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BRENT OIL

110,81 \$/BL

GASOLINE

20.44 ₺/LT

USD/TRY

14.86

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22.19 ₺/LT

EUR/TRY

15.72

FUEL OIL

14.49

Environmental Diplomacy: Turkey's Potential

Büşra Selin Kartal 

The necessity for states to make joint decisions on the environment and climate has initiated environmental diplomacy. Issues such as climate change, global warming, regional sustainable development, protection of natural life, and biological balance, which do not occur within a single country's borders, can commonly affect the citizens of the world. Moreover, transboundary problems require countries to cooperate. Thanks to environmental diplomacy, which enables states to take action on environmental and climate issues and regulate the actions taken, it is possible to impose sanctions on states that do not fulfill their responsibilities. It covers all kinds of environmental policies, from multilateral agreements made by states on the environment to conflict resolution. While states are unwilling to cooperate, especially on security and political issues, they prefer to do diplomacy on matters that will affect other countries' public in a good way, such as the environment. In addition, even only two countries can organize conferences and workshops and sign agreements to resolve their environmental sensitivities. It makes environmental diplomacy one of the best options for countries that want to strengthen their diplomatic ties. Although the term originally covered only the diplomatic works of nation-states on environmental concerns, it has become more comprehensive today with the complexity of

climate and environmental issues and the participation of different actors. The fact that not only states but also non-governmental organizations and civil society organizations participate in this field; facilitates the states prioritizing of environmental policies. These organizations also act as diplomacy tools.

Although environmental diplomacy is used extensively today, the history of the concept does not go back that far. It can be said that the emergence of the concept started when countries began to increase their awareness of the environment and understand the necessity of taking joint responsibility for the environment. The "United Nations Conference on the Human Environment," which was held in 1972 with the increase of environmental concerns in the 1960s, is the international conference that would later play a role in establishing UNEP. Established in 1973, the United Nations Environment Program (UNEP) is considered the keystone of environmental diplomacy. Although there were bilateral environmental agreements before that, UNEP acts as an international body to coordinate all these efforts. After this date, it is seen that international contacts have increased. In addition, instead of seeing the environment and economic development as two separate



and contradictory concepts, the understanding that the two can go together has begun to be accepted. Countries have started to prioritize sustainable development, and this has become one of the main topics of many environment and climate summits. With this understanding, the UN General Assembly united environment and development concepts and established World Commission on Environment and Development (WCED) in 1983. The official definition of sustainable development made by the Brundtland Commission Report named by Brundtland, who chaired WCED in 1987, is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Turkey is a party to numerous international environmental agreements, and it has been observed that, especially since the 90s, participation in international works on the environment and climate is high. Although Turkey did not have an emission reduction commitment, it became a party to the Kyoto Protocol in 2009. However, the Kyoto Protocol expired in 2020. The Paris Agreement was approved by the parliament in Turkey in 2021 and entered into force. In addition, Turkey is a party to many regional environmental agreements. Turkey became a party to the "Convention

for the Protection of the Mediterranean Sea against Pollution," Barcelona Convention, in 2002 and hosted the 22nd Conference of the Parties in 2021. Turkey is also a party to the Convention on the Protection of the Black Sea against Pollution and actively coordinates the work of the Land-Based Pollutants Control Activity Centre. The country also participates in many projects of UNEP and regularly provides financial support to the UNEP Environment Fund.

While seeking solutions to many global and regional environmental and climate problems thanks to environmental diplomacy, the environmental issue encounters common problems with other diplomacy fields. Taking action on an important issue in foreign policy can sometimes conflict with priorities in domestic politics, which poses a serious obstacle in terms of environment and climate issues. In particular, conflicts of the opinion of different interest groups affect this field. For example, in a country that has committed to international agreements to reduce carbon emissions, business groups may worry that they will not be able to reduce carbon emissions as planned. This situation may cause pressure on the government. In addition, although the current trend is sustainable development, we cannot say that every country considers



it on its agenda. For this, countries have to fulfill some conditions and reasons such as regional terrorism cause countries to put sustainability in the background. Even if a government takes this into its agenda, it may still face the reaction of interest groups in the country. In addition, the inability of the international arena to impose sanctions also affects environmental diplomacy as one of the general dilemmas of diplomacy. New solutions must be found that will ensure regulation and provide partial enforcement.

However, aside from the difficulties of this type of diplomacy, there is a serious public diplomacy potential for countries that turn to environmental diplomacy. The countries' efforts to compromise for the environment by leaving aside their other problems make a good impression on the people of other countries. In addition, since the environment is a sensitive issue, it will create a good image to take the lead in the world. In addition, like organizing international events

such as the Olympics that contribute organizer country, international environmental summits, forums, and events offer great benefits both in terms of economy, network and image. The fact that countries have organized dozens of summits and few agreements have resulted usually causes the summits to be seen as political theatre. However, it can be seen as a means of communication between countries, where countries convey their responsibilities to each other. In this respect, it can be said that there is a race to become the center of environmental diplomacy. Turkey is a country that both wants to expand its global diplomatic network and has great environmental concerns. So, it has the potential to play a leading role in environmental diplomacy. Here, the criterion of adequacy is not to be a perfect example in terms of environment and climate, but to be an exemplary country that makes the most effort for the environment and climate issue, which also eventually helps to reduce environmental concerns.

Hair Mats for Oil Spills

Gülce Özdilekcan

So far, in the 21st century, we have faced countless oil spills in our history. We have watched them in the news or read about them in the newspapers. Without being a scientist, it is inevitable to understand that it has countless long-lasting effects on the environment. Oil spills have been a nightmare since the 20th century. One of the most recent ones happened in 2010, and it was officially the largest oil spill in human history, and it was an accidental one, unfortunately. It is called the BP Deepwater Horizon oil spill. After the explosion happened, it killed 11 people officially. However, after 12 years, we are unsure how many people and animals have been affected by the spill.

On April 20, 2010, the oil drilling rig Deepwater Horizon, operating in the Macondo Prospect in the Gulf of Mexico, exploded and sank. The incident didn't just finish with the explosion, but the oil spill continued for nearly three months, resulting in 4 million gallons of oil spill into the ocean. The incident continued with billions of dollars worth of lawsuits, but unfortunately, it didn't take back what had already happened. Billions of dollars were spent by both the company and the government itself to clean the mess that the oil spill had created; however, it wasn't still enough.

According to National Geographic, in 2020, they weren't still sure about the today effects, and they expected other outcomes in the longer term as well. The technology itself used to cure the environment and prevent another spill was the same as in 2010.

BP used few methods to clear the oil spills, which were both not effective as it was expected and controversial to use. It is classified as physical and chemical. The physical way to prevent oil spillage from broadening in areas is simply by using physical barriers. They were placed around important places like beaches and farm areas. Also, sorbents were placed, special sponges, to absorb the oil on the surface. They were sometimes using the method of burning the oil since it is flammable. However, it is not the safest method to get rid of oil. On the other hand, chemical methods are a bit controversial, and people have reacted to this method. Dispersants were used to break the oil molecules into smaller parts so that either wave would get rid of them or bacteria or other microorganisms would get rid of it throughout the time. Unfortunately, the dispersant used wasn't eco-friendly either, which resulted in countless health hazards to the environment and living creatures. The side effect would be



that the smaller oil molecules would cover the bottom of the oceans, horribly affecting the coral reefs.

What is a hair mat?

Even though it sounds gross, hair is one of the number one oil absorbents. Human hair and the hair of other farm animals work as well. It came out as a project in 1999 by Lisa Gautier. She was affected by the idea of a hairdresser who realized that hair absorbs the natural oil that the body produces, and we use shampoos to deal with it. They have created a product called hair mats. They collect donations from households, farms, or hair salons that donate the hair they would throw away anyway. First, they created a hair bundle that looked like a sausage, the hair would be collected in nylon pockets and thrown away, and they would collect them after they absorbed the oil. Afterward, they have changed their product to a hair mat that looks like

a rug to decrease the amount of non-degradable nylon they were using. It is fascinating that, in seconds, hair collects so much oil, more than the chemicals or physical barriers that BP was using. Most importantly, they are eco-friendly and cheaper as well to produce. However, BP wasn't willing to use these hair mats to clean the ocean, which is controversial.

Why didn't Big Companies Use Hair Mats (Booms)?

At first, when this incident happened, Lisa reached out to BP about a possible partnership. However, they didn't reach back to her. As a result, scientists concluded that they weren't as effective as the booms they had made with polypropylene, which is not eco-friendly at all. According to Charlie Henry, the director of the National Oceanic and Atmospheric Administration (NOAA)'s Gulf of Mexico Disaster Response Center, the downside of hair booms was that when they were soaked in water, they would get



heavier, and they would sink. As soon as they would sink, they would dispose of the oil they had already soaked. It seems like a valid argument. However, there are other controversial ideas. "Dog fur, in particular, was surprisingly good at oil spill clean-up, and felted mats from human hair and fur were very easy to apply and remove from the spills," said the lead author of the study, environmental scientist Dr. Megan Murray. It is also mentioned as the best way of absorbing the oil spills, and it takes less time and less effort than the poly-booms. Therefore, there is no need to wait for days for hair mats to absorb the oil spills.

I think that the concern about not using the hair mats was about financial concerns but not environmental concerns. Today, according to my research, there are many producers of poly-booms. However, I am not sure of the producer of the one used by BP. There is quite a chance that these products

are only used in oil spill disasters; fortunately, there is a small market for that. They wanted to sell their products to BP, and hair mats were quite a big competitor at the time, even though they were producing in probably smaller amounts and working with donations. However, looking at the process, they were ready to increase their production. Since 2010, Lisa has proceeded with advancement in her products and initiated other projects for a sustainable environment. For me, hair mats remain a wise choice for caring about the planet in a better way and will become popular in the future.

Air Pollution Analysis

Büşra Öztürk 

Air pollution, which is a silent killer, threads lives worldwide and creates dangers that can lead to death. Air pollution consists of releasing pollutants into the atmosphere that is harmful to human health and the environment as a whole. According to the World Health Organization (WHO), about seven million people die each year due to air pollution. WHO also states that air pollution is cancer's most important environmental cause. Moreover, air quality is inextricably linked to the earth's climate and ecosystems, which makes to be directly related to the problem of climate change.

There are many causes of air pollution. The developing industrial ventures that use fossil fuels have played a significant role in increasing air pollution. It is because the combustion of fossil fuels emits gases and chemicals into the atmosphere. Furthermore, Climate and Clean Energy specialists declare that air pollution is also caused by energy use and production. In a particularly destructive feedback loop, air pollution contributes to and exacerbates climate change. In other words, there is a cycle in the relationship between climate change and air pollution such that while CO₂ causes climate change, climate change causes air pollution.

Many of the drivers of air pollution, which consist of particles produced by the combustion of fossil fuels, are also sources of greenhouse gas emissions. The suspended particles may arise from car emissions, chemicals from factories, dust, pollen and mold spores, etc. The noted pollutants are Black Carbon (BC), Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), Ozone (O₃), Sulphur Dioxide (SO₂). Additionally, particular substances (PM_{2.5} and PM₁₀) are the most threatening elements of human health for air pollution. WHO declared them carcinogens in 2013 since prolonged exposure to high levels of particles weakens the lungs' ability to clear infections and reduces their ability to fight infection due to compromised immunity.

The interesting fact is that CO₂, which gets the most attention in climate change, is not considered a core parameter of the pollutant index as much as other pollutants. CO₂ is the most concerned gas because CO₂ has caused most of the warming, and its influence is expected to continue. It is due to the structure of CO₂. It enables trapping the heat coming from the sun like the glass of a greenhouse by letting sunlight pass through the atmosphere. The concept of a



greenhouse's warm interior is simply a metaphor for how gases in the atmosphere keep the earth's surface warm. As the density of CO_2 increases, more heat is kept inside the earth's atmosphere. If CO_2 were lacking, there would be an ice age since enough heat could not be drawn from the sun. Hence, the world needs an incredibly delicate balance. CO_2 is not a directly killer gas as the other greenhouse gases. For instance, while at 40,000 ppm (parts per million), CO_2 can be life-threatening, concentrations above 800 ppm can end life in minutes.

The pollutants that create air pollution are measured using air quality sensors sponsored by several companies. One of them is OpenAQ which presents a real-time and historical air quality platform, aggregating government-measured and research-grade data. The data is captured from multiple sources and accessible to all through an open-source platform. While you can access data around the world on this website, it is also possible to find data on different cities and regions of Turkey. I want to share some of the results of the current data analysis by basing a similar air pollution analysis shared on Kaggle.

Starting with the most threatening pollutant, PM_{10} , it is possible to observe that the measured value of the presence of PM_{10} is changing around 40 $\mu\text{g}/\text{m}^3$ (microgram/cubic meter) in Turkey. Those values are pretty higher than the measurements from reference-grade monitors in Europe. It is also interesting that Turkey has no blue points, which represent the presence of PM_{10} with less than ten $\mu\text{g}/\text{m}^3$. The situation is similar to other pollutants such as CO , NO_2 , O_3 , and SO_2 . Another exciting result by considering the average air quality data is that Iğdır, Kocaeli, and Muğla are holding the top places on the leaderboard of the world air pollution. These results place Turkey in 7th place among the 42 countries in the European region with the most polluted air. For a healthy and livable Turkey, the authorities urgently need to take measures to increase environmental awareness and reduce pollutants.

What Does World Day Mean In 2022?

Yaren Öztürk 

The world celebrated its first Earth Day on April 22, 1970. Since that day, unfortunately, the world has been left alone with more extensive problems with each passing year. In the last fifty years, with the rapid increase in countries' economies and the human population globally, the whole world has begun to experience resource shortages. In addition to these, while the world is experiencing a serious pollution problem, some living things have become extinct. What makes this Earth Day different from other days is that the war between Russia and Ukraine forces the world to decide on the energy future with each passing day collectively. Decisions made today will shape the conditions under which Earth Day will occur in years to come.

For Earth Day, United Nations Secretary-General Antonio Guterres called for the renewal of the planet and the peaceful coexistence with nature. In this year's message, the Secretary-General of the United Nations underlined that the planet has reached the tipping point and that people still continue to harm the planet recklessly. The world does not have much time left without considering the sustainability of the world's resources, respecting wildlife and nature, and using the air, seas, and soil as if they were garbage dumps. Guterres, who likens the collapse of ecosystems and food

chains to suicide, said that it is impossible to win this war against nature and said that they must put this war to an end. He also said a climate plan is needed to limit global temperature rise to 1.5 degrees Celsius, and sharper action is required in order to preserve biodiversity. Stating that the steps to be taken will both protect the planet and provide new job opportunities for millions of people, Guterres called for more work for the world. On the other hand, climate activists in Berlin, Warsaw, Brussels, and elsewhere organized various protests for Earth Day, expressing demands for Europe to stop Russian oil and natural gas imports and no longer use fossil fuels. While some climate activists targeted German embassies in protest, they criticized the German government's policy of not embargoing Russian oil and gas not to harm the country's economy. About fifty activists gathered at Germany's European Union Representation in Brussels, wrapping themselves in Ukrainian flags and lying on the floor with their blood-dyed clothes visible, trying to make their voices heard with the slogan "Be brave like Ukraine." Nastya Pavlenko, one of the Ukrainian activists, said that natural gas and oil imported from Russia financed not only the war in Ukraine but also the climate crisis. He also said that it should be known that the lives that will be destroyed due to climate change, the generations that



will be extinct, and the lives of children dying in Ukraine cannot be compared with any money. In the city of Lviv in western Ukraine, a dozen activists protested on Earth Day with banners that read "Embargo now!" similar to protests in other parts of the world.

There is a fact that since Russia invaded Ukraine on February 24, European Union countries have spent more than 41.2 billion dollars on fossil fuel imports from Russia. These countries still import 40% of their natural gas from Russia. 27 member states of the European Union have agreed to ban coal imports from Russia as of August as part of large-scale investments targeting both Russian banks and business people. However, countries with high dependence on Russia in the energy sector, such as Germany and Italy, prefer to announce that they can stop importing natural gas from Russia in the next few years rather than make a definitive decision. Since the beginning of Russia's invasion of Ukraine, some large companies have voluntarily stayed away from Russian natural gas and oil to protect their reputation and avoid legal problems. On the other hand, European countries still have not reached a consensus on whether to impose an embargo on Russian fuels. Countries such as Germany and Hungary stated that

they would experience economic difficulties if they imposed an embargo. German Chancellor Olaf Scholz, who has an opposing view on the embargo, said, "If Putin were open to economic arguments, he would never have begun this crazy war". He also added that any natural gas embargo to be implemented by the European Union countries would not end the war between Russia and Ukraine.

The effects of climate change and the war on the world are becoming more evident day by day, and it is necessary to work more collectively for a sustainable world. Earth Day is defined as a day of action for a livable world to change the behavior of more than one billion people each year and create policies and laws in a local, national, and global context. Although a single day carries symbolic value for a livable world, this day has great importance in 2022, which is still the scene of war in the 21st century. Although people prefer to celebrate this day in various ways by participating in walks, collecting garbage, or planting trees, the essential point is to protect nature and the world as much as possible by not doing the opposite the next day. The actual celebration will be living in a sustainable world where climate goals are met.



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