



The Effects of Climate Change on Turkey

When it comes to Global Climate Change, we all think of unexpected weather events, especially heatwaves. We're talking about a global change, and there's no escaping it. Turkey has no escape. So what situations can these heatwaves from Global Climate Change cause for our country?

Research suggests temperature increases will occur in the next half century. Turkey, which has already been affected, will suffer more from the change. So what's going to happen? For Turkey, it means a decline in agriculture, industry, tourism and economy and many other sectors. The financial dimension of this, of course. But the changing soil structure, the changing ecosystem, the disappearing species will be even more painful for Turkey to have them. Turkey, which has land suitable for agriculture, already has basins that are starting to dry up. Besides, the water problems are already stretching his head out the door. The rains will decrease, we will have snowless winters. The deteriorating ecosystem will bring us diseases. What's more, for these diminishing resources, people will start fighting, and maybe even bring about this civil war.

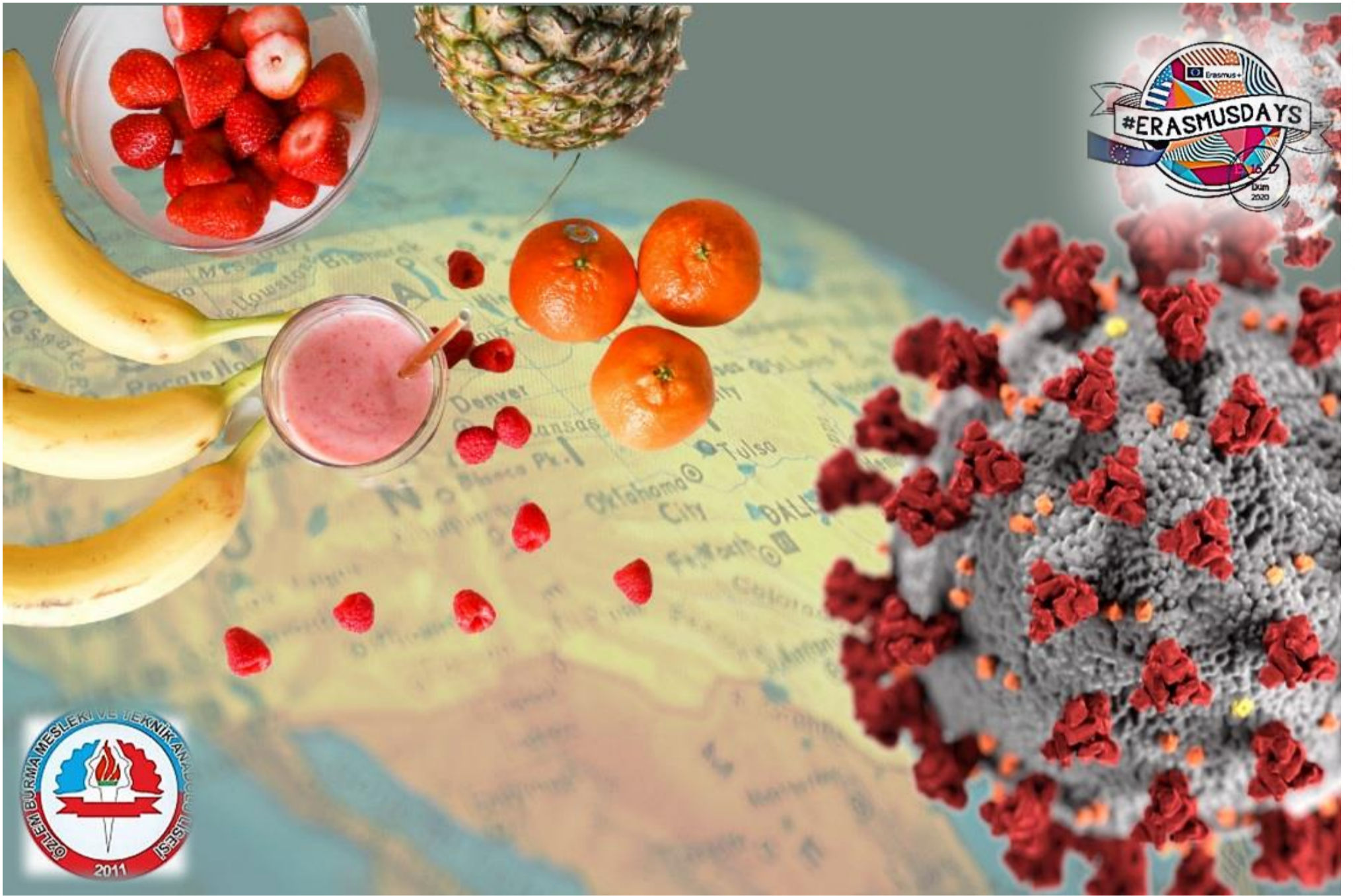
According to research; If global warming continues in the same way, temperatures will rise by 5 to 6 degrees in western Turkey in the summer and 3 to 4 degrees in Central and Eastern Anatolia and Southeast Anatolia. Temperatures will also rise by 2 to 3 degrees in winter. Rainfall in the Black Sea Region will increase by 10 to 20 percent, while in the south it will decrease by up to 30 percent.

- Although temperature growth remains limited over the next 15-20 years, it has been predicted that there will be a rapid increase in temperature growth by the late 2030s.
- It is generally thought that temperature increases will be 4°C in winter and 6°C in summer. It has been observed that there will be an increase in turkey's average annual temperature between 2.5°C and 4°C.
- Although there has been an increase in rainfall on the eastern side of Northern Anatolia, rainfall is expected to decrease throughout Turkey.
- All this will bring with it a significant reduction in our country's water resources, drought and desertification, loss of agricultural yields, an increase in the number and impact of forest fires, and a loss of biodiversity.



WHY ARE OUR SEAS IMPORTANT?

- The seas are home to an extremely rich wildlife, from microscopic plankton to the largest mammalian blue whale ever.
- **Seas, an important source of our** planet's biodiversity and ecosystem services, are also vital to the water cycle and climate system.
- Seas contribute to sustainable **development**, 'sustainable ocean' based economies, poverty eradicate, food security, nutrition, livelihoods, maritime trade and transportation.
- Our **seas face a serious** threat today. The way we use the seas and coastal areas destroys not only species diversity, but also the ability of these natural resources to meet the basic needs of millions of **people. Overfishing, pollution and climate change are** all negatively impacting this process.
- The crises caused by centuries of overuse and neglect remind us that it is time **to** change our view of these vast blue spaces that cover almost **three-quarters of** the world.



GIDA

Today, the food system is one of the greatest threats to nature. It's time to reconsider our food system and make it sustainable.

We all need nutritious food to survive. Extreme weather events such as rising temperatures, droughts and floods due to climate change are damaging food production. The loss of production affects prices.

WHY IS IT IMPORTANT?

All of our food comes from nature. There's a price to pay for producing food alone, and that's the heaviest impact on our planet in all human activity. **In order to meet the increasing demand for food, we need to solve problems and inadequacies in food production and consumption processes.**

The importance of our agricultural activities for the country's economy and development is unsiable, but its **environmental impact is also quite great.** To minimize this harm, we **must support sustainable, responsible production and consumption.**

- Our agricultural practices and consumption forms should be in order to maintain the sustainability **of Turkey's** natural values
- It should not exceed the self-renewal capacity of resources **such as soil, water and energy.**
- It should **also increase the profitability and well-being** of farmers.



CLIMATE AND ENERGY

The fact that climate change has not led to irreversible consequences for humans and other creatures depends on the increase in average surface **temperature below 1.5°C**. About **80 percent of the world's primary energy production is from oil, coal and gas, which we call fossil fuels**. Greenhouse gases caused by the use of fossil **fuels are causing climate change**.

WHAT WILL HAPPEN IF THERE IS AN INCREASE OF 3°C!

If we don't reduce our greenhouse gas emissions, it is predicted that by 2100 there will be an **increase of about 3°C in global average surface temperatures**. In this case:

- **Biodiversity** will disappear,
- **There will be major difficulties in accessing water and food**, and there will be an increase in epidemic disease and **death**, olacak,
- Disasters due to extreme **weather events and therefore loss of life and property will increase**,
- Due **to the drought, agricultural** production will become undecotable; water and food shortages will spread and increase,
- **410 million people around the world will be severely drought-hit, while 49 million people's habitats will be flooded by sea level rise**,
- As sensitive groups struggle for survival due to heatwaves, the epidemic and deaths due to it will increase,
- All coral reefs that meet the food, conservation and income needs of **500 million people today will be destroyed**.

SO WHAT WILL HAPPEN IN TURKEY IN THIS SITUATION?

- By 2100, sea levels will rise by **74 cm due to global warming**. 252,000 people will be flooded **if 50 cm rises in Istanbul and Izmir**
- Coastal ecosystems **will see desalusion, salting of soil, water and loss of natural drainage**
- **Marine life will decrease by 17%**



FORESTS

We are working against the negative effects of climate change on Mediterranean forests. We aim to **maintain the existence** of forests together with biodiversity and to maintain the capacity to provide ecosystem services that are important to the **people** of the region.

WHY IS IT IMPORTANT?

The average temperature in the Mediterranean Basin is expected to rise due to global climate change. This means that the **severity and** frequency of drought in **the region** is increasing.

The indirect effects of temperature rise include **significant** ecosystem **soyunun tükenmesi** changes in forests, **istilacı türlerin** such as fires and diseases becoming more common, **invasive** species **increasing**, some species migrating **or** extinction. The changes could lead to disruptions to ecosystem services, such as soil protection provided by forests, water and air clearing. Forest ecosystems adversely affected by climate change, **carbon storage services are also disrupted.**

In order to ensure the protection of Mediterranean forests, it is important to accurately predict the potential negative effects of climate change on forests, how and when these effects will occur, to alleviate the environmental and socioeconomic effects of climate change.



SWEET WATER©

WHY IS IT IMPORTANT?

The continuation of life depends on the presence of adequate and good quality water. If all the water on earth was put in a five-liter bottle, the amount of fresh water that we people could access is only about a tablespoon.

In other words, the amount of fresh water accessible is less than **1 percent of the world's total water presence**. The presence of adequate and high quality water is as essential a condition of food security and sustainable development, hence the future of humanity, as well as freshwater ecosystems. That's why it's so important to protect freshwater sources. The main challenge we face in the 21st century is the limited water resources. The sustainability of water resources is at the heart of many issues such as food security and energy assurance, economic growth, combating climate **change and preventing biodiversity** loss. Therefore, the limited or over-use of water resources is now of interest to all of us.



WILDLIFE

401 species are in danger of being destroyed in our country!

We share our planet with millions of plant and animal species that enrich our lives in many ways.

This network of life provides us with safe natural conditions such as water, fresh air, fertile soils and a stable climate. It gives us food, medicine and supplies and supports millions of businesses, enriches our lives in every way.

But our **planet's wildlife is in crisis** : since the 1970s, species have been rapidly disappearing alarmingly. Many scientists believe that increasing consumption and rising demand for energy, land and water as a result are dragging us into a new geological age. Nature, with its biological values, offers many services that form the building blocks of modern society; however, both nature and biodiversity signal alarming **nothing**.

We need to reverse the tendency of biodiversity to decline and create a future where wildlife and man grow together.

LOST SPECIES

Wildlife disappears on every continent, every ocean, land and underwater. His fate is in the hands of only one species: **Homo sapiens..**

The species' deep-rooted connection to each other, its dependence on each other, survives with a large directory of complex systems. There are millions of simple and complex bonds from bees that provide the continuity of plants, plants that are an important source of medicine for human life; woodks that need old trees to nest and produce new generations, sheltered areas for fish, sea meadows that provide nutrients and oxygen. As human activities **reached the dimensions that forced their** carrying capacity, they began to experience huge losses with major global problems such as wildlife, loss of habitat, climate change.

Large **natural areas are being renewed to agriculture, urban growth, mining and infrastructure, suffering from the effects of pollution, becoming fragile to invasive species.**

The rate at which species disappear is far beyond the natural cycle!