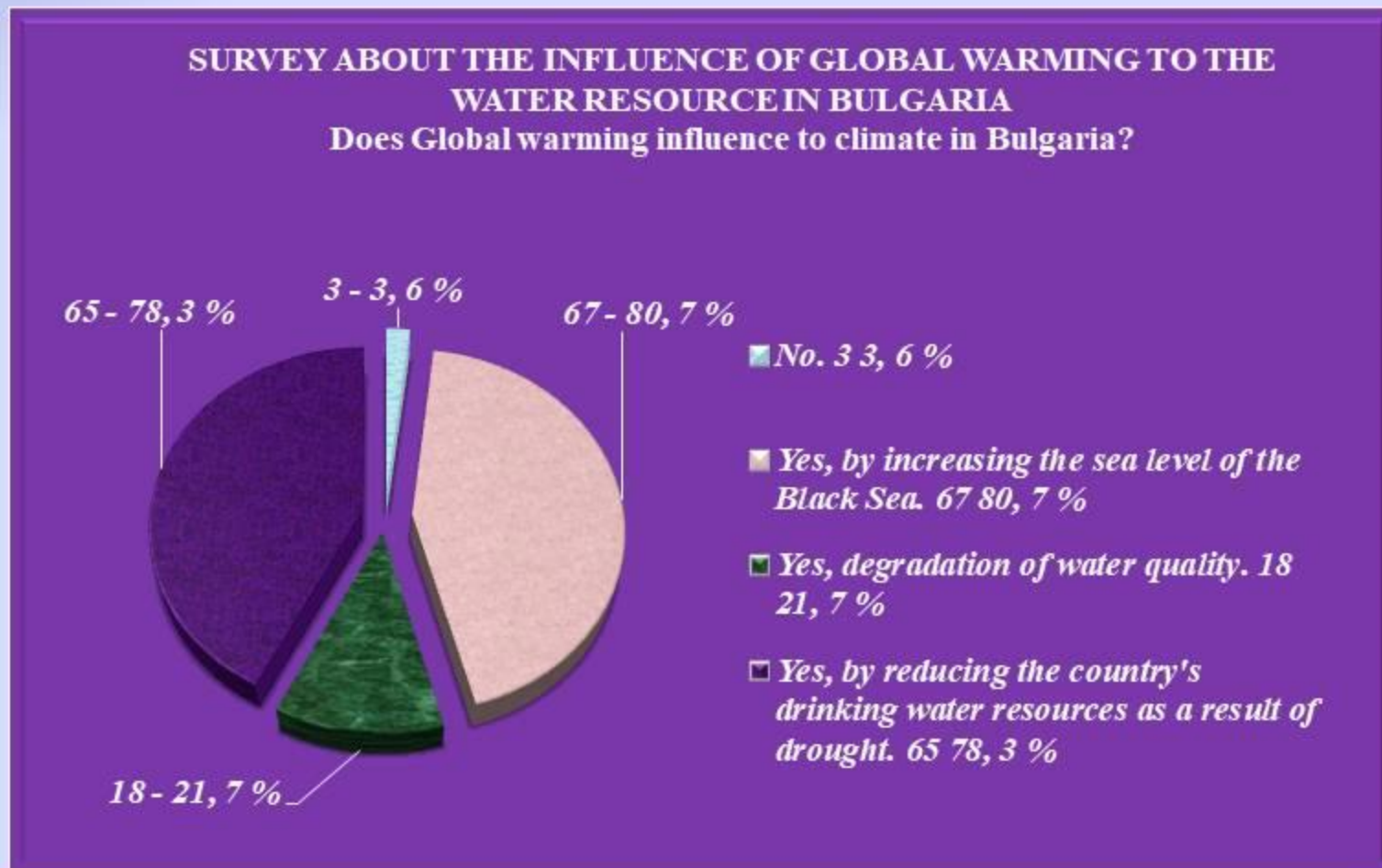


Reporting the results of survey about the influence of global warming the water resources in Bulgaria

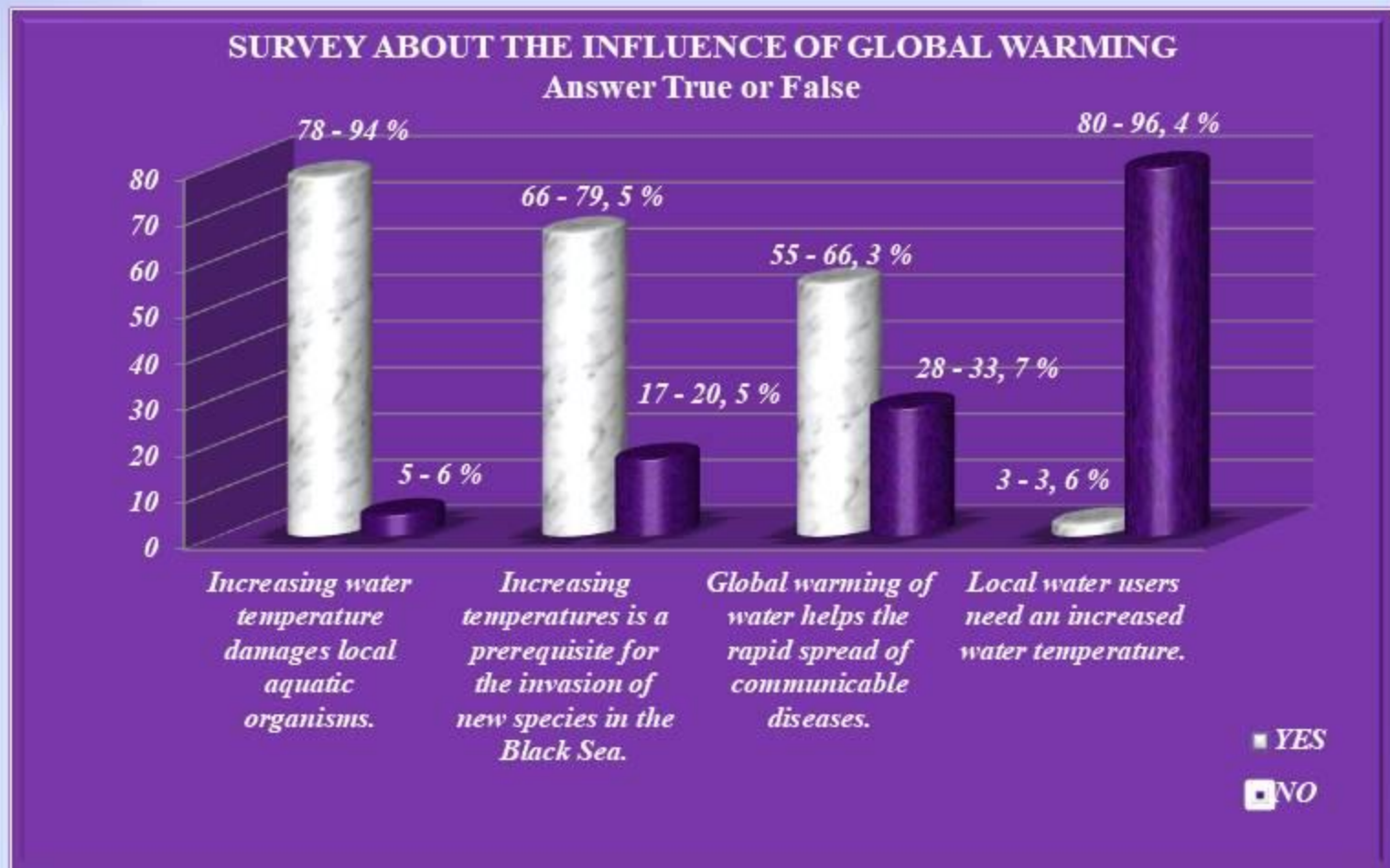
The aim of this study is to know to extent students are aware
of the issues of climate change and global warming.

The total number of participants is 83, aged between 7 and 9 years.

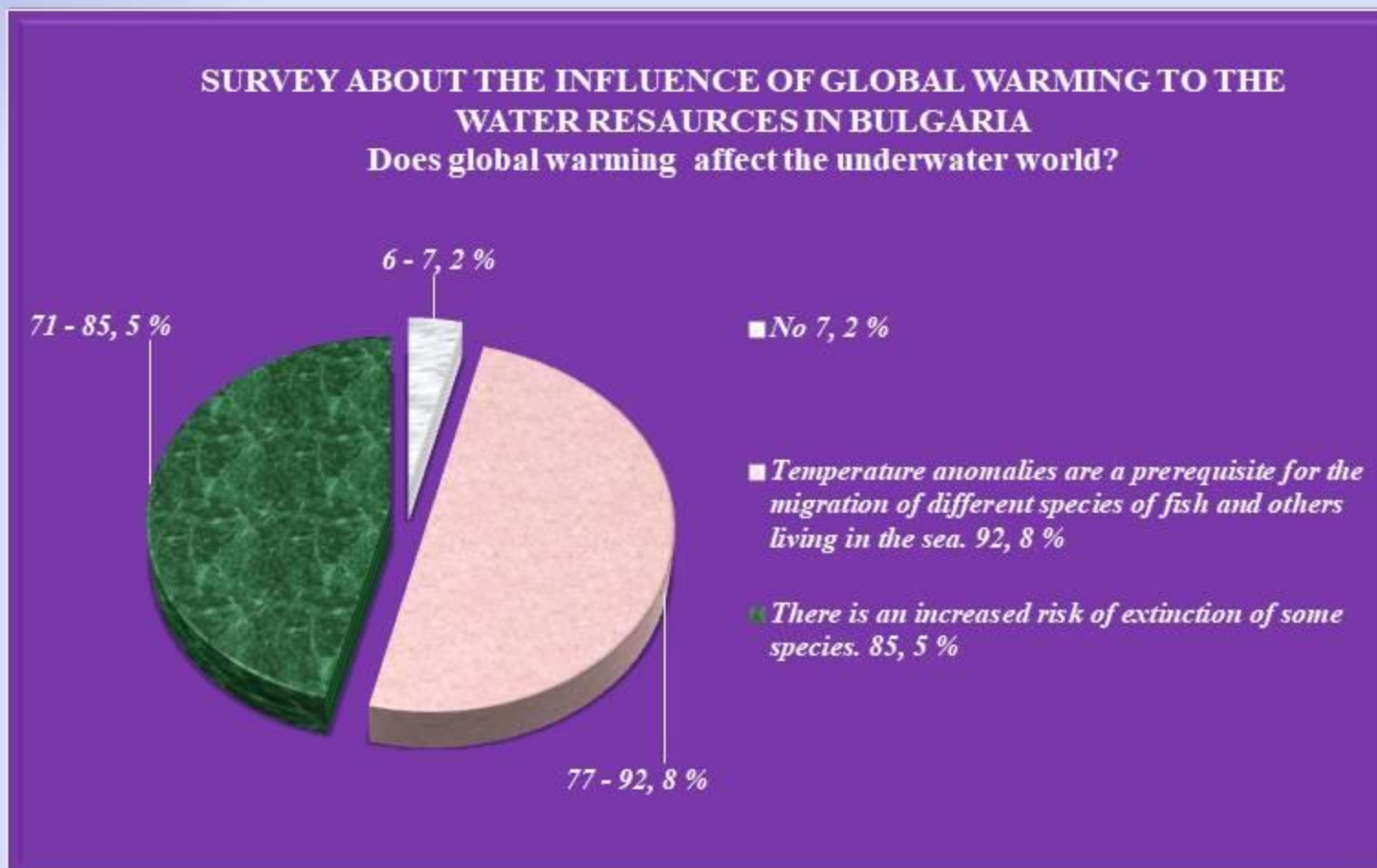
According to 67 pupils, global warming affects the increase water level in the Black Sea, 65 pupils think that is possible to reduce the drinking water resources of the country by drought, 18 pupils noted that the water quality may deteriorate, 3 pupils think that there is no influence.



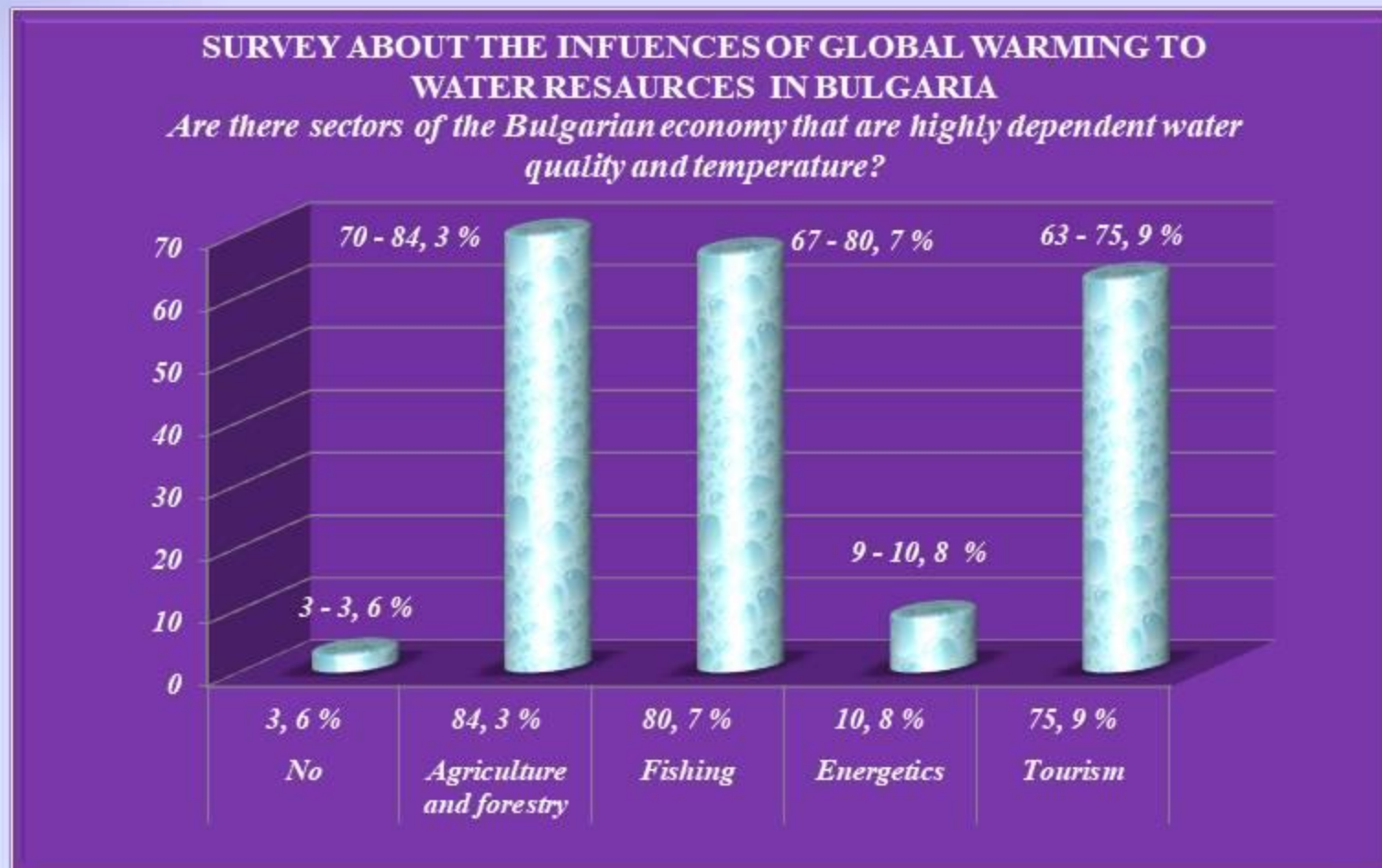
The opinion that the rising of water temperature is harmful to the sea inhabitants is supported by 78 pupils, 5 pupils deny it. For to 66 pupils, raising temperatures is a prerequisite of invasion of new biological species in the Black Sea, 17 pupils disagree. Permanent increase in temperature water helps spread infectious diseases is supporting by 55 pupils, 28 pupils deny that statement. 80 pupils realize that water temperature balance is particularly important for the sea species, just 3 pupils claim that it has no influence.



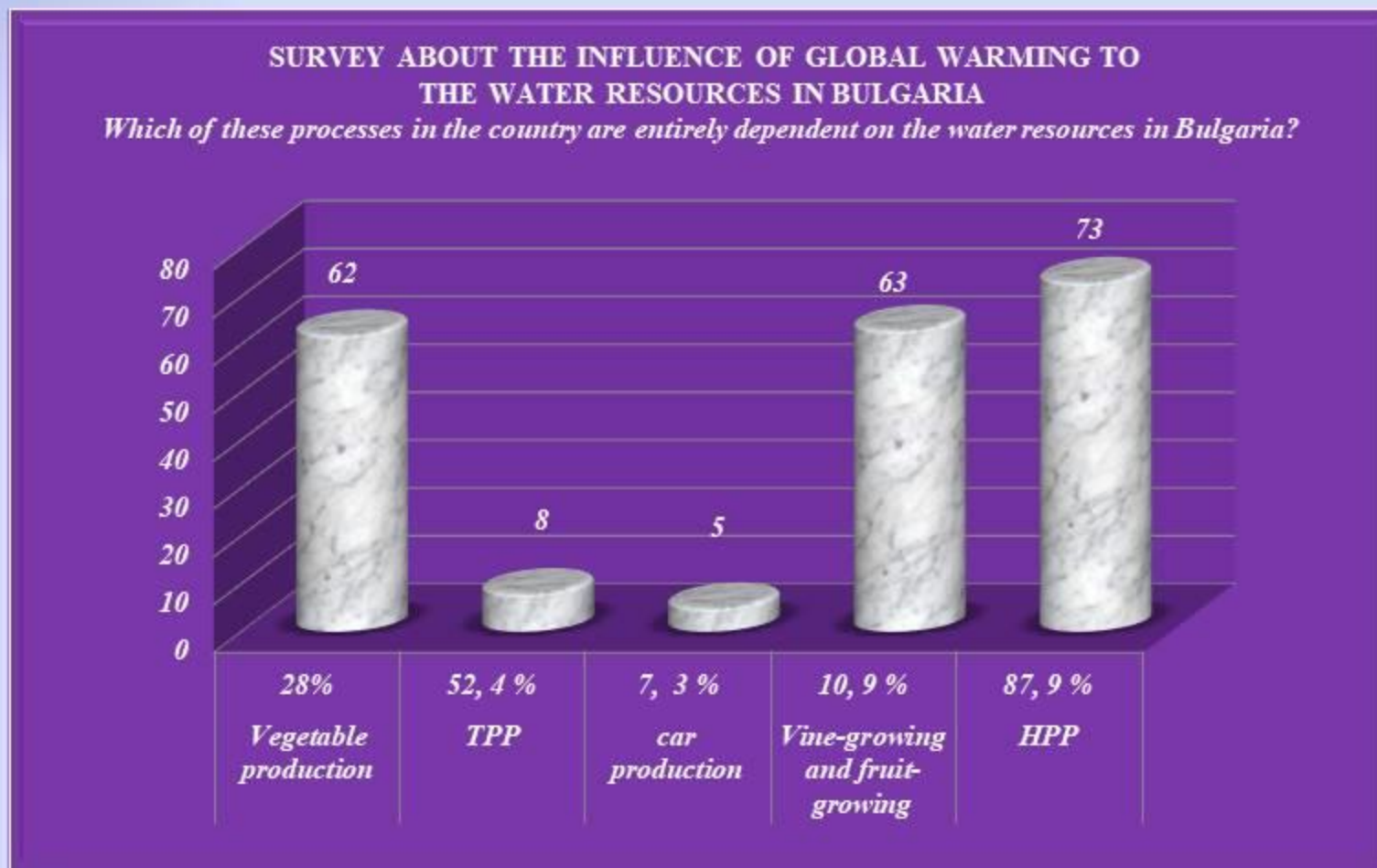
The life in the Black Sea changes, 77 pupils are to the opinion that temperature anomalies are a prerequisite for the migration of different sea species, according to 71 pupils there is an increased risk of extinction of sea species, only 6 pupils think there isn't a real danger for sea animals and plants in Bulgaria.



The pupils know that life on the Earth depends of temperature, quality and quantity of the water, as well as many Bulgarian economy sectors. Depending on these factors, 70 pupils show to agriculture and forestry, 67 pupils - fishing, 63 pupils - tourism, 9 pupils - energy, 3 pupils think there are not such sectors.



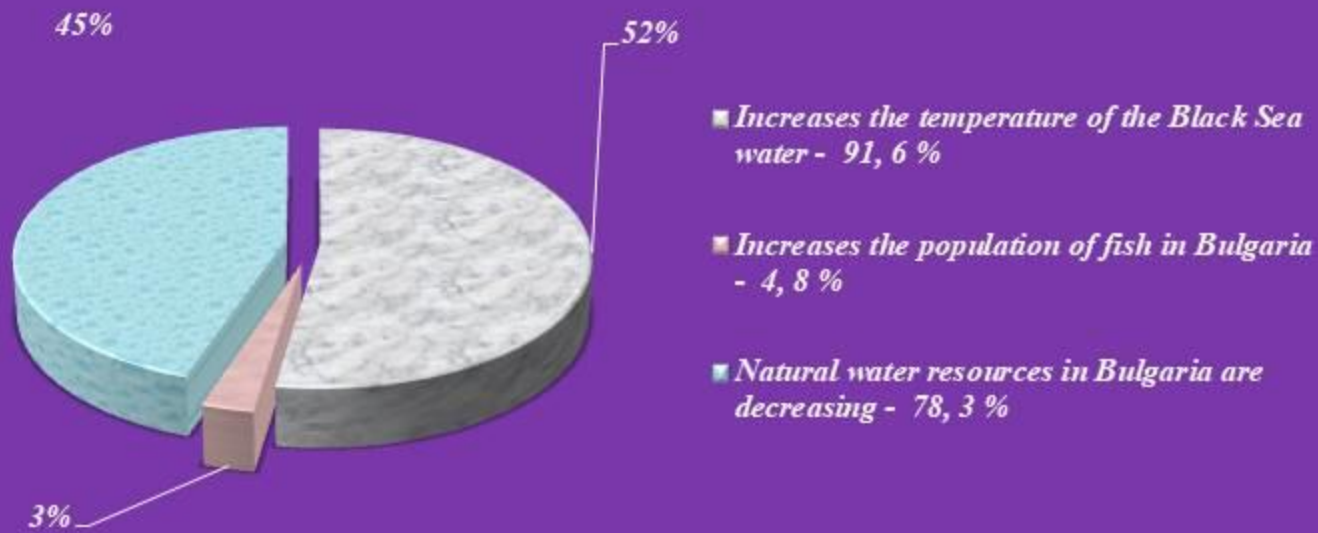
According 73 pupils depending of our water resources are HPP, 62 pupils show vegetable production, 8 pupils – TPP, 5 pupils - car production, 3 pupils - viticulture and fruit growing.



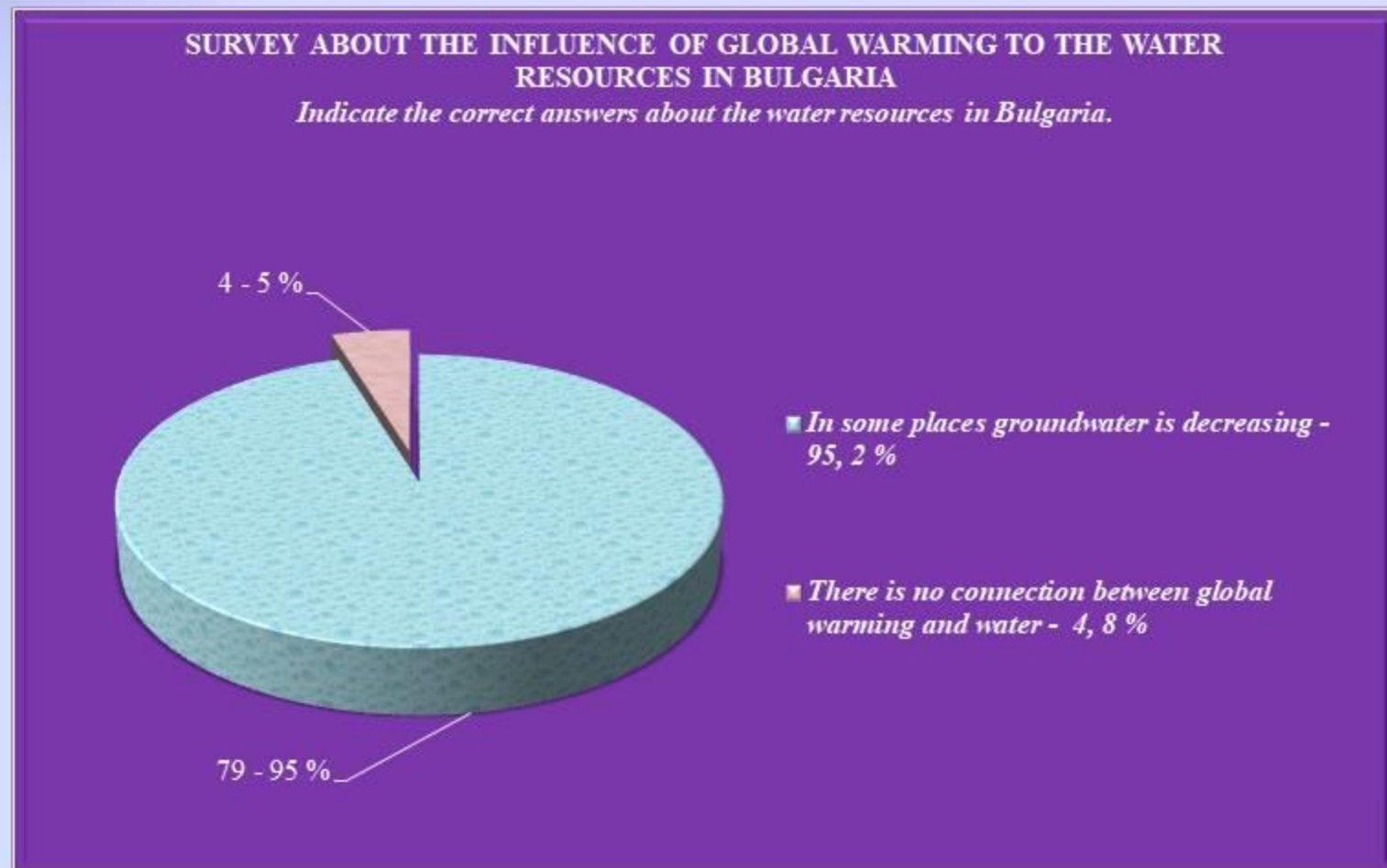
76 pupils are of the opinion that as a result of the greenhouse effect the water temperature in the Black Sea increases, 65 pupils think that are reducing the natural water sources in Bulgaria, 4 pupils say the population of fish in Bulgaria is increasing.

SURVEY ABOUT THE INFLUENCE OF GLOBAL WARMING TO THE WATER RESOURCES IN BULGARIA

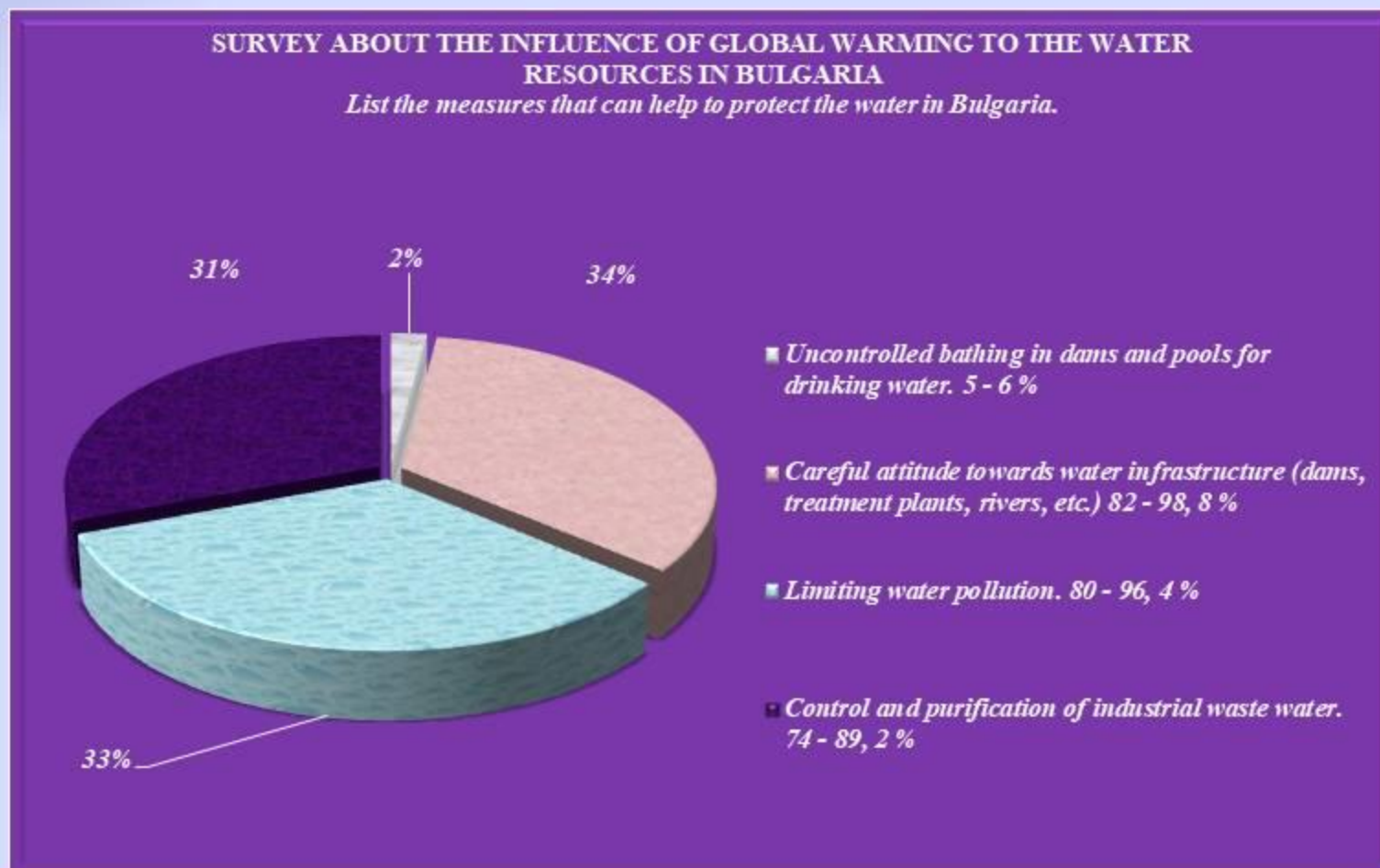
Mark the correct answers. The effect of greenhouse effect is :



There are more and more publications about the level Bulgarian groundwater and 79 of the pupils think this they decrease, according 4 pupils that there is no connection between global warming and water resources.



The pupils know that water in nature extremely valuable. Measures that can help, according to 82 pupils, are careful attitude towards water basins, limitation of water pollution - 80 pupils and control and cleaning of industrial waste water - 74 pupils, that free bathing in dams and drinking water basins do not affect its purity.

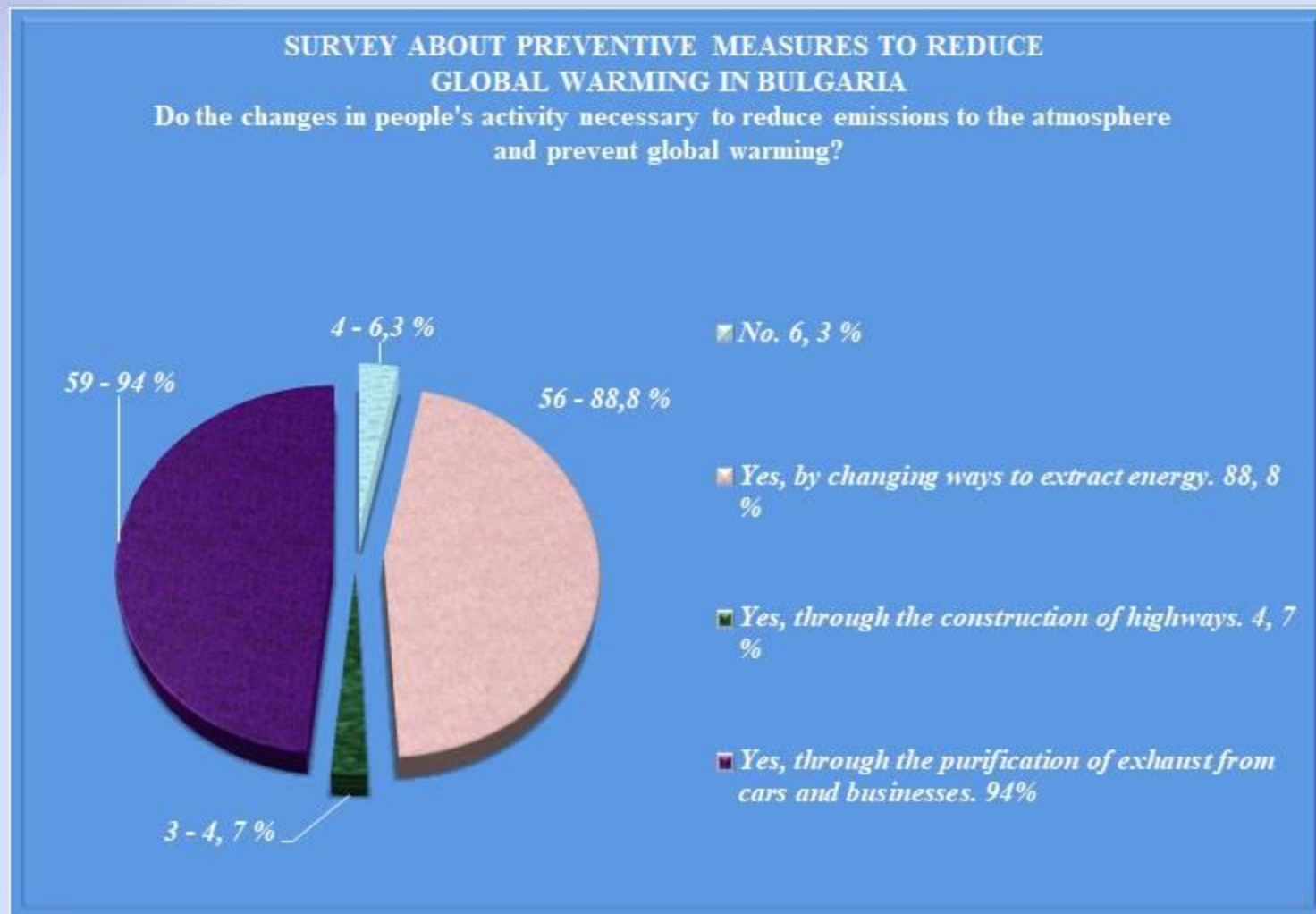


Survey about preventive measures to reduce global warming in Bulgaria

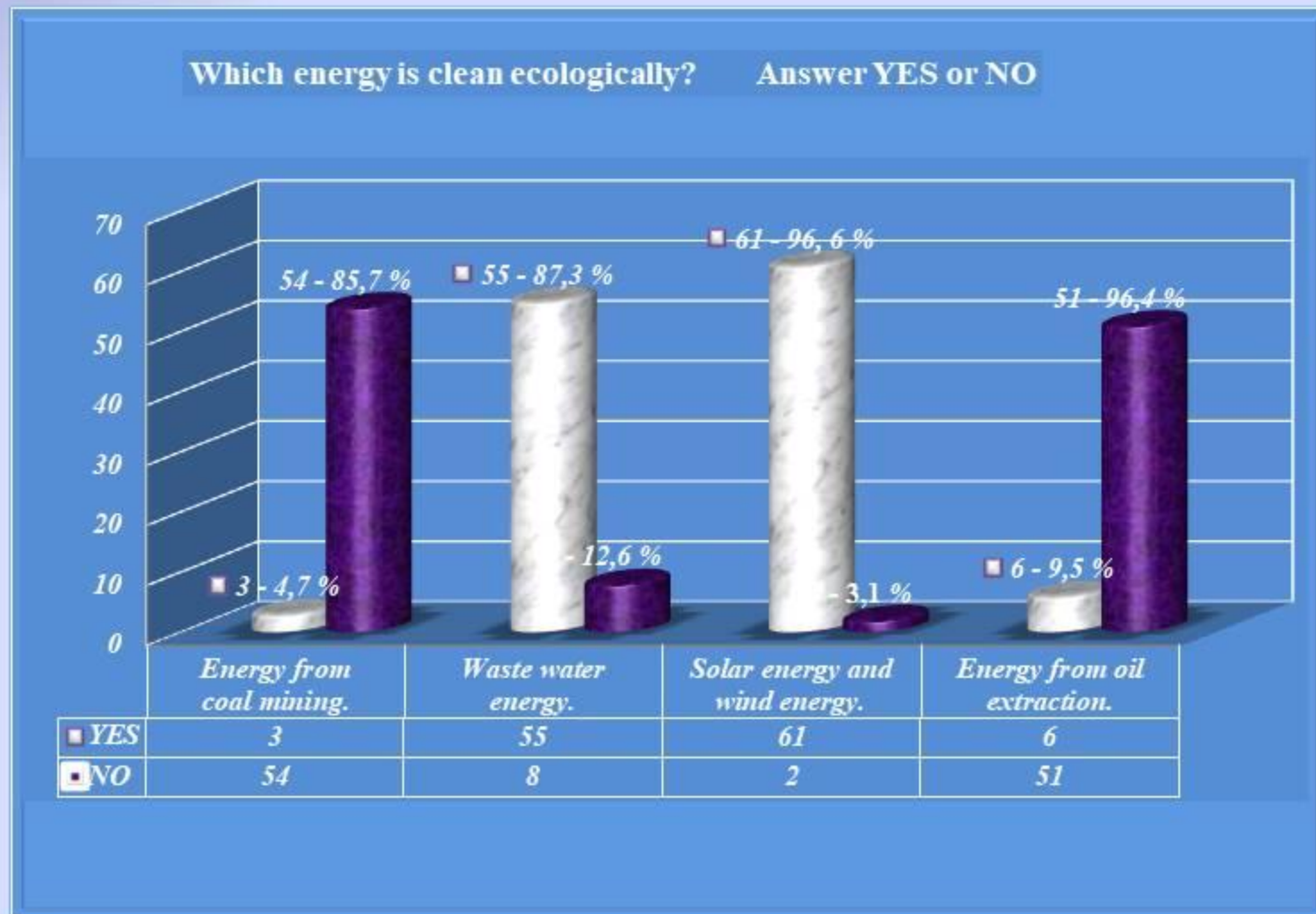
The aim of this survey is to show to what extent students are aware of the measures taken to reduce the impact of global warming on the climate in Bulgaria.

The total number of participants is 63, aged between 7 and 9 years.

To the question whether changes to people's activities, reducing emissions to the atmosphere, and halting global warming are needed 59 students report the clean-up of cars and businesses for one of the most important changes, 56 students think they are needed change in ways to extract energy, and 4 students feel it is not necessary.

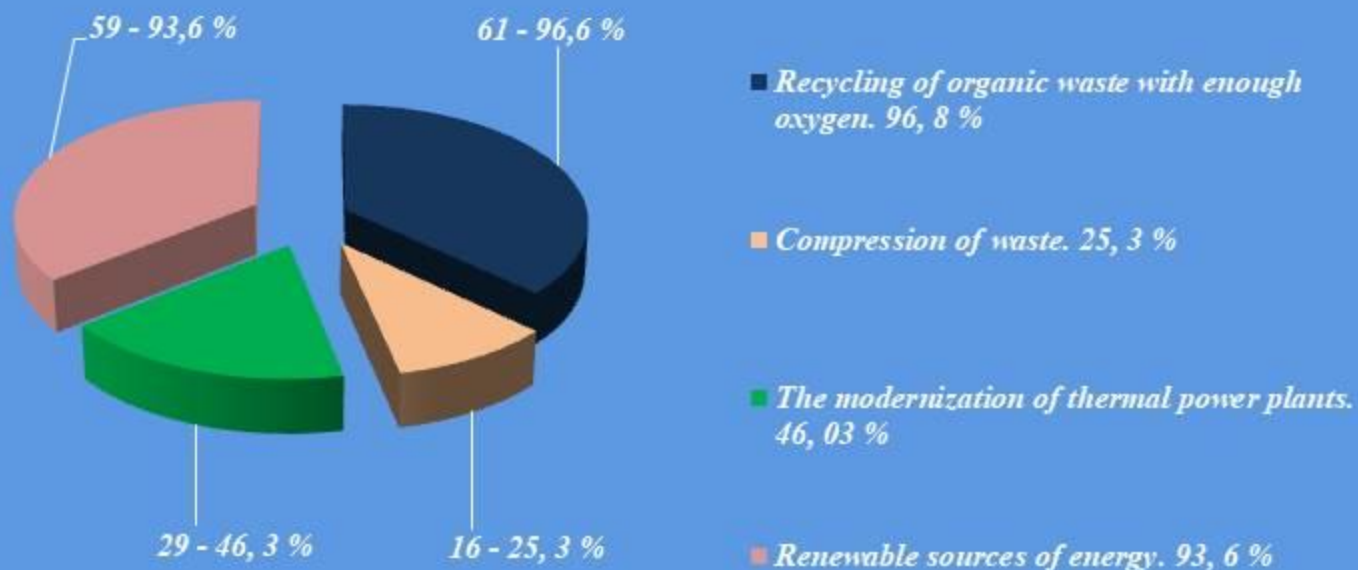


The pupils think that ecologically clean energy is solar and wind energy - 61 pupils, the waste water energy - 55 pupils, but there are the pupils who show as such energy from oil extraction - 6 pupils, energy from coal mining - 3 pupils.

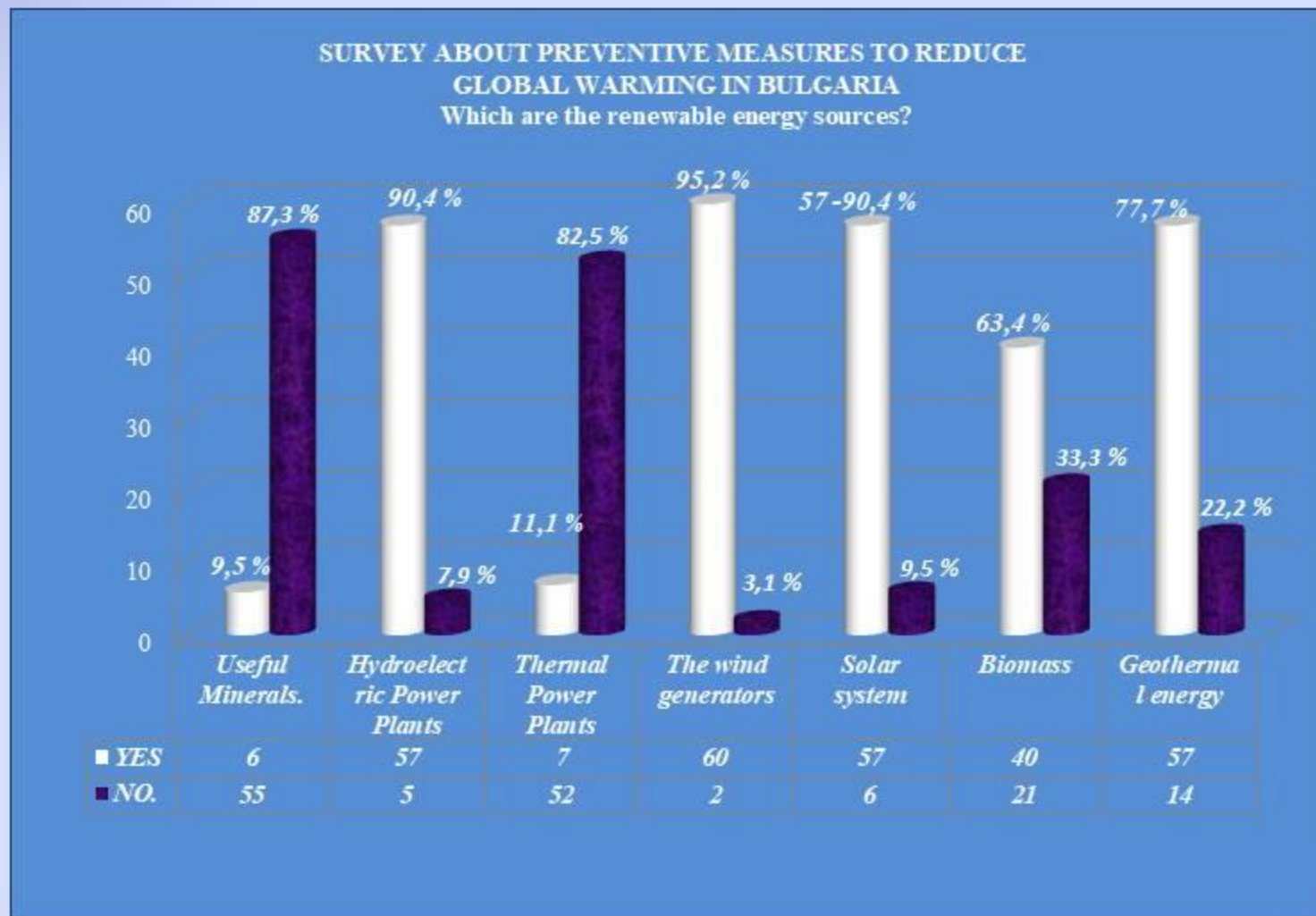


At the first place the small pupils are put as helper to get green energy recycling of organic waste with enough oxygen - 61pupils and the next are renewable sources of energy - 59 pupils, the modernization of thermal power plants - 29 pupils and compression of waste - 16 pupils.

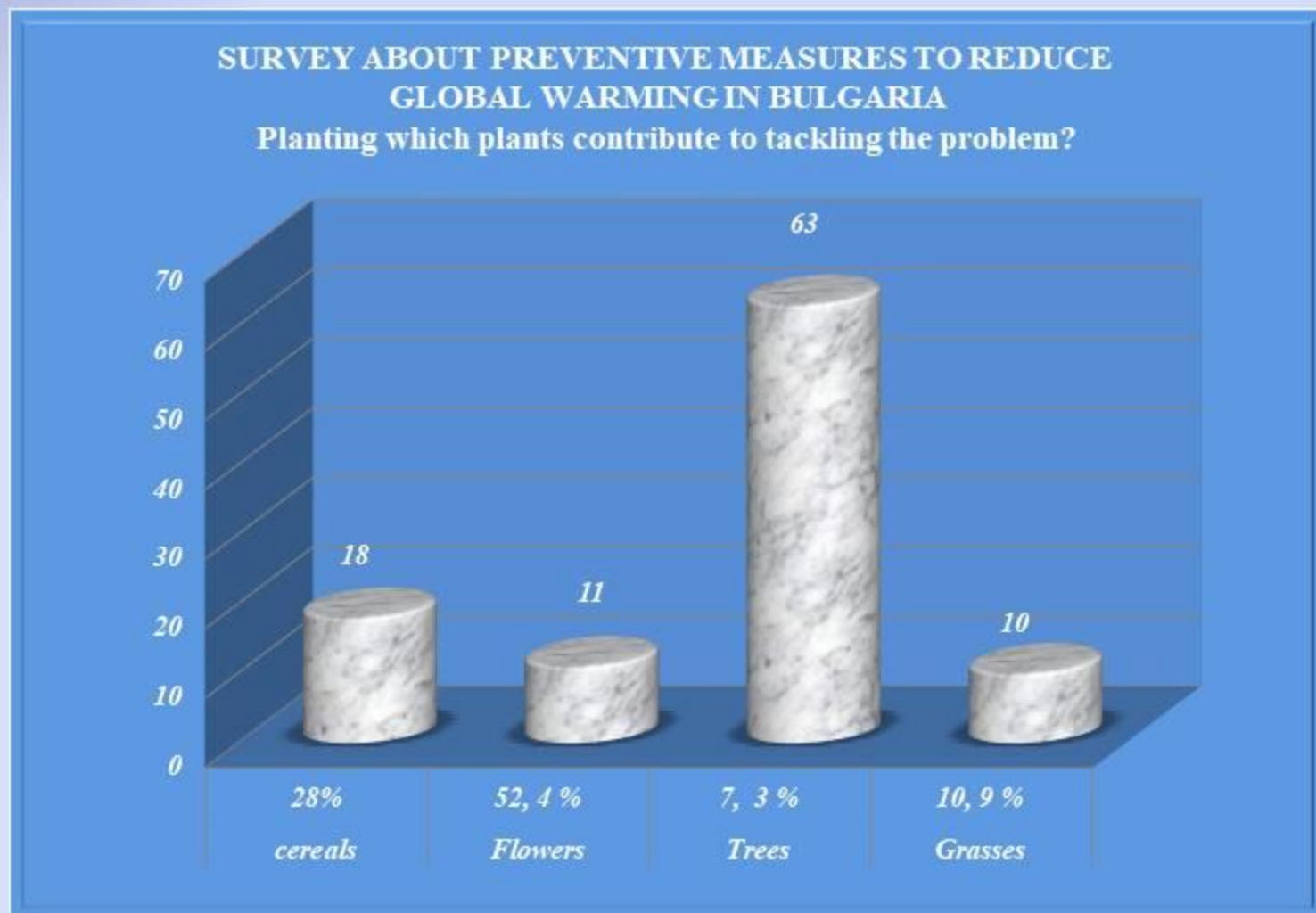
SURVEY ABOUT PREVENTIVE MEASURES TO REDUCE GLOBAL WRMING IN BULGARIA
Mark what helps to get green energy



The pupils show their know as recognize which are the renewable energy sources. They determine as such that The wind generators - 60 pupils, Geothermal energy, Solar system and Hydroelectric power plants - 57 pupils, Biomass - pupils and Thermal Power Plants - 7 pupils, Useful Minerals - 6 pupils.



For the question if planting which plants contribute to tackling with global warming 63 pupils say that they are the trees, 18 pupils - the cereals, 11 pupils think that they the flowers and 10 pupils - the grasses.



According to 58 pupils treatment plants, filters to reduce emissions are required - 54 students, afforestation - 60 pupils, use of nuclear fuel - 26 pupils and only 10 pupils have opinion chemical plants will stop the global warming.

