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ECONOMIC, SOCIAL AND ECOLOGICAL JUSTICE FOR CLIMATE ACTION

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ECONOMIC, SOCIAL AND ECOLOGICAL JUSTICE FOR CLIMATE ACTION

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ABBREVIATIONS

AEP	American Electric Power
EU	European Union
USA	United States of America
ECHR	European Court of Human Rights
EHRC	European Human Rights Convention
AOSIS	Alliance of Small Island States
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
BP	British Petroleum
BRICS	Brazil, China, India, Indonesia and South Africa countries
CGD	Center for Global Development
CISL	University of Cambridge Institute for Sustainability Leadership
CJN	Climate Justice Now!
COP	Conference of Parties
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ETS	European Emissions Trading System
GPDD	Global Program for Disability and Development
GNP	Gross National Product
GtC	Gigaton
IPCC	Intergovernmetal Panel on Climate Change
ITUC	International Trade Union Confederation
İYUK	Administrative Adjudication Procedure Law
MGM	General Directorate of Meteorology
NASA	US National Aeronautics and Space Administration
CSO	Civil Society Organization
TÜİK	Turkish Statistical Institute
UNEP	United Nations Environment Program
WMO	World Meteorological Organization

EXECUTIVE SUMMARY

Human - induced climate change is undoubtedly one of the most important threats before the existence of human beings and living things on our planet. Climate change, which constitutes such a great threat to the human existence on the planet, have different levels of impact on different social segments, classes, groups and genders. Climate change which has been felt more and more through long lasting droughts, more frequent and harder storms, hails, excessive rain and floods, excessive temperature waves particularly in the cities, forest fires that occur at a size and frequency above normal, have a wide range of impacts on the socially and economically backward and disadvantageous segments. This impact hits more the poor farmers over food safety and low yield in agriculture and the urban poor over the increasing food prices as a consequence of this. When we look at the global geography as a whole, impacts of climate change have a more destructive effect on the peoples of less developed and/or developing South countries.

Another aspect of the inequalities also takes place in the field of gender. All researches conducted demonstrate that disadvantageous segments of the society are affected more heavily and hardly from the climate change, and the women, who face with more problems almost in every geography in social stratification get their shares more in this problem.

Climate Justice is used as a term to understand the reflection and reproduction of the social and historical inequalities being aggravated over the problem of climate change on the disadvantageous segments, groups, races, regions, social classes, genders, all the way to the future generations. One of the most important points here is that those who are affected from climate change the most, such as the poor, least developed countries, women, are the ones which are the least responsible historically for carbon emissions that cause climate change. At this point, the fact that those who are the least responsible are exposed the most of the threats is the shortest definition of climate injustice.

Researches and discussions on climate justice which we could summarize as the effort of putting a frame to climate change as an ethical and political issue beyond considering it only as the changes in the environment or in the nature, are still ongoing. In this report, first the concept of Environmental Justice, which plans an important role in the development of discussions and which has priority over Climate Justice, will be analyzed. It will be followed by the concept of Climate Justice and the main framework and historical context of the discussion that has created it. After that, the main titles and problem areas of Climate Justice will be handled, which will be followed by the contemporary status of the concept and the discussion and finally which social policies should be created and what type of measures should be taken for overcoming this injustice.

INTRODUCTION

Human - induced climate change is undoubtedly one of the most important threats before the existence of human beings and living things on our planet. United Nations Intergovernmental Panel on Climate Change (IPCC) reports, which have undersigned important scientific studies and awareness rising campaigns for long years for demonstrating the issue, have demonstrated almost to the level of certainty that the climate change was caused by human activities since the Industrial Revolution as well as the greenhouse gas emissions released during production (IPCC, 2019). In addition to this, even the USA government, which has been the fortress of climate deniers for long years and took the decision of withdrawing from The Paris Agreement under the administration the USA President Donald Trump, had to publish the Climate Science Special Report, which includes clear determinations that the climate change is real and is due to human being "with high possibility" (USGCRP, 2017).

Climate change, which constitutes such a great threat to the human existence on the planet, have different levels of impact on different social segments, classes, groups and genders. Climate change which has been felt more and more through long lasting droughts, more frequent and harder storms, hails, excessive rain and floods, excessive temperature waves particularly in the cities, forest fires that occur at a size and frequency above normal, have a wide range of impacts on the socially and economically backward and disadvantageous segments.

For example, this impact hits more the poor farmers over food safety and low yield in agriculture and the urban poor over the increasing food prices as a consequence of this. When we look at the global geography as a whole, impacts of climate change have a more destructive effect on the peoples of less developed and/or developing South countries.

The poor and disadvantageous parts of these countries are affected two folds worse from the economic and socio-ecologic consequences of climate change.

Another inequality is that the Small Island States, which in general have limited economic resources, are more radically affected from the rising sea levels due to climate change. Rising sea levels not only hit the people of Small Island States in economic terms, but also at a level of existence – nonexistence due to such reasons as the sea water invading the living space and mixing of the salty sea water to the fresh water resources

Another aspect of the inequalities also takes place in the field of gender. All researches conducted demonstrate that disadvantageous segments of the society are affected more heavily and hardly from the climate change, and the women, who face with more problems almost in every geography in social stratification get their shares more in this problem.

As we have explained with certain examples, Climate Justice is used as a term to understand the reflection and reproduction of the social and historical inequalities being aggravated over the problem of climate change on the disadvantageous segments, groups, races, regions, social classes, genders, all the way to the future generations. Researches and discussions on climate justice which we could summarize as the effort of putting a frame to climate change as an ethical and political issue beyond considering it only as the changes in the environment or in the nature, are still ongoing.

In this document, first the concept of Environmental Justice, which plans an important role in the development of discussions and which has priority over Climate Justice, will be analyzed.

It will be followed by the concept of Climate Justice and the main framework and historical context of the discussion that has created it. After that, the main titles and problem areas of Climate Justice will be handled, which will be followed by the contemporary status of the concept and the discussion and finally which social policies should be created and what type of measures should be taken for overcoming this injustice.

1. JUSTICE WITHIN HISTORICAL CONTEXT

According to John Lock, people living in the form of a society have three fundamental rights (Tuckness, 2018) These are right to life, right to property and right to freedom. These fundamental rights were imminently developed and progressed in the process of socialization of human beings long before these were started to be systematically discussed. In this regard, wherever there is a sociality and something developing in relation to the society, the struggle of rights and justice has been existing.

However, like many important terms that are being handled within the context of social problems and discussions, discussions on the concept of "justice" has been ongoing since the Ancient Greek philosophy. The Ancient Greek philosopher Plato, who has left significant impacts historically in every field, studied the concept of justice within the context of the first theoretical approaches in his book titled "The Republic", and this concept has transformed and developed over time in line with social developments and changes. Together with the philosophy of Enlightenment in the Western Civilization, the concept of justice has become one of the fundamental basis of a social contract based on mutual understanding of people living the communities. The idea that an equalitarian social order is only possible if justice becomes a social norm and is guaranteed with legal contracts, has become gradually stronger. The natural rights of citizens as expressed in the constitution and laws of nation states, have become the expressions of the understanding of and search for justice.

The English Bill of Rights (in full form, "Law Declaring the Regulation of Rights and Freedoms of Men and the Succession of Royalty") dated 1689, **United States Declaration of Independence** promulgated on 4 July 1776, and **Declaration of the Rights of Man and the Citizen**, which was promulgated following the French Revolution on 26 August 1789, have taken their places as the written expressions of human rights attainments and searches of justice of citizens which they acquired after long struggle (UK Government, 2019; The Library of Congress, 2018; Conseil-Constitutionnel, 2002). The search for justice, which has continued over human rights in the 20th century, has become concrete with the **Universal Declaration of Human Rights** comprising 30 articles which were adopted in the 183rd session of UN General Council held in Paris on 10 December 1948, which was prepared by the UN Human Rights Commission in June 1948 and adopted after a couple of amendments. The first two articles of the Declaration are as follows: "**Article 1. All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood. Article 2. Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status**" (OHCHR, 1996-2019). Despite these articles which express the natural rights of every individual of the family of humanity in the most fundamental and undisputed way, it has not become possible to completely ensure justice on the world. Although these important steps of the search of humanity for justice realized the attainments such as justice before laws, freedom of opinions and expression, they dialed to ensure overcoming many inequalities such as social, class, religious, national, regional, race and

gender, and even could not prevent the inequalities becoming stronger in some areas. Today, the existence of humanity on the planet has been continuing in the darkness of all these inequalities. No doubt that these inequalities let themselves be felt stronger and more dramatic in the fields of crisis and disaster, regardless of whether these are nature-borne or human-borne. In the next section, the historical development and background of the concept of environmental justice, which enabled the first systematic discussion of these inequalities and attracting the public attention on the issue, will be discussed, with a view to have a healthier introduction to the discussions on Climate Injustice.

2. ROOTS OF CLIMATE JUSTICE: ENVIRONMENTAL JUSTICE

In fact, even in periods when combating climate change was not an area of discussion and field of struggle at this level, there was an important literature demonstrating that the environmental problems have a strong connection with social inequalities. In this sense, at the roots of the conceptual approach and struggle which we mention as Climate Injustice are the **Environmental Justice** discussions. For that reason, it is necessary to mention briefly the concept of and discussions on the Environmental Justice.

Whereas Environmental Justice relates to the environment in which we live and the changes that arise in this environment and the search for justice sought against these, climate change is a problem at global scale and is considered under the title of Climate Justice which is related to all humanity. Whereas there is a close relationship between two concepts and they affect each other, the difference between them arises rather a problem of scale (Kilinc, 2017).

The father of the concept of Climate Justice, which has first been started to be discussed in the USA, is **Robert Doyle Bullard**, who is a sociology professor and the former dean of Texas University Barbara Jordan-Mickey Leland Public Administration department (Bullard, 2018). With the studies, researches he conducted and books he has written, Bullard has provided important contributions in the development of the concept and also paved the way for the development of Environmental Justice Movement in 1980s.

USA Environmental Protection Agency (EPA) defines the Environmental Justice as follows: "Environmental justice comprises just approach and significant interventions towards the whole humanity through implementing and developing policies, legal regulations and environmental laws, regardless of their races, colors, national origins or incomes. This target of EPA is towards all communities and individuals overall the nation. This target could be realized when all are protected at equal level against environmental and health damages and have equal access to the processes of decision making that will ensure living, learning and working in a healthy environment" (US, EPA, 2018).

The first studies of Bullard, who himself is an Afro American, relates to the municipality landfills in the vicinity of the Afro-American population settlement who live in the vicinity of Houston. The case filed by attorney Linda McKeever Bullard, the wife of Bullard, in 1979 in the name of the settlers has become a turning point on this issue. The PhD study of Bullard which he completed a couple of years later progressed on the same issue: The research titled "Solid Waste Sites and the Black Houston Community" is considered as the first comprehensive eco-racism study in the USA. Bullard and his researchers revealed that most of the Afro-American settlement areas in Houston were in the vicinity of toxic areas (Bullard, 1983).

Despite the fact that the black population constitutes only 25 % of the city population, all of the five urban waste areas, six of the eight garbage incineration ovens and three of four private garbage areas were located in the neighborhoods where Afro-American communities lived. This discovery was the start of the eco anti-racist campaign of Bullard and of long academic studies. Bullard said "No doubt that this is a way of apartheid in which the Whites takes the decisions and the Afro-Americans, native Americans and Hispanics have never been involved in the process."

During 1980s, Bullard spread his researches on eco racism throughout the whole South USA over the communities in Dallas, Texas, Alsen, Louisiana, Institute, West Virginia and Emelle, Alabama. The result did not change. Black communities resided in places where environmental damage and hazard are higher at all times in every region compared to white citizens. In 1990, Bullard published his first book which would over time become a classic: "***Dumping in Dixie: Race, Class and Environmental Quality***".

Following the leading studies of Bullard, Environmental Justice concept and discussion have covered the whole world. Every study and research conducted evidenced the importance of environmental justice and that this is a real social fact. It demonstrated that the environmental problems in any community in the world – whether developed or developing – are distributed in an unfair way along the social inequality levels. Whereas this is highlighted with the racial dimension as in the case of the USA, it also progressed over different inequality norms at different social orders. In particular, it was seen that communities that have lower conditions in socio-economic terms and are poor are more and strongly affected from environmental problems and risks.

Various examples have appeared in Turkey on this issue over time and are still continuing to appear. Social inequality that increases or decreases depending on the settlement areas could increase or decrease the environmental risk rate in the same rate. Whereas there is no study similar to the one in the case of Bullard's research, the example of the explosion of Umraniye dump site in 1993 demonstrates the reality that the dump sites are constructed in poor areas, or to put it otherwise, those who are poor and at lower income group settle around the dump site due to the cheap prices of lands and houses. On 28 April 1993, 27 people have died and 12 people disappeared in the disaster that happed as a result of the methane gas that accumulated in Hekimbasi dump site in Umraniye district of Istanbul, and the bodies of the lost 12 people could not be found (GZT, 2016).

Umraniye disaster was referred to European Court of Human Rights. Masallah Oneryildiz and Ahmet Nuri Cinar applied to the European Court of Human Rights against the Republic of Turkey for the reason that Umraniye disaster occurred as a result of the ignorance of authorities. Based on the Notion that one of the rights that have been threatened by the damage given on nature or by environmental pollutions was the "right to live", ECHR resolved in 2004 that the right to life, which is guaranteed under Article 2 of European Human Rights Convention, [1] and held the Republic of Turkey responsible in Umraniye case since it has not taken the required measures for preventing the explosion despite the existence of reports foreseeing the danger of explosion, that it did not inform people who are under life threat on the risk of explosion nor transferred them to a safe place, and further that it failed to fulfill the obligations following the explosion. This decision was referred to in the literature as "AIHM Oneryildiz Decision".

[1] EHRC Article 2/1: "Everyone's right to live is protected by law. Other than the execution of a penalty imposed by a court due to a person being punished by capital punishment, no one's life could be intentionally ended."

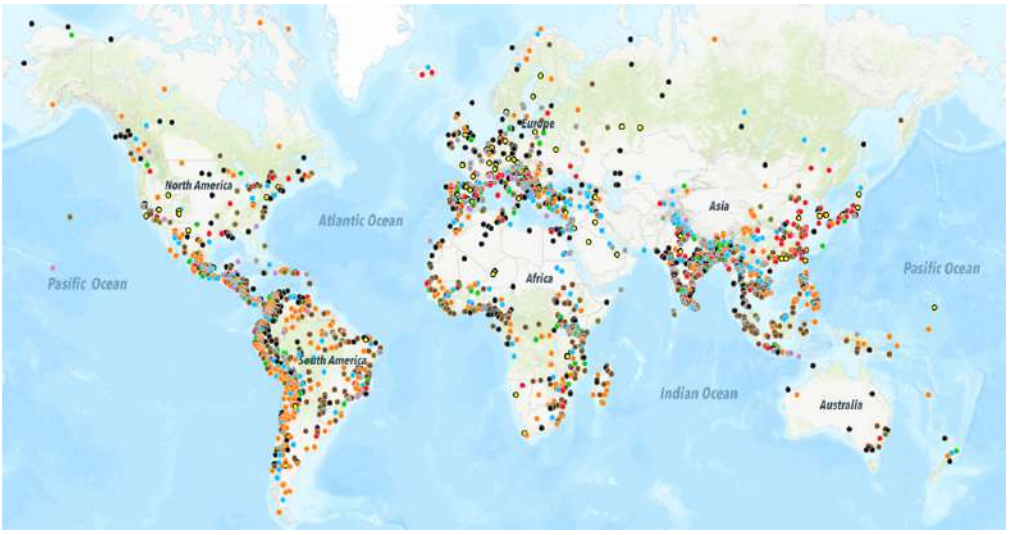
At this point, one of the most striking examples specific to Turkey could be seen in the residential sites build on brook beds. Brook beds, which are among the most risky settlement areas due to the flood risk, have hosted shelter house settlements particularly during 1970s and 1980s. With the increase of sudden and strong precipitation as a result of climate change in recent times added up to the growth of cities, these brook beds started to experience floods frequently which lead to the poor people living in the region being victims. Urban poor, who do not have any other option then settling down in this type of risky areas, lack the access to general information that will ensure knowing the associated risks or even though they may learn that the place is under risk, lack to financial resources and mobility opportunities to leave that area and relocate to other places, are among the subtitles that should be spoken about specifically for Turkey under the title of Environmental Justice.

It is possible to get access to disasters and news that are repeated almost every year in Istanbul, in particular the floods. The flood disasters that occurred in the September of 2009 were compared in the news to 17 August Earthquake where thousands of people died. When we look at the victims of the flood that caused the loss of 31 lives as a result of two-day rain, we could see that we face with an environmental disaster that is aggravated with a class based inequality. Seven women workers, who worked in a textile factory and tried to reach to the factor on the day of the event, died because of drowning in a load vehicle which did not have any windows or double doors. It was learned that women workers, Özlem Ünal, Naciye Karadeniz, Nuriye Can, Nebahat Salkım, Bircan Karakaş, Altun Yüksel and Güldane Çiftçi, who died by drowning, were employed at minimum wage under conditions that reached up to 15 hours a day. It was revealed that the textile company where these seven women worked was a leading and big company that exported its products to the whole world.

Women workers of the company that produces world brand textile had to get on that bus in that morning despite the showers, by saying "I should get my per diem". The explanation by the company officials that the workers did not want to get off the car as they were scared to get wet and by saying that "it was an unfortunate event of nature", and how a vehicle without any window could be operated as a transportation vehicle, should all be discussed under the concept of Environmental Justice (Bianet, 2006). Other victims of this grief disaster that occurred in September 2009 demonstrate how a critical concept the Environmental Justice is. Six drivers who were sleeping in the TIR park in Ikitelli…Extreme weather conditions that are triggered by climate change effect people from socioeconomically lower segments of society harder and stronger under any condition.

Another issue that is the subject of environmental justice in Turkey is related to the violations in the legal processes. Whereas there is no integrated regulation that handles the issue of climate change in the planning processes in a wholistic manner, numerous environmental cases were heard/ are being heard as the losses of rights experienced in the EIA (Environmental Impact Assessment) processes, which are used as an important planning tool in our country, are referred to the judiciary. A significant part of these cases relate to the EIAs of the thermal power plants, claims related to climate change have also started to be included in the cases related to Environmental Impact Assessment. Problems are being experienced in various issues and fields overall the world and in our country on the issue of The most comprehensive and influential study on this issue is the **Environmental Justice Atlas**, which demonstrates the problems and conflict areas overall the world. (Environmental Justice Atlas)[2]. Currently, 2548 cases reported over 10 different areas could be examined on the Atlas, including **"Nuclear" , "Mine** Environmental Justice and these are being demonstrated with various researches and studies.

[2] Environmental Justice Atlas https://ejatlas.org/



Quarries", "Waste Management", "Biomass and Land Conflicts", "Fossil Wastes and Climate Justice", "Water Management, Infrastructure and Construction", "Tourism Recreation Areas", "Biodiversity Protection Conflicts and Industrial and Public Investments conflicts". Cases which could be researched over countries and problematic areas are being collected with the cooperation of civil society organization overall the world and updated regularly.

According to an analysis conducted on the up to date data of Environmental Justice Atlas, the biggest area of conflict currently related to Columbia, Honduras, Mexico, Indonesia and Myanmar Rain Forests within the framework of land extortion that occurred as a result of palm oil production. Other 10 biggest conflict areas and their numbers are as follows: Renewable energy conflicts (31 wind, 326 HPP), giant mine areas (270 conflicts), fuels that should not be burnt (deep oil drill, oil soil etc. 178 conflicts), garbage economy (126 conflicts), soil mafias (82 conflicts), fish resources (77 conflicts), China (76 conflicts related to petrochemical product inflammable Paraxylene production), nuclear nightmares (57 conflicts) and pesticide impacts (23 conflicts) (COSMOS, 2018).

3. EMERGENCE AND IMPORTANT TURNING POINTS OF THE CONCEPT OF CLIMATE JUSTICE

Climate justice is a concept that handles the issue of climate change as an ethical and political subject and creates the discussion opportunities, rather than a change that only occurs on environmental or natural conditions. It aims at associating the impacts of climate change with the concepts of justice and in particular environmental and social justice. This is done by handling the issues of historical responsibility of equality, human rights, collective rights and climate change and of ecologic debt. The most fundamental proposition of Climate Justice could summarized as that those who are the least responsible from climate change are exposed to its effect the most and in the heaviest way.

In this direction, how did the concept of Climate Justice arise as the first time and what sort of a path did it follow in the international climate negotiations?

The first study which lead the inclusion of the concept in the public discussion was the Greenhouse Gangsters vs. Climate Justice report, which was published in 1999 by the civil society institution named CorpWsatch centered in California, which aimed at ensuring accountability of giant multinational companies and carries out struggle on the axis of environmental, social and human rights (Bruno et al., 1999).

Following this, the 6th Conference of Parties (COP6) of United Nations Framework Convention on Climate Change (UNFCCC), which was organized in La Haye city of the Netherlands in 2000, hosted the first **Climate Justice Summit**. In the summit which aimed at a communication network which will bear this struggle and a radical alternative that will carry out the Climate Justice struggle, which is not handled by the official climate change negotiations in a sufficient and accurate way, it was targeted to "**accept the climate change as an issue of rights**" and to "**constructed collaborations between states and borders**" which will strengthen sustainable development against climate change.

International environmental groups which came together in the World Summit, which was organized in 2002 in Johannesburg city of South Africa and known as Rio+10 (which included different organizations such as CorpWatch, Third World Network, Oil Watch, the Indigenous Environmental Network) promulgated the Bali Principles of Climate Justice (International Climate Justice Network, 2002). **Bali Principles of Climate Justice**, which aimed at locating a "human face" to climate change, redefined the climate change from the perspective of human rights and environmental justice. The principles disclosed have been adopted from the "**Environmental Justice Principles**" prepared in the People of Color Environmental Justice Leadership Summit in Washington DC in 1991 (The People of Color, 1996).

Principles which comprised 27 headings were a significant milestone in extending the climate negotiations, which were derailed by governments and special interest groups such as giant oil, coal and energy companies and restricted totally to a technical area, so as to include social justice, human and local community rights. In this way, it was considered that the problems of local communities would be associated with the climate change.

Two important meetings were held and steps were taken on the issue of Climate Justice in 2004. The first of these is the announcement of the incorporation of **Durban Group for Climate Justice** in the 17th Conference of Parties (COP17) of UNFCCC organized in Durban city of South Africa. This group which comprised the representatives of civil society organizations and various people, carried out discussions in order to locate climate change to a more realistic foundation to a social justice basis and

The Durban Declaration on Carbon Trading was published after this meeting (Center for Civil Society, 2019). With this manifesto, the Climate Justice movement has demonstrated a standing against the Carbon Trade, which is one of the three flexibility mechanisms developed with **Kyoto Protocol** which was signed with the participation of 169 countries in 1997, because, according to the signatories, it is impossible for the carbon trade mechanisms to stop the climate crisis (Republic of Turkey, Ministry of Environment and Forestry).

In the Just Climate Conference which was organized in Michigan University in 2004, **The Climate Justice Declaration** comprising 14 articles were declared (Environmental Justice Initiatives, 2004).

In 2007, in order to organize Climate Justice Campaigns, a global coalition and network, **Climate Justice Now!** (CJN!) was established in the 13th Conference of Parties (COP13) of UNFCCC organized in Bali city of Indonesia and announced itself with a declaration (Widick, 2018).

One of the most important organizations working on Climate Justice is The Mary Robinson Foundation – Climate Justice established by the 7th President of Ireland, a lawman, politician and diplomat, Mary Robinson. The foundation which was established in 2010 by Robinson, which is one of the most important political and social actors, and handles the issue of climate change as a matter of human rights, have been struggling for long years for making various research on the issue of Climate Justice and directing the interest of global community to this issue (Mary Robinson Foundation, 2019; Robinson, 2015).

Climate justice actions, which are being carried out over six principles, namely Respect and Protect Human Rights, Support the Right to Development, Share Benefits and Burdens Equitably, Ensure that Decisions on Climate Change are Participatory, Transparent and Accountable, Highlight Gender Equality and Equity, Harness the Transformative Power of Education for Climate Stewardship and Use Effective Partnerships to Secure Climate Justice, focused on associating the issue with human rights, protecting the rights of people who are most affected and just and equal distribution of damages associated with climate change.

4. CLIMATE CHANGE: NOT IN THE FUTURE, RIGHT HERE, RIGHT NOW

It is one of the most general findings of social sciences that, when it comes to human beings and civilization, "nothing is natural and normal" On the other hand, many studies demonstrate that even the effects and results of the "natural disasters" as we known them are not distributed in an equal and just manner. In these studies, it could be seen that situations such as class based, regional inequalities and gender inequality end up with creating new inequalities in being exposed to disaster, remedying the damages and reaching the support, or aggravating those which exist.

In this sense, climate change is already not a "natural disaster", but a social-historical fact that is created and grown by human hand historically, however, the climate change may show itself in most of the times with natural disasters such as flood, drought, hail, storms, sudden heat waves. All scientific researches and statistical studies demonstrate that at the global level, there is an increase in the number and magnitude of the extreme climate events caused by climate change. **IPCC (Intergovernmental Panel on Climate Change)**, WMO (World Meteorology Organization), NASA (National Aeronautics and Space Administration) and many scientific organizations demonstrate that the global average temperature increase caused by human borne greenhouse gas emission and land use preferences will change the climate and this could increase the frequency and magnitude of extreme weather conditions such as drought, irregular and excessive precipitation and storm (NASA Earth Observatory, 2005; Banholzer 2014; ISDR 2008). Thanks to the citation studies which have been rapidly increasing in recent years, proofs and event based evidences related to the connections between human borne climate change and extreme air conditions, have been gradually increasing (IPCC Assessment Reports could be used as reference).

No doubt that this important problem which is applicable for the whole world is also valid for our country and this impact has been demonstrated with a clarity close to certainty with many local and international scientific studies. According to Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, Turkey is located in the Mediterranean Basin which is among the regions which will be most affected from the negative impacts of climate change. For example, in 2017, the average temperature in Turkey increased by 1.5°C compared to 1970 and became 14.2°C. Considering that the average between 1981 – 2010 was 13.5°C, the average increase is 0.7°C. Meteorology General Directorate (MGM) expressed that "There is a continuous increase in the average temperatures of Turkey since 1998 (excluding year 2011)" (MGM, 2017).

Another issue which is frequently referred to within the context of climate change is the amount and frequency of precipitation. According to MGM data, "The annual spatial average total precipitation in Turkey for year 2017 was 506.6 mm, which was under the 1981 – 2010 normal (574 mm) by 12%". According to "**2017 Temperature and Precipitation Assessment**" of the institution, there is a trend of decrease in the amount of precipitation since 1990 up to our day and "In year 2017, the third of the decreases that were seen since 1990 up to our day was experienced" (MGM, 2017).

This data demonstrates that while temperatures in Turkey increase, the precipitations have a tendency to decrease Another data that is important in terms of the relationship between climate science and climate change and meteorological weather evets is the humidity and vaporization data. Whereas humidity and vaporization data is related to disasters such as long term drought on one hand, it is also directly related with short term meteorological disasters such as excessive precipitation and storms. MGM data points out that average humidity has decrease in Turkey today compared to 1970, showing that the vaporization is in decrease trend.

There is plenty of scientific studies to the effect that climate change also affects extreme temperatures. Whereas maximum temperature averages increase in Turkey during summer months, there is a trend of decrease in minimum temperature averages during winter months. It is expressed that Turkey is facing a climate which is hotter, with more irregular and heavy precipitation and higher vaporization.

5. RELATION BETWEEN CLIMATE CHANGE AND DISASTERS

The researches demonstrate that, in addition to the increases and anomalies of humidity, temperature and precipitation as we have expressed above, the frequency of disasters including storms, floods and frosts has been increasing in Turkey, accompanies by the increase in magnitude. All these observations seem to be one to one in harmony with the effects of climate change expected in Turkey.

In Turkey 598 disasters have been observed in 2017, whereas this number of 654 in 2016 and 731 in 2015 (MGM, 2015 – 2017). According to MGM data, these three years in question have been the years when the highest number of meteorological disasters were seen in the history of the country since 1940. Another striking point related to these disasters relates to the characteristics of the disasters. In the last three years, more than 80% on average of the disasters in Turkey were in the form of storm, heavy precipitation/ flood and hail.

When we look at the natural disaster data of the last three years, we could see the situation more clearly. For example, the meteorological natural disasters observed in year 2017 are lead by storm (36%), heavy rain/ flood (31%) and hail (16%) disasters (MGM, 2017). Almost half of the natural disasters that have meteorological character that occurred in our country

in year 2016 were the storms (45%). Whereas strong precipitation and flood events (20%) were the second, this is followed by hail events with a rate of 15% (MGM, 2016a). For example, the meteorological natural disasters observed in year 2015 are lead by storm- tornado (31%), powerful rain and flood (31%) and hail disaster (15%) (MGM, 2015).

The assessment of MGM for year 2016 is in the same direction: "There has been significant increase in the flood cases in the years following 2000. More than 50 flood cases have occurred in the last 10 years" (MGM, 2016). Years 2015, 2016, 2017 are the three years out of five years when the hail disaster hit the most in the last 20 years. In our country, 226 storm/ tornado cases occurred in 2015, while 292 in 2016 and 215 in 2017. "When we look at the number of storm disaster for long years, we see that the number of storms in the last 10 years was higher compared to previous years". Year 2016 was also "recorded as the year when the most flood cases occurred among the disasters that hit in the last 10 years" (ibid)

Prof. Dr. Mikdat Kadioglu, one of the most reputed meteorology and disaster management academicians in Turkey, says that, according to the projections made by IPCC with Global Climate Models, a major part of Turkey could enter into the effect of a very dry and hot climate in 2030 and the temperatures could increase by 2°C in winter and 2°C to 3°C in summer (Kadioglu, 2007). MGM expresses that, overall the world, "there are significant increases in the number of occurrence of meteorological, climate and hydrological disasters with the effect of global climate change", and in Turkey's Climate Change 6th National Communication, it was indicated that the temperatures are on the rise overall Turkey, that the number of summer days and hot days increases and there is a trend of irregularity and magnitude in the precipitations (MGM, 2016b; Republic of Turkey, Ministry of Environment and Urbanisation, 2016).

6. IS TURKISH SOCIETY AWARE OF CLIMATE CHANGE?

What do the people think about the climate change which is demonstrated without any doubt by scientific studies and statistics? The newest research on this issue was conducted in recent months in collaboration with **İklim Haber** and **KONDA Research**. In the field study carried out by KONDA Research, the question of "Have the irregular weather cases such as floods, storm, extreme temperature and drought increased or decreased in Turkey?" was asked to a total of 2595 people. According to the results of the research, Turkish society also observes that there is an increase in the number of meteorological disasters. 76.3% of those who participated in the survey responded as "increased" to this question, and only 6.5% responded as "decreased". The research also demonstrates that 87% of Turkey said that "there is climate change" (IklimHaber, 2018).

However, there is hardly any scientific research that examines the relationship between extreme weather conditions and climate change in Turkey. One of the rare studies on this issue was conducted on 29 December 2016 on the flood that hit Mersin. The study titled "**Meteorological Analysis and Climate Change Connection of Mersin Flood dated 29 December 2016**", was conducted by Senior Chemical Engineer Omer Erdal Bilici and Prod. Dr. Ayse Everest (Bilici & Everest, 2017). This research is among the first studies in terms of detailed analysis of the disasters connected with climate change on the basis of cities in Turkey.

No doubt that there is a need for more researches and scientific studies on this issue. These scientific studies that demonstrate the relationship between disasters connected with extreme weather conditions and climate change, will ensure that the public administration, local administrations, private sector and citizens will act in a faster and powerful way to the issues of adaptation to climate change and greenhouse gas mitigation against climate change.

7. CLIMATE JUSTICE AND NATIONAL, REGIONAL, SOCIAL CLASS INEQUALITIES AND GENDER INEQUALITY

7.1. Who Has the Historical Responsibility?

The question of who bears the historical responsibility in climate change and how this responsibility will be reflected to today is one of the most important problems and areas of discussion of Climate Justice. Developed Western European and North American countries, which have started industrialization since the Industrial Revolution and completed this fundamentally based on the fossil energy resources, could be easily named as those who historically have the biggest responsibility on this issue. It is possible to express this inequality as a derivative of the ecological debt. Ecologic debt basically means the debt of these countries that have industrialized earlier, to the less developed, developing countries or countries which are named as the "Third World" but currently expressed more as the global South in the current climate discussions, which has arisen from transfer of the natural assets in the process of colonization relations that have been continuing for more than 500 years (Warlenius et al., 2015).

However, the historical responsibility and debt within the context of climate change, focuses on the calculation of greenhouse gas emissions released by the industrialized North during fossil fuel oriented development. No doubt that the primary and priority responsibility in the climate crisis which is based on the utilization of coal, oil, natural gas, rock gas and similar fossil fuels, that have been waiting under the earth for millions of years and carry high amount of energy, lies with the global North countries, which are lead by the UK and USA, which have become rich by means of fossil fuels since the Industrial Revolution. The total of carbon emissions released to the atmosphere from 1870 to 2014 is calculated as 545 GtC (gigaton) (CO_2 - Earth, 2017- 2019). As a result of these emissions, the CO_2 rate in the atmosphere has risen from 280 to 410 ppm as of 2018 and the world had seen this level before only 4.5 million years ago[3] (Monroe, 2013).

Historically these countries have released greenhouse gases to the atmosphere by using fossil fuels intensely since the 19th century and in particular the historical responsibility of the Eastern Block, which has implemented an inefficient energy/resource development model for state socialism, should not be forgotten in this context (Turhan et al., 2017, p. 16).

Another important development is the BRICS (Brazil, China, India, Indonesia, South Africa) countries, which have realized a rapid economic growth following the collapse of Soviet Union and in parallel to that experienced a very fast increase in the carbon emissions. In this process of growth, China has increased its total carbon emissions at an incredible speed and passed above the USA. Besides, as a result of this increase, it has passed even the total emissions of the USA and EU countries and is still continuing this increase in a concerning way (Bradsher & Friedman, 2018) (For the up to date carbon emission amounts and rates of countries, see: European Commission, 2017).

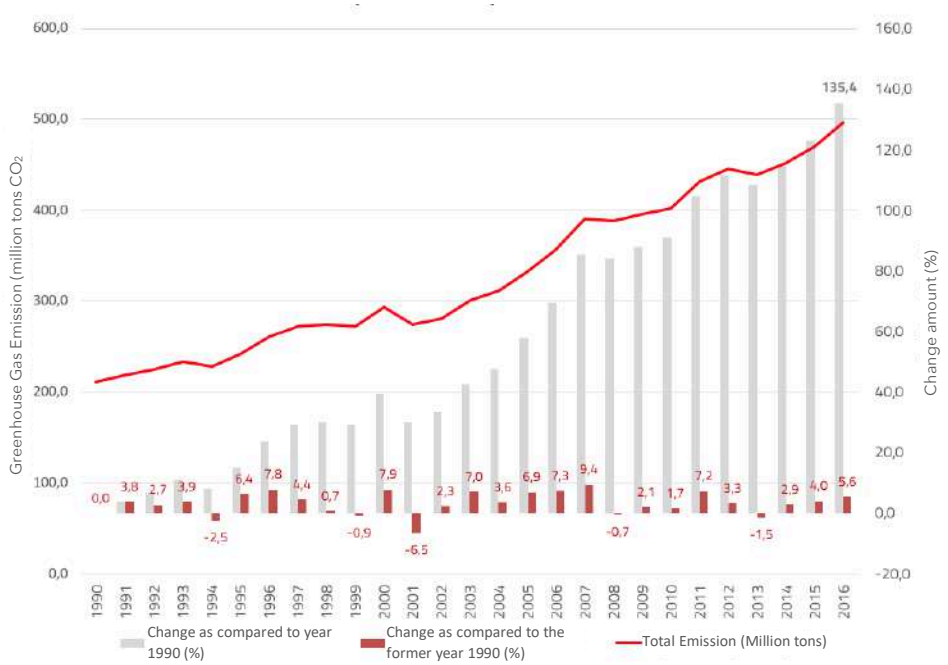
A more accurate and relatively just calculation is the per capita carbon emission rates. Whereas China has a population of 1 billion 413 million, it had a carbon emission of 10.151 $MtCO_2$ according to 2016 data. The USA, which has a population of 325 million, and EU Countries with a population of 510 million, have a slightly higher population from half of China's

[3] Daily carbondioxide levels that are measured in Mauna Loa Observatory could be regularly followed from this address: https://www.co2.earth/

population. According 2014 World Bank data, the per capital carbon emission of China was 7.544 metric tons, whereas this number was 16.491 in the USA, 8.889 in Germany and 6.497 in the UK (World Bank, 2014). Despite the fact that it is still less than half of the USA in per capita carbon emissions and slightly below Germany, the point that should be emphasized here is that the EU has accomplished significant studies and attainments in decreasing both per capital and total carbon emissions, whereas China still continues to increase carbon emissions with the increasing population and growing middle class. At this point, after a short while, it could be expected that the discussion of historical responsibility could loose its former clarity. The same situation also applies for India and many other newly growing economies.

At this point, we could say that Turkey has experienced a similar development and increased its carbon emissions with a record breaking speed. According to the latest data shared by Turkish Statistical Institute (TUIK) on 13 April 2018, the total greenhouse gas emission amount of Turkey for year 2016 increased by 135.4% compared to year 1990 and broke a record in this field, reaching to a total 496.1 $MtCO_2$ equivalent (Gundogan, 2018) (see. Graphic 1).

Graphic 1: *Turkey's Greenhouse Gas Emission 1990-2016*

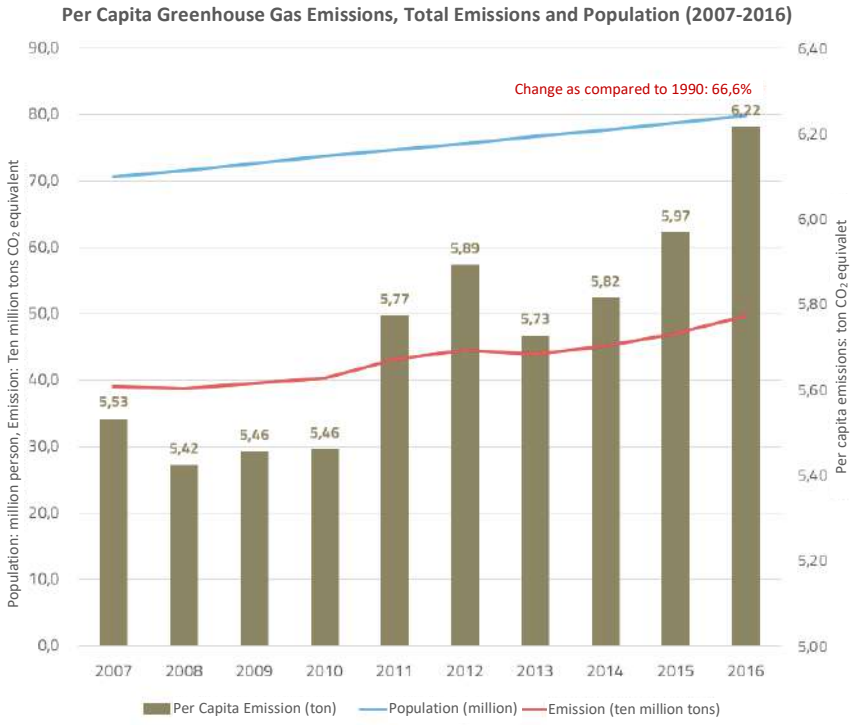


According to the same data, there has been an increase in per capita greenhouse gas emission amount in Turkey.

The value which was 6.04 tons CO_2e in 2015 (carbon dioxide equivalent), increased to 6.3 tons in 2016.

Per capita emissions were calculated as 3.8 tons/person in 1990. This points out an increase of around 40% in the per capita carbon emission increase (See. Graphic 2).

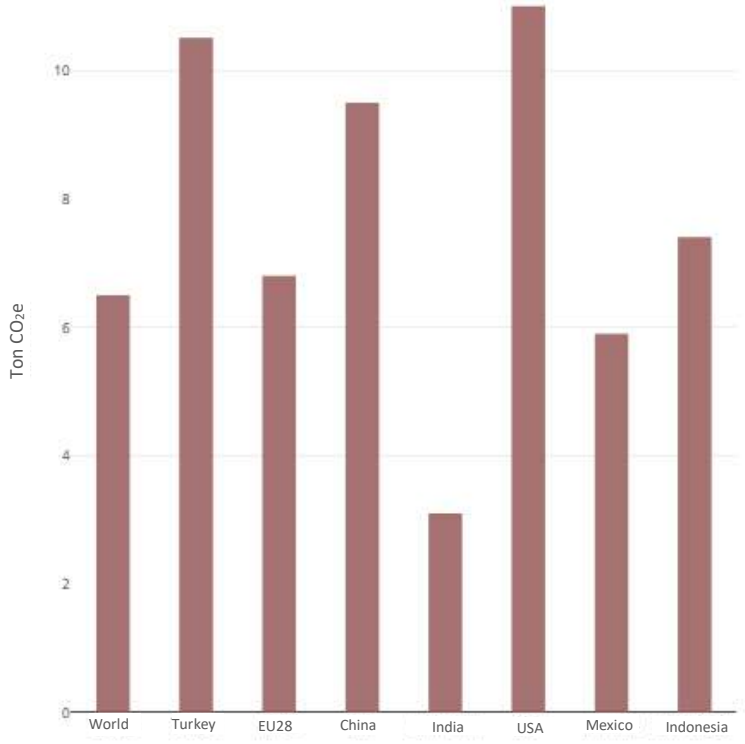
Graphic 2: *Per Capital Greenhouse Gas Emissions, Total Emissions and Population (2007-2016)*



According to the same analysis of Arif Cem Gundogan, who is a Climate and Sustainable Development Expert, the emissions in Turkey are mainly caused by cycle and energy sector, transportation sector and production and construction sectors (ibid). Gundogan says: "We know that Turkey has less per capita emissions today compared to many developed countries. However, according to the estimations and objectives, it is not a low probability that Turkey will pass the giants by the year 2030 (ibid). Therefore, like many growing economies, there is a possibility that Turkey could loose the position that it has in terms of historical responsibility in the coming period.

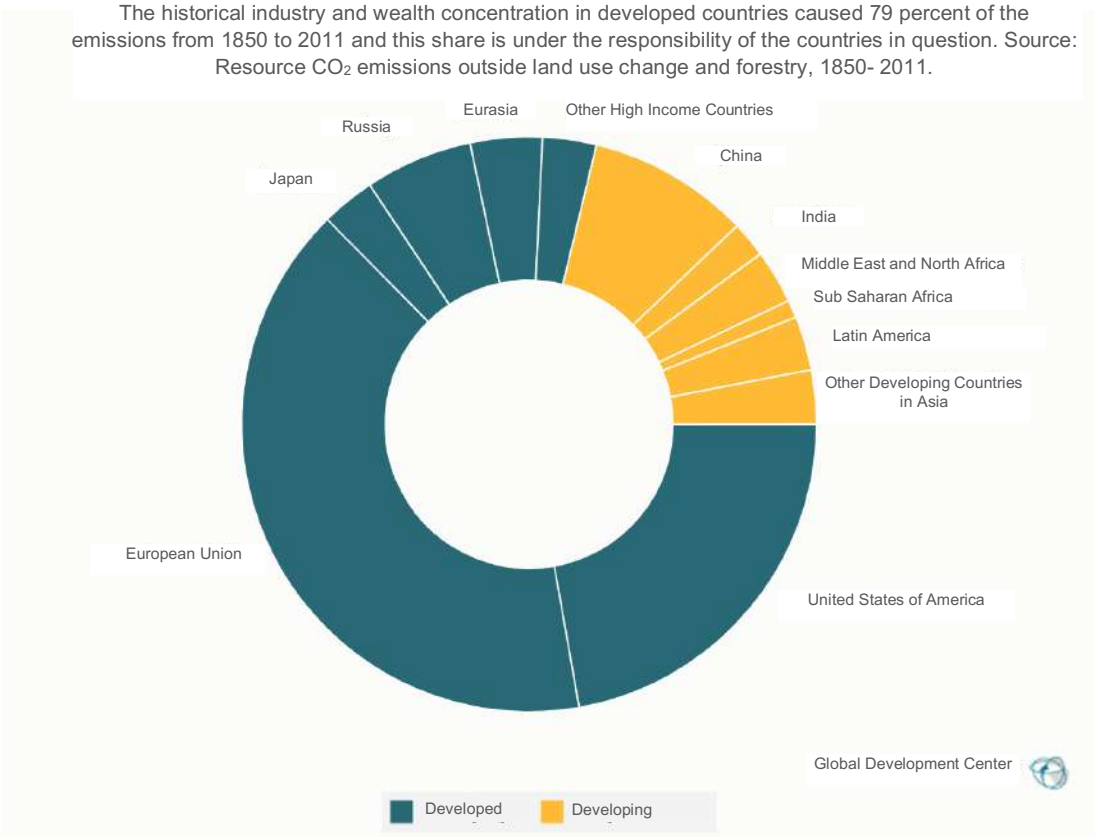
According to the analysis, there is the possibility that, in per capital carbon emissions for year 2030, the country could approach the USA (11 CO_2e) with 10.11 tons CO_2e emission and have a per capita carbon emission rate above the European Union countries (6.8 CO_2e) (see. Graphic 3).

Graphic 3: *National Contribution Targets of Per Capital Greenhouse Gas Emission Amount in Turkey and Selected Countries*



In line with this historical carbon emission analysis at the background, how can we distribute the historical responsibilities of climate change to countries and regions? Here it is essential to look at an important study conducted by the Center for Global Development (CGD) in 2015. According to the analysis of CDG, which is based on the date between 1850 – 2011, Western countries are responsible from 79% of the climate change in historical terms (developed countries were taken to include European Countries, USA and Canada, former Soviet Union, Australia, New Zealand and Japan; and the separation according to former naming in this regard was taken as 1st and 2nd World and less developed 3rd World) (Busch, 2015). Of this, 40% is under the responsibility of the European Union, 22% USA, 3% Japan, 3% other high income countries, 6% Russia and 4% Eurasia (ibid) (See. Graphic 4)

Graphic 4: *Historically Who Caused the Climate Change?*

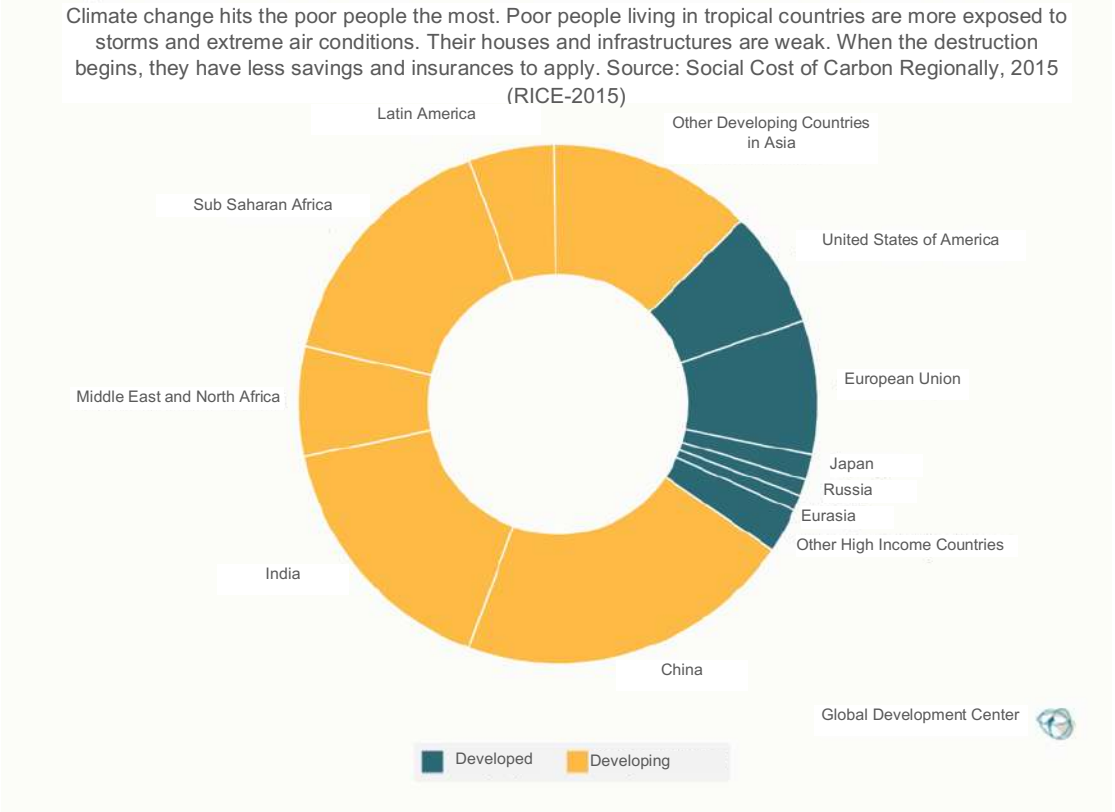


The next analysis of the same research focuses on which countries are damaged the most by the climate change. Here, the graphic turns upside and down by very clearly demonstrating the climate injustice (See Graphic 5). According to the analysis of Professor **William Nordhaus**, who won 2018 Nobel Economy Prize, which is based on RICE model, the cost of climate change is paid by developing, namely South countries (which is the name we currently think to explain them better) with a rate of 78%.

It is expected that this rate will reach 87% as of 2035 (ibid). According to CDG, the main reasons for this is that the poor living in tropical regions are exposed more to the storm and extreme weather conditions due to the region they live; the weakness of the infrastructure in their houses and residential areas, and the lack of insurance or financial accumulation that could compensate their losses when the disaster hits.

In addition to these, the estimation that, in the coming 30-40 -year period, the efficiency of the agricultural and water products will fall, that the efficiency of north regions will relatively increase demonstrates that the damages of the global South due to climate change will increase.

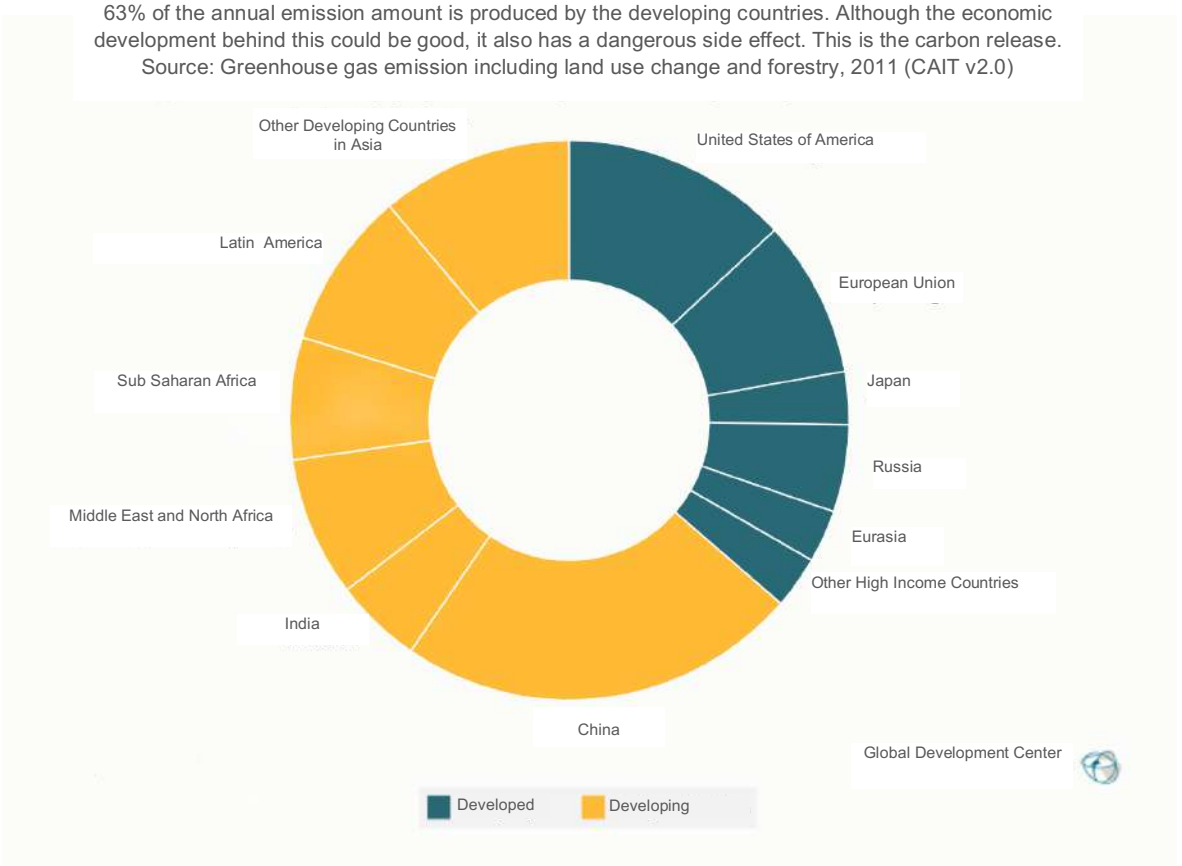
Graphic 5: *Who's hurt by Climate Change?*



The third graphic and analysis of CGD involve an interesting contradiction compared to what we have explained up to this point (See Graphic 6). The title of the graphic which tries to demonstrate the results of change in the production demography of the world and the development areas is "Who is causing the climate change currently?" According to this graphic which lets us to rethink our knowledge about historical responsibilities and demonstrates that he issue has become more complex, the responsible party from 63% of the annual global emissions is now the global South.

The growth of middle class, increase of wealth, economic development that favors the improvement of infrastructure in the countries in question unfortunately cause an incredible increase in the carbon emissions. The discussions on "decoupling", which is translated into Turkish as "ayriklastirma", brings about alternative development models which enables mitigating carbon emissions while providing economic growth and development thanks to the developments in the field of energy efficiency and renewable energy (Sustainable Development Association, 2015)

Graphic 6: *Who is Causing Climate Change Now?*



At this point, it is highly important for ensuring climate justice that the global South, including the Small Island States, contribute in the adaptation processes in order to ensure fragility against climate change in covering the damages. In particular, peoples of the Small Island States, who had almost never used fossil fuels historically due to their climate conditions and geographical locations and therefore caused climate change at the least level, face with the problem of existence – disappearance, namely the loss of their lands as a result of water level increase arising from climate change. Countries which try to have their voices heard with AOSIS Group, which represents 44 members and observers, in the Climate Negotiations, could be accepted as the most striking and dramatic examples of climate injustice (Dornan and Cain, 2018).

7.2. Climate Justice or Fronts of the North and South

7.2.1. Going Deep into the Inequalities

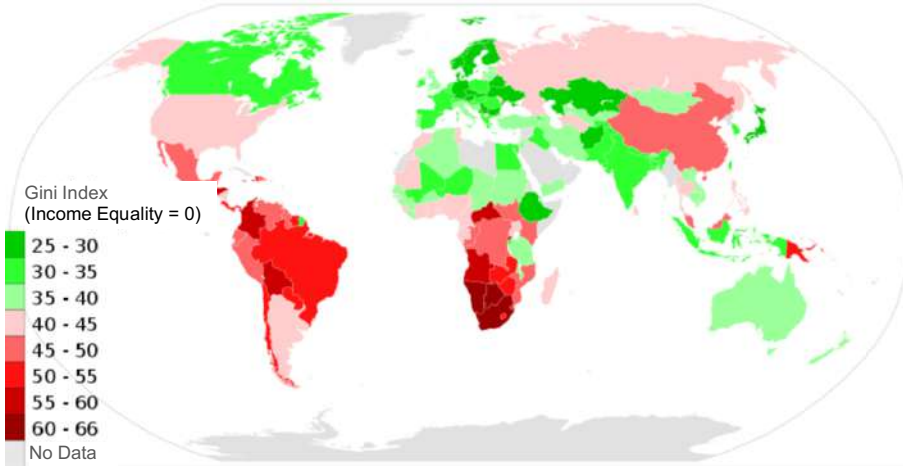
In the previous sections, how the climate change is a problem of justice and how the countries that have the least contribution in climate change are the ones that are the most affected have been explained with various examples, from different aspects and with historical contexts over the countries and regions. However, the weakest side of these analysis that is conducted over the countries is that most of the time the differences in social and political approaches and the social classes in the countries are ignored. Yet, whether developed North or developing South countries, every country has quite deep social

inequalities and these social inequalities and injustices should be included in the Climate Justice discussion by means of different dimensions.

One of the most reliable and widely used scales on economic inequality among countries is accepted to be the Gini index, which expresses statistically the inequality of income or asset distribution among the citizens of a country (OECD, 2006). According to Gini Index, 50 represents a quite high income inequality (Brazil, Columbia, South Africa, Botswana and Honduras are in this category), and there is a relative economic equality between the countries under 30 (Austria, Germany, Slovenia, Sweden and Ukraine are in this category) (See Graphic 7). In this evaluation, the USA, which is mostly considered as the most developed and wealthy country and is one of the historical responsible parties of climate change within the context of our subject, is a highly inequality society according to Gini Index and furthermore this situation is getting worse. USA, which has an inequality rate which is slightly above the average, namely 37.5 in 1986, reached to the level of 41.5 as of 2016, which is a highly unequal level of income distribution (World Bank, 2018).

This situation is also confirmed by many reliable researches conducted recently (United Way of Story Country, 2019). According to the research report prepared by the United Way, which is one of the biggest non-profit organizations of the USA, within the scope of ALICE Project, 50.8 million (42.6%) of 119 million households in the USA fail to meet their basic living requirements such as food, house, health, child care, transportation and mobile phone by their monthly budgets.

Graphic 7: *Income (In)equality*



According to the report, 16.1 million households in the USA (13.5%) live under the federal poverty limit. According to a research conducted in 18 states of the country, in each of these states, more than 30% of the households lack the sufficient budget to meet their basic needs. The report highlights that 49% of the people in California, which is one of the richest states of the USA, and Hawaii, which is considered as the paradise of tourism, struggle with poverty.

European Union countries, which are much more loyal to the understanding of social state and welfare society, have a much more equalitarian share compared to the USA and this situation could be very clearly seen from the point of Climate Justice. Compared to European countries, which have undergone significant efforts and commitments in terms of both the mitigation of carbon emissions, which is the single solution that could control climate change, and adaptation to the effects of climate change in the world, which has already heated up 1°C and still continues to become warmer, the USA is far back in terms of both mitigation and adaptation. In the period of President Trump, who took the decision to withdraw from Paris Agreement, which was signed in President Obama period, and its commitments, climate injustice and income sharing injustice are walking hand by hand.

This situation is not applicable only for the USA. As it was demonstrated many statistics and researches such as Gini index, in all countries where there is unjust sharing of incomes and the gap between the rich and the poor is deep, Climate Injustice could be clearly seen over the social classes.

The rich and the poor who are present in every country are responsible at very different levels from these emissions both in historical and contemporary terms. It is also possible to read this over the consumption habits which cause emissions and the practices of making a decision on this. When we look at from the point of consumption patterns such as rates of owning and using private vehicles, size of motor capacities of the vehicles; size of the living areas in relation to the energy spent for heating and cooling; consumption of luxury consumption products; in country and abroad travel rates (in particular airways); nutrition forms (eating red meat, exotic or tropical fruit and vegetables brought from long distances); vehicles with high energy consumption, the carbon emission calculations of a poor American is close to the average of a South country, and we could see that the CO_2 emission amount of a rich American is even higher than the USA averages.

However, causing the climate change should not only be taken into account from the point of consumption rates and personal carbon emissions, also from the point of making decision on the production forms and energy resource preferences in historical terms. At the end of the day, they are the dominant classes, their companies and the political powers through which they are represented which determine the ways of production, their efficiency, which resources will be used, which natural areas will be filed to use and destructed (for example rain forests or efficient agricultural lands). Therefore, the poor and rich and the sovereigns in the rich North do not have the same responsibility. A more aggravated form of the same situation could also be seen in the inequalities within the South. The most poor which we could call as the South of the South have the least historical responsibility in climate change over the public and commercial decision making, their power and capacities to be represented and their ways and volumes of consumption, yet they have the highest rates of being affected.

One of the shortcomings that we think of the Climate Injustice only at the scale of countries and nations is the great differences within a country – in particular those which have the provincial system. In particular, when it comes to the USA, these differences become much more apparent. Whereas the current USA national administration takes the decision to quit Paris Agreement, tries to retrieve back all the

attainments in the field of environmental protection and cancels the commitments given in relation to carbon emissions, some states take and implement very different decisions. For example, the United States Climate Alliance[4] which was established with the participation of 13 USA states and Porto Rico and represents more than 33% of US population set its target at reducing the "greenhouse gas levels to the rates species in Paris Agreement protocol (25-28% less than the ones in 2005)" (US Climate Alliance, 2019).

Another example from recent history is the case sued by Rhode Island State to a group of giant oil companies, including Exxon Mobil Corp. and BP. The state accuses the companies to contribute in the climate change which damaged the infrastructure and coastal communities in the state (Cama, 2018). Peter Kilmartin, the Head Prosecutor of Rhode Island, indicated that the companies required to make payment for the damages related to climate change, asserting that the taxpayers had to repair the roads and bridges and reconstruct their coastal structures.

A new report named "Global Climate Action From Cities, Regions and Businesses Individual Actors, Collective Initiatives and Their Impact on Global Greenhouse Gas Emissions" prepared in 2018 by Yale University, New Climate Institute, PBL Netherlands Environmental Evaluation Agency and CDP, emphasizes that the regional administrations and the business world could play an important role in terms of closing the gap before the realization of the targets of Paris Agreement due to the reluctance of national governments. More than 6000 cities and regions and over 2000 companies could realize a mitigation between 1.5 to 2.2 $GtCO_2e$ per year by the year 2030 over the global greenhouse gas emissions that will arise with current national policies if they fulfill all of their individual commitments. This potential mitigation equals to around two folds the amount of greenhouse gas emission of Canada for 2016.

According to the same report, if the cities, states and companies explained and measured fulfill of the commitments they declared in the USA, where President Trump disclosed his intention to withdraw from Paris Agreement, at least 50% of the amount of emission needed by America to realize Paris commitment could be accomplished (660 and 810 $MtCO_2e$/year).

Due to all these reasons, we should consider Climate Justice not only an inequality between countries and regions, but as a class based and political problem beyond that and adopt a point of view which keeps away from seeing the whole country having the same political opinion and class structure, with a more explanatory and solution-oriented approach.

7.2.2. Why are Low Income Groups More Affected by Climate Change?

There are numerous researches that demonstrate that those who are affected from climate change in different ways, whether living in the rich North or the poor South, are the segments that are more disadvantageous in socio-economic terms.

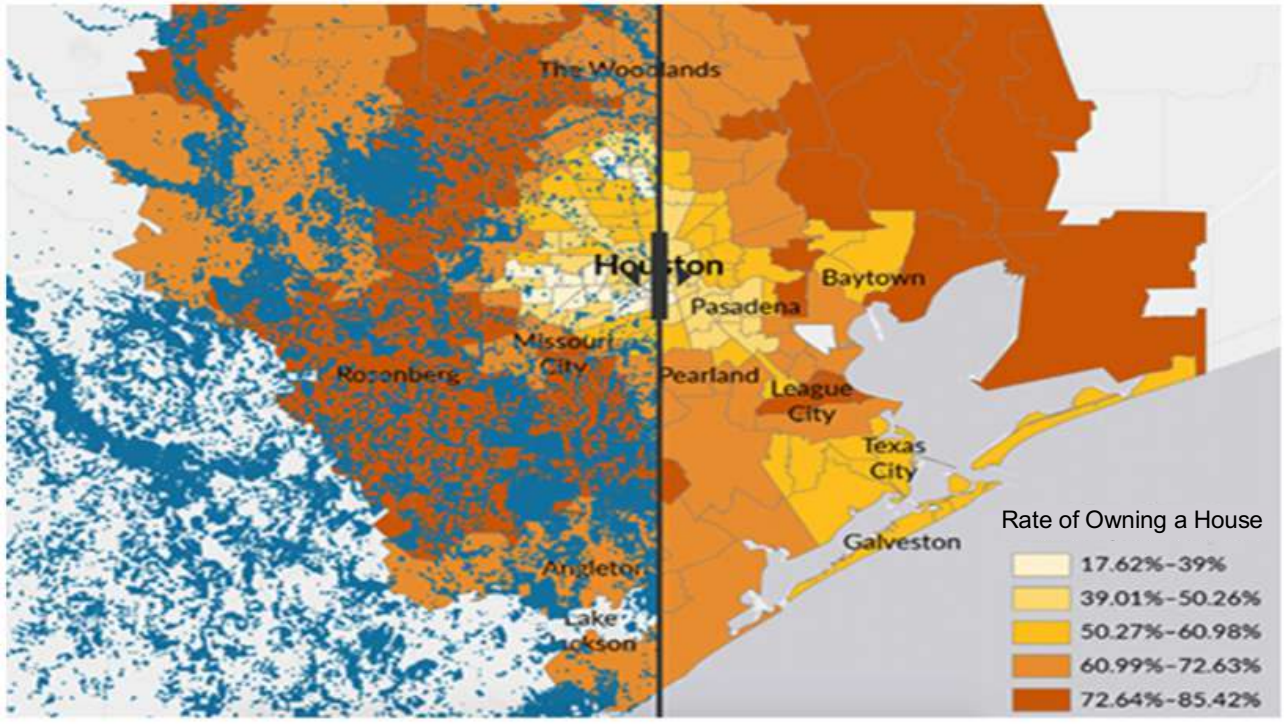
Researches conducted on the Harvey Storm, which hit the southeast coasts of Texas State of the USA in August 2017, verify this determination in a significant manner. It was determined that Harvey Hurricane, which BBC mentioned with the risk of being "transformed into a historical disaster", hit the "low income communities in the most and strongest way" (Blake & Zelinsky, 2018). Robert Bullard, professor of urban planning and environmental policies in Texas Southern University, who make explanations about Harvey Hurricane which is declared to have caused the biggest lost the history of the USA (Amadeo, 2018), claimed the lives of minimum 47 people,

[4] For United States Climate Alliance, see: https://www.usclimatealliance.org/

cased 43 thousand people to remain in shelters and affected 16 million people in total, states that: "Most of the time required measures are not taken for the low income and non-white communities in relation to flood control. This model is now clearly demonstrated. In extreme weather conditions, poverty is a risk factor" (Deaton, 2017).

However, the only problem is not that the risk of the poor being exposed to disasters is higher. Another important factor relies on the studies conducted on healing the wounds. The article written by Tanvi Misra titled "Mapping the Impact of Harvey Hurricaone on Houston Dwellers", indicates that a high majority of the houses located on the route of Harvey did not have house insurance and states that "historically, when it comes to reclamation funds, the tenants are always the ones that pick the short stick" (Misra, 2017). A series of maps prepared by Sarah Strochak and Bhargavi Ganesh from Urban Institute organizations (See Graphic 8) demonstrate as the first time that the minority house owners remained in an uncertain situation after the storm. The same article states that "for urban dwellers who live in the areas that are unprotected against water floods, are poorer and not white, the way to normality could be longer and more challenging".

Graphic 8: *Rate of Owning a House*



At this point, why and through which mechanisms the extreme weather conditions arising from climate change hit the communities from lower socio-economic segments in a stronger way will be tried to be explained with researches conducted in this field (SAMHSA, 2017).

- **Living conditions and infrastructures:** First of all, the poor segments always have less safe and unhealthy sheltering areas, conditions and infrastructures. This is sometimes in the form of the poor relocating to cheaper land areas such as constructing house to the brook bed. This sometimes occurs, as we have handled in the example of Environmental Justice, as the risk progresses towards the residential areas of the vulnerable poor in terms of rights. In the USA, this situation has arisen as the garbage areas are transferred step by step to the residential areas of Afro-Americans, who are the poorest of the region, however, this could occur through other processes and events in other regions. For example, concentration of pollutant industrial facilities in a small area in Dilovasi region where the cancer cases are the most frequent in Turkey, stands before us a local and grieving example of this defenselessness (Duvar, 2018). This situation becomes much more dramatic with the extreme climate conditions that are triggered by climate change overall the world.
- **Lack of political representation:** The poor are usually away from the opportunities of political representation. They are generally less educated (and unfortunately the next generation is less educated due to equality of opportunity in education). They have less financial resources, legal support, political connections and lobbying power required for advocating their rights in legal processes. For that reason, they are more badly affected from any type of disaster.
- **Restricted mobility:** They have no place to go after a disaster due to hurricane, flood or any climate change. Katrina Hurricane that hit New Orleans State of the USA between 23 August 2005 – 31 August 2005, is one of the most dramatic examples of this and was called by reputed US newspapers as the "hurricane that embarrassed America" (Independent, 2010). Before the hurricane, everyone who could go to other regions and have connections and savings had left the state and only the most poor and the Afro-Americans stayed back (McGonigal, 2015).
- **Financial insolvency:** People who are located at lower levels in socio-economic terms do not naturally have the sufficient financial savings to reestablish their lives following any disaster. Since they have little power to pay or they do not have fixed works or job security, their possibility to get loan for reestablishing their lives, repairing their houses and renewing their goods is low.
- **Insurance opportunities:** Poor segments of the society who hardly make the ends meet naturally have less insurance opportunities in general for their houses, business places, goods and agricultural areas where they make production. According to the report of ClimateWise Coalition, which is established by 29 insurance companies, published in 2016, the difference between the costs of natural disasters and the insured assets – which situation is called as the protection gap – has increased by four folds since 1980 (University of Cambridge Institute for Sustainability Leadership (CISL), 2016). According to the same resource, water borne disasters have increase by six folds since 1950. It is among the emphasis of the report that the climate change has a share in these incredible rises and eventually the assets which were insurable previously have gradually risen to the category of uninsurable. This situation means that the insurance premiums of the assets whose risk has increased due to climate change have also risen, which will constitute a challenge for the low socio-economic segments.

It is calculated that the economic damage of Maria Hurricane, which hit the whole Caribbean in 2017 and almost totally destroyed Porto Rico, is between 30 to 60 billion USD. However, the total insurance coverage in Porto Rico is between 15 and 30 billion USD, which could hardly cover 60% of the damage (RMS, 2017). How the remaining damage will be covered is totally uncertain and this situation seems to be almost a universal rule for the poor regions under the current conditions. Another foot of the issue of insurance is the health and life insurances. Similarly, poor are more away from these insurance opportunities and mostly it is not possible to compensate for the damages following the disasters.

In regions and countries where inequalities are high, resistance against the disasters is weaker and the problems experienced afterwards is bigger and more tragic. In European Countries where social state and infrastructures are powerful, we see these types of examples less. All these risks and inequalities contain significant threads for Turkey due to the increasing income inequality and infrastructural problems.

According to 2016 Risk Barometer Research published by Allianz, the natural disasters risks rank at the top with 55% for Turkey (EKOIQ, 2017). Two reasons are being this. First is the infrastructure which is very weak due to ignorant and gas structuring which is not strengthened with measures to adapt to climate change; and the second is the unique climatic and hydrographic conditions of the geography we live in. Unfortunately, the Mediterranean Region we are located is considered as one of the most fragile geographies that are mostly affected from climate change overall the world and it is indicated that the extreme temperature waves in the region could happen with 10- folds more possibility (IUCN, 2019).

The data and climate events that were experienced one after another confirm this information. According to the data published by Turkish Union of Insurances, a damage declaration of 116 million TL was made for 7000 damages by the citizens who applied to insurance companies operating in the sector following the flood disaster that happened in Istanbul in 18 July 2017. In the flood disaster which hit Istanbul in 27 July, the number of damage statements was 22.000, and the amount claimed was 168 million TL. This situation is repeated in any disaster that arises from climate change and the total burden increases continuously.

7.3. Climate Change Injustice and Its Consequences Beyond Disasters: Agriculture, Nutrition and Food Safety

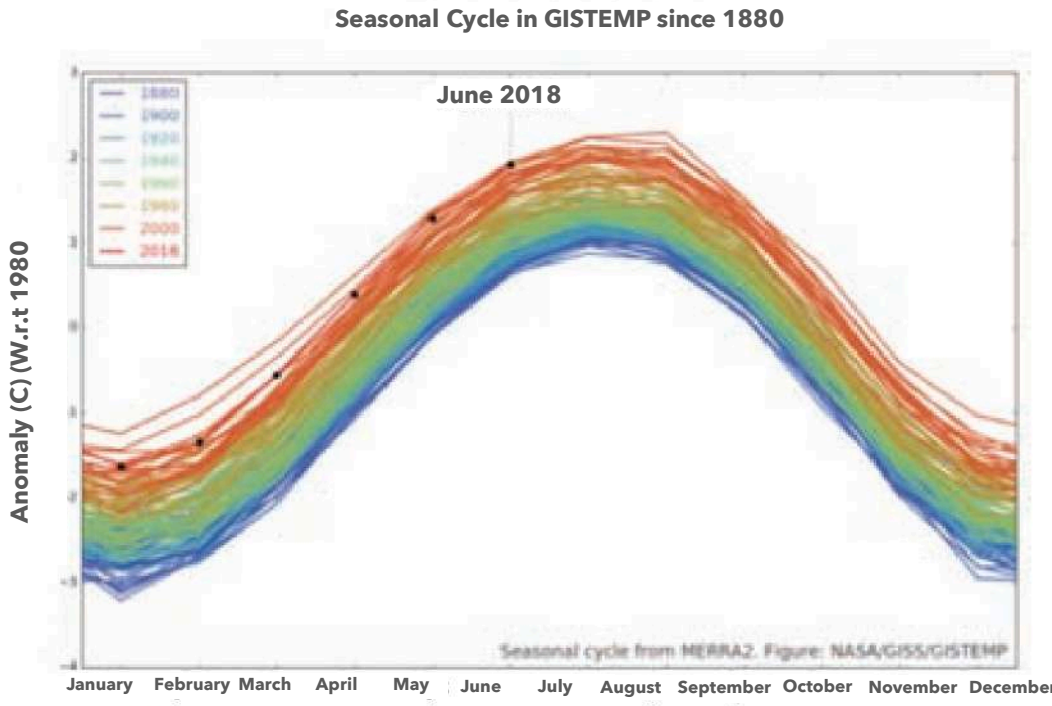
Up to this point, the impacts of climate change were handled in relation to extreme weather conditions and their social consequences, however, this singly will be a limited explanation, because, climate change is in fact a disaster that is being experienced and repeated every moment. Changing climate conditions have significant impacts on the ecosystem also with the total temperature change beyond the hurricanes, floods, hails, extreme hot waves. The main of these is the big changes and fluctuations in the field of agriculture and food.

Starting from the death of bees, which play a significant role in pollination and therefore the cultivation of the crops, many factor such as changes in humidity rates and precipitation regimes (See Graphic 8), frost, increase in the species and number of agriculture pests have been scientifically demonstrated to have caused important efficiency losses in agriculture (Karapinar, 2018).

For example, studies that research the climate effects on agricultural production demonstrate that every 1°C increase in global temperatures decrease the wheat yield by 6% on average overall the world. There are regions and countries where the climate impact is much higher. A yield loss of 6% observed in wheat means a loss of around 1` million tons per year for a producer country like Turkey. If the consumption of fossil fuels such as coal, oil, natural gas which cause

climate change is significantly reduced, it is foreseen that long term temperature increases will be around 5-7°C. Researchers indicate that every 1°C increase causes to a loss of 6% and considering his fact, an expectation of 30-40% yield loss only in wheat seems to be realistic. Climate change also directly affects all other products than cereals, including fruit – vegetables and stockbreeding." (ibid).

Graphic 9: *Seasonal Cycle in GISTEMP since 1880.*



Source: NASA

These efficiency losses mean a loss of earning and an uncertain future with high risks for the farmers, but also the issue has a consumer aspect. Baris Karapinar summarizes the impact of agricultural yield loss due to climate change for the consumer as follows: "For the consumer, this situation means a shortage in food supply, and in particular failure of the poor households who are in need of using high portion of their incomes for food expenditures, to access the food.

Agricultural losses due to climate affect as the most the small scaled agricultural producers and low income poor masses. Climate change is an important source of social injustice both between the countries and also within the countries" (ibid).

7.4 Dimension of Being Disadvantageous in Climate Justice

7.4.1. Challenges of Climate Change

As it is explained in this document, when it comes to human beings, there are hardly few facts that could be characterized as "natural". Hundreds of thousands of years of adventure of humanity has irrevocably changed the face of the whole world, the feedback sources, its natural structure and atmosphere. Every changing natural process continues to affect human communities with different structures and means. These effects take place in harmony with the social structure of that society. The economic impact of climate change doubled the existing inequalities through various ways. At this point, this hierarchy

which starts from the inequalities between the countries and continues with class based inequalities, eventually hit those at the bottom and who are the most vulnerable. Whether they live in the developed North or small island states who face the danger of being disappeared, or in the developing South countries, disabled individuals and the elderly are at the most fragile position in terms of extreme climate events and disasters if a disaster crisis program has not been developed.

There is no sufficient study on the impacts of climate change on the disabled. The most important document on this issue is the "Impacts of Climate Change on the Disabled". Which was prepared in 2009 in collaboration between the World Bank (Human Development Network – Social Protection/ Disability and Development Team) and Global Partnership on Disability and Development (GPDD) (World Bank, 2009). The report which focused on two themes, namely "Comprehensive Disaster, Emergency and Conflict Management" and "Basic Needs and Poverty Reduction", includes effects of climate change on the disabled and the recommendations towards mitigating these impacts.

At this point, the following question is important: How does the climate change affect the disadvantageous groups more? It is known that the Katrina Hurricane, which hit the USA in 2005 and enabled the speech of various parties on the destructive impacts of climate change, claimed the most of the lives among the elderly (The Denver Post, 2005). According to the research prepared by Louisiana Health and Hospitals Department, 60% of the 500 lives lost in the region were among people aged 61 and over. According to the explanations of state authorities, more than 215 dead bodies were found inside or in the vicinity of the hospitals and nursing homes. According to the same resource, two nursing home operators were held responsible from the dead of 34 people due to their negligence. According to the study of Environmental Health News, 10% to 15% of the global population are the disabled people who are significantly affected from the climate change.

In addition to being more fragile on the hurricanes, storms, floods and extreme weather waves, the disabled are also under a greater risk for being caught by contagious diseases that spread rapidly after a disaster (Center for Disease Control and Prevention).

Another strong effect of climate change on the disable people is the necessity to leave the living areas which are destroyed before, during and after the disasters (Scher, 2017). The World Bank Group has published a very important report in March 2018 that examines the impacts of climate change on migration. The report titled "Groundswell Preparing for Internal Climate Migration", which is the first and most comprehensive study conducted on how the climate change caused people to migrate, demonstrates that by the year 2050, 140 million people could be forced to migrate domestically due to climate change (Rigaud et al., 2018).

Regions that were focused in the report are Latin America, South Asia and Sub-Saharan Africa. However, another dimension of the event is those who are forced to leave the country and the continent where they live due to climate change, and these people are defined as the "climate refugees" (Ekşi, 2016). Whereas there are various calculations and estimations on this issue, according to the report titled "Climate Refugees: Science, Human Beings, Laws and Future", which was prepared by the Stockholm centered think tank FORES, 200 million people will be required to leave their countries as of year 2050 due to the disasters that develop in connection with climate change (Karakitapoglu et al., 2017).

It is estimated that the disabled individuals are experienced and will continue to experience significant problems in relation to accessible transportation and housing, as well as hindering health and social services. Beyond this, their removal from the disaster area for saving their lives during the disaster is an issue which should be handled on its own (Ansell, 2009).

7.4.2. Climate Change and Gender Inequality

Following the handling of the issue of climate change from the point of view of the disabled, it is also highly important for the climate justice to examine from the point of gender. Here the situation which will be underlines here will be this: Climate change is seen to have different reflections on the genders. The most striking example in this context is that the women are more disproportionately affected by climate change compared to men. Besides, according to Dr. Nuran Talu, who is the author of "Women Solutions to Climate Change in Turkey", which was prepared within the scope of project "**Women, the Missing Component in Climate Chang Struggle of Turkey**" and has been studying on woman – climate relationship, climate policies do not provide equal benefits for women and men: "This is true both for the greenhouse gas emission mitigation policies and for the adaptation to the impacts of climate change. In both of the cases, there are consequences that leave women disadvantageous against men" (Talu, 2018).

There are numerous studies overall the world that demonstrate that the women are more affected from the disasters that occur as a result of climate change. It was revealed that, in the flood disaster that his Bangladesh in 1991, the death rate among women was five folds higher compared to death rate among men. One of the reasons for this is that the alarms released were spread from ear to ear among men at file places however that other family members who live inside the house – women, young girls and children – could not receive any news. Other reasons also caused the women to become disadvantageous in relation to disasters: The fact that they are prohibited from leaving the house without being accompanied by a man and the fathers save their boys, who will continue their surnames, as priority rather than their daughters. It was recorded that 567 of those who died for the same reasons in the tsunami disaster that hit the Indian Ocean in 2004, were women. Another example is that 80% of the victims of Sidr cyclone that occurred in 2007 in Bangladesh were women. The physical disadvantages of women in climate disasters could even be caused by their clothes. The traditional women clothing, "sari", lead to the increase of deaths as it prevented running and walking during disasters in South Asian countries such as Bangladesh, India and Pakistan.

Whereas women are more and strongly affected from climate change on one hand, they are more innocent compared to men in relation to causing climate change. According to UNEP Global Gender and Environment Outlook 2016 research, women tend to leave smaller carbon footprint, prefer climate technologies at higher rates and refrain more from risky solutions compared to men (UNEP 2016). At the background of this lies the historical difference of knowledge and experience between women and men, and differences in a series of consumption habits ranging from animal food consumption to having private vehicles (Hedges, 2014).

In particular, the researches conducted in developed countries demonstrate that women have a more clear consciousness compared to men when it comes to climate change, and that the perceive climate change as a dangerous fact. Women who have higher awareness on climate change and less average carbon footprint, are more strongly, deeply and unjustly affected from the climate change similar to other disadvantageous groups like the poor and the disabled.

8. FUTURE GENERATIONS AND CLIMATE JUSTICE RELATIONSHIP

Brundtland Report, which has one of the first uses in official texts of the concept of "Sustainability", which we currently hear frequently, and was prepared by UN World Environment and Development Commission, was published in 1987. The original name of the report, which is known with the name of Gro Harlem Brudtland, Head of Commission, is "Our Common Future" (UN WCED, 1987). The Sustainable Development was described in the most comprehensive way as the first time in the Report and this definition was generally adopted after that date. "Development which guarantees the requirements of today without sacrificing from the capability to meet the requirements of the future generations." The most fundamental emphasis at this point is on the "future generations". In this period when the effects of climate change are less known by the general public and there is less awareness on the excessive climate events, the issue is handled within a narrow framework by the experts and some politicians. For that reason, the issue was discussed within the context of problems that will occur in a coming future, around the issues that could be experienced by the future generations, our children and grand children. Despite the fact that the problem has become a more important and up to date issue, it should be accepted that one of the most important and tragic titles of Climate Justice is that future generations, namely the generations which have not yet born and have no single responsibility in the climate change and other ecologic problems, are to be exposed to ecologic crisis that will take their rights of human living from their hands. In addition to these, the global average surface temperature increase scenarios, including the best scenario on the way, namely 1.5°C, followed by 2°C and 3°C scenarios, will be examined and a closer look will be given on what sort of a world we will be leaving to the coming generations.

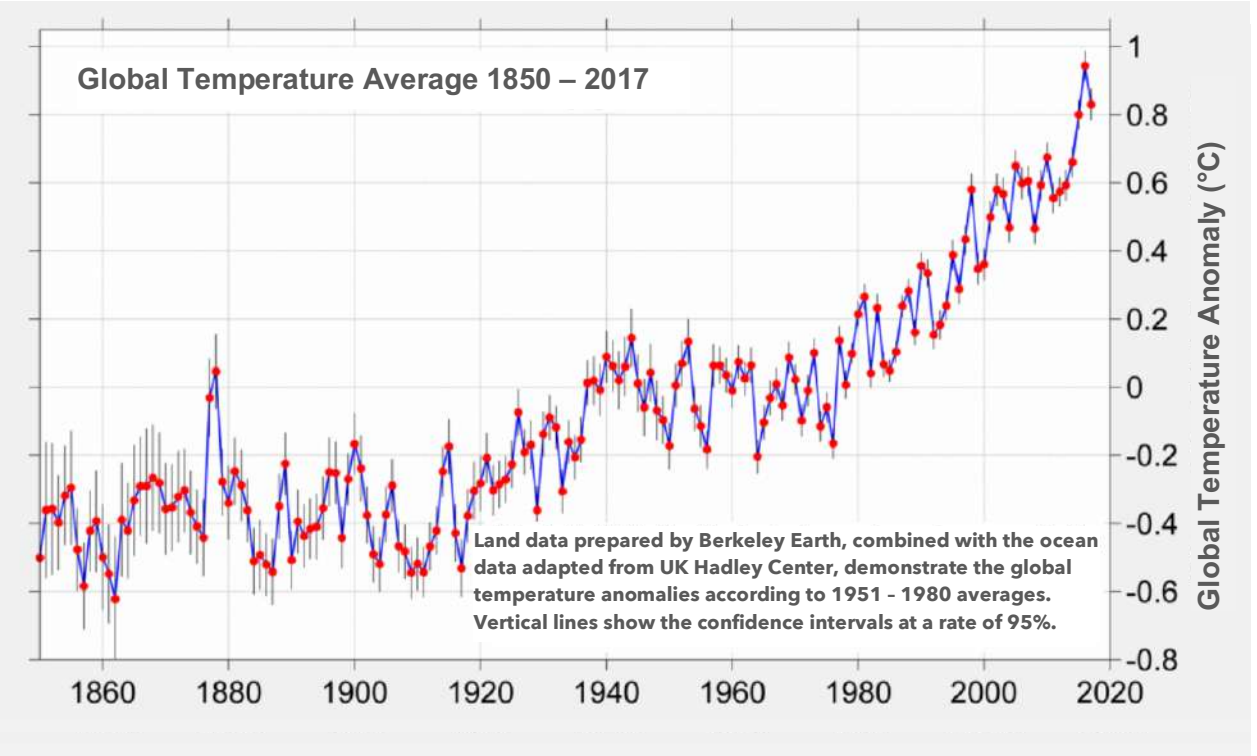
1,5°C Increase Scenario

At this point, the last data that we have in hand, will be shares over the **"Special Report on Global Warming of 1.5°C "**, which was prepared by the Intergovernmental Panel on Climate Change (IPCC) by examining over 6000 scientific studies and approved in South Korea on 8 October 2018 by the governments (IPCC, 2018).

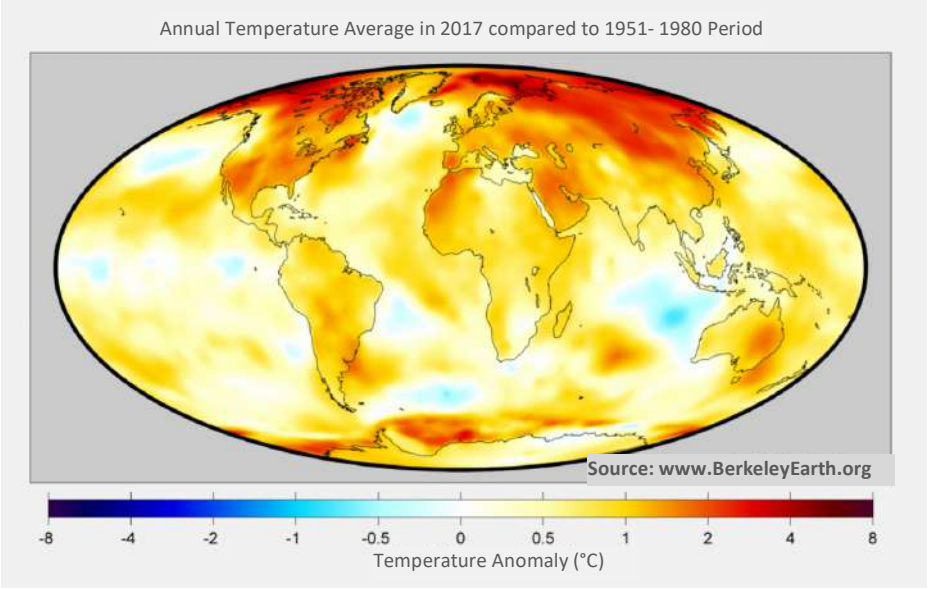
The main headings in the report could be listed as follows:

- Human beings have caused the earth to warm up approximately 1.0°C compared to pre-industrial period (Berkeley Earth, 2017). The global heating has started to show its effects by now in the form of extreme weather conditions such as drought and floods, rising in the sea level and melting of the Northern Ice Sea.
- If the greenhouse gas emissions continue in this manner, the global warming will exceed the limit of 1.5°C between 2030 and 2052 (See Graphic 9 and Graphic 10).
- 1.5°C limit has a critical importance in order to ensure sustainable development and prevent poverty. Limiting the global warming at 1.5°C means that many permanent impacts on ecologic systems and living spaces will be prevented with a higher probability compared to 2°C.
- In order not to exceed this limit, it is required to mitigate global emissions by 45% in 2030 compared to 2010 and to reach net zero emission target in 2050.
- For that reason, "fast and comprehensive" transformations are required in agriculture, energy, industry, building, transportation and cities.
- Currently the commitments given under the scope of Paris Agreement are not sufficient to limit global heating at 1.5°C. The countries are required to renew their commitments within the earliest period.

Graphic 10: *Global Temperature Average 1850 – 2017*



Graphic 11: *Temperature Indicator for 2017 Compared to 1951-1980 Averages*



All reliable researches demonstrate that global temperature averages exceed around 1°C above the pre-industrial period due to climate change, and in case that the emissions rapidly increase, the temperatures could increase by 1.5°C in 2040 (Rogelj et al., 2018). In order to limit the temperature increase with 1.5°C in 2100, it shall be preferred to immediately and rapidly decrease global emissions at an unprecedented scale. Even if this challenging target could be reached, some of the climate change based damages will be encountered. As a critical question, what does 1.5 C warming mean for us and our children.

Extreme Temperatures: In a world which will be 1.5°C warmer in 2100 than today, the frequency of seeing extreme temperatures will be at least doubled (Weber et al., 2018).

Water Scarcity: Researches demonstrate that a temperature increase of 1.5°C will increase the pressure on fresh water resources and the risk of water scarcity in sensitive geographies such as Turkey. A temperature increase of 1.5°C could decrease the amount of fresh water in rivers and lakes by 9% in Mediterranean basin, 10% in Australia, 7% on the north of Brazil (Schleussner et al., 2015).

Ecosystem Damages: Climate change not only affects the human beings, but also a significant part of plant and animal species on the world. Limiting the temperature increase at the threshold of 1.5°C could decrease the risks on living things by half (Warren et al. 2018). Despite this, according to 1.5°C scenario, 9 out of 10 coral reeves will be under threat of disappearance after the year 2050. Land and maritime life will be negatively affected and the pressure on species will increase (Schleussner et al., 2016; IUCN, 2009) The agricultural production will fall together with ecological damages and access to food will become harder (Zhao et al., 2017).

2°C Scenario

If quick action is not taken for climate, it seems a high probability that the average global temperatures will rise 2°C above the pre-industrial period by the year 2065 (Berkeley Earth, 2017). There is a need for a radical mitigation in global emissions in order to limit temperature increase at 2°C (van Vuuren et al,2011). Similar to the previous question, what sort of a world will our children face in the case of 2°C scenario?

Extreme Temperatures: A temperature increase above 2°C in the average temperatures will lead to a boiling temperature increase and extreme temperatures being prevalent almost all the summer long in the Europe, Middle East and North Africa. It is expected that the thermometers will show 50°C during the hottest days in Middle East and North Africa (Lelieveld et al., 2016). Whereas deaths due to hot air waves will increase, it will be considered normal that we will be exposed to forest fires that are much stronger that those that occur today.

Water Scarcity and Floods: In a world where temperature increase exceeds 2°C, the precipitation regimes will become unbalanced and water scarcity will be faced more frequently. All of Europe and Turkey will receive stronger precipitation in every season. 8% of the global population will have severe aridity problems (Schewe et al., 2014).

Ecosystem Damages: A temperature increase which exceeds 2°C will lead to the disappearance of coral reeves. 25% of 80.000 plant and animal species in the parts of the world that have the biggest natural biodiversity such as Amazon and Galapagos, will be extinct at local scale by the end of the century (WWF, 2018). Temperature increases will also change the behaviors of insects and animals, creating a wave impact which is reflected to the whole of ecosystems (Diamong et al, 2016). If global temperatures increase by 2°C, the glaciers in North Ice Sea will melt for a couple of consecutive years, and totally in certain months (Jahn, 2018). Since this will decrease

the amount of solar radiation reflected by the earth, the warming could speed up (González- Eguino et al., 2017).

3°C Scenario

If the increase in emissions continues at today's pace, the average global temperature will increase 3°C above the pre-industrial period in the second half of this century. If governments fulfill their emission mitigation commitments within the framework of Paris Climate Agreement but could not pass beyond, there will be some decrease in the speed of increase of temperatures (UNFCCC, 2019). In any case, the temperature increase compared to pre-industrial period will exceed 3°C around the year 2100 (Hausfather, 2017).

Extreme Temperatures: In today's climate, one to three hot waves are experienced per year in Africa continent (Weber et al., 2018). In a scenario when the temperatures increase by 3°C by the end of this century, the number of hot air waves could increase by five folds in the middle of the century. It is possible that the droughts will be seen more frequently and become heavier in the Mediterranean, West Europe and North Scandinavia (Spinoni et al., 2017).

Water Scarcity and Floods: A temperature increase of 3°C will create a significant threat of decrease in the underground water resources which are one of the basic sources of drinking water. A temperature increase of 3°C could cause the disappearance of 43% of the glaciers at the top of Himalayans, which are the water source for 800 million people today (Kraaijenbrink et al., 2017) Besides, extreme precipitation and floods will negatively affect the lives of millions of people.

Ecosystem Damages: Plants and animals, in particular the migrant organisms, will not adapt to this temperature change and they will extinct at local scale. Sea ecosystems could totally collapse in such level of temperature increase.

There are other nightmare scenarios that reach beyond the 3°C temperature increase. Of course there are ways to prevent these scenarios which are similar to science fiction movies, and not to live a future that could not be lived to the future generations, to our children and grandchildren. This is possible with a new, comprehensive and inclusive sustainable development program which will change all our living habits from production to consumption,

In the next section, the recommendations brought by international organizations, research institutions, politicians and activities who have been carrying out actions on the issue of Climate Justice for years, will be briefly mentioned.

9. ROADMAP FOR CLIMATE JUSTICE

9.1. Limiting and Ending Climate Change

If the energy and production policies continue in this way, the climate change will hit all humanity through various factors such as disasters, production falls, ecosystem damages, general health problems, but in particular the Small Island States, to be followed by the South, and after the North. It will affect all starting from the disadvantageous groups such as the pool, disabled and women.

For that reason, for Climate Justice, there is a need to mitigate and gradually quit the greenhouse gas emissions that cause climate change. This will take place by replacing the energy production based on fossil fuel gradually with clean energy production. The existing unproductive plants should be gradually shut down and shifted to solar, wind and other clean renewable energy plants.

Historical responsibility is an important discussion, however, it shall not permitted that development policies are locked to this discussion. Renewable energy is currently more accessible and feasible

compared to fossil fuels (BloombergNEF, 2018). The only thing that needs to be done is to remove the subventions provided to fossil fuels, in particular to the coal (OECD supported that it supports the decision to abolish these subventions in its last meeting before Paris Climate Summit) and abolish the legal problems (such as base load requirements) and prejudices before the renewables (EKOIQ, 2015).

Technological and financial support of the developed North is important for the poor South countries that come from back to shift to clean energies, energy efficiency and clean production. However, even when these are not completely provided, South could use the advantage of coming from back and start to change the energy and living preferences. Rather than being a partner to crime by following the path of those who have polluted before, remaining on the clean side and declaring that being supported on this issue is a historical right and responsibility will give more positive results.

When the issue is considered from the point of view of Turkey, due to its historical and structural location, it neither bears the unique characteristics of the North nor of the South. A Turkey which could gradually shift to clean energy within the framework of responsibilities created in addition by its geographical location within the context of energy, could leave a positive heritage to the coming generations in historical terms. In this direction, if it manages to gradually change the fossil fuel production facilities with renewable energy resources within the energy range it has, Turkey will have taken a significant step. In addition to this, taking steps towards energy efficiency and presenting these efforts to global community and demanding technological and financial supports will have its place as another important strategy.

9.2. Adaptation to Climate Change

It is not possible to struggle against climate change without stopping and slowing down the greenhouse gas emissions (and of course by preserving and cultivating the carbon swallows such as Rain Forests), however, the global heating is as 1°C limit and even if the emissions are cut down by now, the greenhouse gas ppm value in the atmosphere will continue to increase for some time. This strongly demonstrates the necessity to take committed and strong steps towards living together with climate change and adapting to it.

From the point of Climate Justice, adaptation to climate change is very important in this aspect, because as it was demonstrate in the whole study that you have in hand, climate change increases by replicating the existing injustices. For that reason, poor and the deprived ones become poorer and more victimized.

Starting from Small Island States who face with the danger of loosing their lands or the danger of sea water invading their water resources, namely the risk of existing, of life and death, rapid steps need to be taken for the adaptation of the most victimized ones to climate change.

Among these are the establishment of **water, sewage system, electric and communication infrastructures** that are resistance against climate change. It is an absolute necessity to calculate the risks related to climate change in every region in the best manner, evacuate the risk areas, increasing the protection and resistance of the risky residential areas, and make a comprehensive and realistic disaster crisis planning. These disasters plans should be prepared as a priority taking into account the most risky and fragile sections of the society, namely the women, disabled, elderly and children. Establishing the disaster warning systems, evacuation plans, post-disaster assistance, planning the measures to be

taken against contagious diseases and for hygiene are highly important.

One of the most important areas in terms of adaptation is to inform and support the farmers, who are producing on agricultural lands, on climate change. There are lots of areas of work such as training the farmers, who experience the climate change in the most severe way and for that reason haven the highest level of awareness, on adaptation to climate change, determining the species and agricultural plants resistant against climate change, developing the resistant local seeds and encouraging their sewing and planting, early warning systems for extreme climate events such as frost, flood, high heat waves, and informing on the issue of agricultural chemicals and fertilization. These adaptation works are important in terms of protecting the farmer populations who are at the lower socio-economic segments among the society against climate change in a just manner, and also from the point of view of food safety of the urban poor who will be hit by big yield losses and price increases to be experienced in the agricultural commodities.

9.3. Contributing in Climate Justice with Comprehensive Development

Struggling against and adaptation to climate change is among the must actions against Climate Justice. However, it is highly important that all these plans should be carried out for a sustainable development policy that is comprehensive and has a social state point of view. Comprehensive development policies do not only take the GDP into account, they also deal with how the national income is produced and shares, such as GINI index or Gross Happiness Index (EKOIQ, 2012).

The 2018 Global Climate and Economy Committee report of **New Climate Economy**, which is established in 2013, involves numerous key solution recommendations (The New Climate Economy, 2019). According to the report, low carbon production models enable us to earn around 26 trillion USD by the year 2030 in the long run and provide us with numerous new employment opportunities.

The most fundamental recommendations for a low carbon and fair development policy could be summarized as follows (Lutken et al., 2011).

Progressive taxation: This tax policy which is based on collecting less tax from those earning less and more from those earning more, has been implementing in many social states particularly in the North European countries, creating a significant source in order to be used for general public benefit.

A strong, just and climate sensitive education policy: Education systems based on material opportunities reproduce the inequalities based on class, race and gender. Here children of the poor group are also poor. The equality of opportunities is taken from the hands of people at the very beginning through education. However, a comprehensive education reform contributes in raising generations who are conscious about struggling against climate change and adaptation, as well as a more just socio-economic structure. Climate change should be widely added to the education curricula starting from the kindergarten level. It is very important to create special research funds on technologic developments that are effective in struggling against climate change.

A strong and comprehensive health policy: A free and accessible, widespread health policy is a basis for a comprehensive economy. Lack of easy access to health services decreases the period of quality life in particular among lower socio-economic segments, weakening the mutual social dependence required for climate change. However, generations who are healthy in physical and mental terms, have high social

awareness could struggle with a long range and dangerous problem such as climate change.

Just Transition: Just Transition, which is described in the most general meaning as "a unionist approach towards climate struggle" is basically an approach that is defended by the trade unions, and should be considered as an important contribution for a comprehensive economy. Just Transition, which is unanimously adopted by International Trade Unions Confederation (ITUC) in its congress in 2010, concentrates on the idea that environmental and social policies should not be contradictory to one another, but on the contrary strengthen each other. The fact that Just Transition concentrates not on protecting climate with growth and development, but on social justice, strengthens this idea. In this scope, focus is put on sharing the negative impacts that will arise as a result of climate protection policies by all (EKOIQ, 2016).

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ANNEX 1: BALI PRINCIPLES OF CLIMATE JUSTICE

29 August 2002

Translated from English by: Yıldız Gülce Demirer

Preamble

Whereas climate change is a scientific reality whose effects are already being felt around the world;

Whereas if consumption of fossil fuels, deforestation and other ecological devastation continues at current rates, it is certain that climate change will result in increased temperatures, sea level rise, changes in agricultural patterns, increased frequency and magnitude of "natural" disasters such as floods, droughts, loss of biodiversity, intense storms and epidemics; whereas communities and the environment feel the impacts of the fossil fuel economy at every stage of its life cycle, from exploration to production to refining to distribution to consumption to disposal of waste, climate change and its associated impacts are a global manifestation of this local chain of impacts Whereas fossil fuel production and consumption helps drive corporate-led globalization, climate change is being caused primarily by industrialized nations and transnational corporations.

Whereas the multilateral development banks, transnational corporations and Northern governments, particularly the United States, have compromised the democratic nature of the United Nations as it attempts to address the problem

Whereas the perpetration of climate change violates the Universal Declaration on Human Rights, and the United Nations Convention on Genocide;

Whereas the impacts of climate change are disproportionately felt by small island states, women, youth, coastal peoples, local communities, indigenous peoples, fisherfolk, poor people and the elderly;

Whereas local communities, affected people and indigenous peoples have been kept out of the global processes to address climate change;

Whereas market-based mechanisms and technological "fixes" currently being promoted by transnational corporations are false solutions and are exacerbating the problem; Whereas unsustainable production and consumption practices are at the root of this and other global environmental problems;

Whereas this unsustainable consumption exists primarily in the North, but also among elites within the South;

Whereas the impacts will be most devastating to the vast majority of the people in the South, as well as the "South" within the North;

Whereas the impacts of climate change threaten food sovereignty and the security of livelihoods of natural resource-based local economies;

Whereas the impacts of climate change threaten the health of communities around the world-especially those who are vulnerable and marginalized, in particular children and elderly people;

Whereas combating climate change must entail profound shifts from unsustainable production, consumption and lifestyles, with industrialized countries taking the lead;

We, representatives of people's movements together with activist organizations working for social and environmental justice resolve to begin to build an international movement of all peoples for Climate Justice based on the following core principles:

1. Affirming the sacredness of Mother Earth, ecological unity and the interdependence of all species, Climate Justice insists that communities

have the right to be free from climate change, its related impacts and other forms of ecological destruction.

2. Climate Justice affirms the need to reduce with an aim to eliminate the production of greenhouse gases and associated local pollutants
3. Climate Justice affirms the rights of indigenous peoples and affected communities to represent and speak for themselves
4. Climate Justice affirms that governments are responsible for addressing climate change in a manner that is both democratically accountable to their people and in accordance with the principle of common but differentiated responsibilities
5. Climate Justice demands that communities, particularly affected communities play a leading role in national and international processes to address climate change
6. Climate Justice opposes the role of transnational corporations in shaping unsustainable production and consumption patterns and lifestyles, as well as their role in unduly influencing national and international decision-making.
7. Climate Justice calls for the recognition of a principle of ecological debt that industrialized governments and transnational corporations owe the rest of the world as a result of their appropriation of the planet's capacity to absorb greenhouse gases.
8. Affirming the principle of ecological debt, Climate Justice demands that fossil fuel and extractive industries be held strictly liable for all past and current life-cycle impacts relating to the production of greenhouse gases and associated local pollutants
9. Affirming the principle of Ecological debt, Climate Justice protects the rights of victims of climate change and associated injustices to receive full compensation, restoration, and reparation for loss of land, livelihood and other damages.
10. Climate Justice calls for a moratorium on all new fossil fuel exploration and exploitation; a moratorium on the construction of new nuclear power plants; the phase out of the use of nuclear power worldwide; and a moratorium on the construction of large hydro schemes.
11. Climate Justice calls for clean, renewable, locally controlled and low-impact energy resources in the interest of a sustainable planet for all living things.
12. Climate Justice affirms the right of all people, including the poor, women, rural and indigenous peoples, to have access to affordable and sustainable energy.
13. Climate Justice affirms that any market-based or technological solution to climate change, such as carbon-trading and carbon sequestration, should be subject to principles of democratic accountability, ecological sustainability and social justice.
14. Climate Justice affirms the right of all workers employed in extractive, fossil fuel and other greenhouse-gas producing industries to a safe and healthy work environment without being forced to choose between an unsafe livelihood based on unsustainable production and unemployment.
15. Climate Justice affirms the need for solutions to climate change that do not externalize costs to the environment and communities, and are in line with the principles of a just transition
16. Climate Justice is committed to preventing the extinction of cultures and biodiversity due to climate change and its associated impacts.
17. Climate Justice affirms the need for socio-economic models that safeguard the fundamental rights to clean air, land, water, food and healthy ecosystems.
18. Climate Justice affirms the rights of communities dependent on natural resources for their livelihood and cultures to own and manage the same in a sustainable manner, and is opposed to the commodification of nature and its resources.

19. Climate Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias
20. Climate Justice recognizes the right to self-determination of Indigenous Peoples, and their right to control their lands, including sub-surface land, territories and resources and the right to the protection against any action or conduct that may result in the destruction or degradation of their territories and cultural way of life.
21. Climate Justice affirms the right of indigenous peoples and local communities to participate effectively at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation, the strict enforcement of principles of prior informed consent, and the right to say "No."
22. Climate Justice affirms the need for solutions that address women's rights.
23. Climate Justice affirms the right of youth as equal partners in the movement to address climate change and its associated impacts.
24. Climate Justice opposes military action, occupation, repression and exploitation of lands, water, oceans, peoples and cultures, and other life forms, especially as it relates to the fossil fuel industry's role in this respect.
25. Climate Justice calls for the education of present and future generations, emphasizes climate, energy, social and environmental issues, while basing itself on real-life experiences and an appreciation of diverse cultural perspectives
26. Climate Justice requires that we, as individuals and communities, make personal and consumer choices to consume as little of Mother Earth's resources, conserve our need for energy. And also we make the conscious decision to challenge and reprioritize our lifestyles, re-thinking our ethics with relation to the environment and the Mother Earth; while utilizing clean, renewable, low-impact energy; and ensuring the health of the natural world for present and future generations
27. Climate Justice affirms the rights of unborn generations to natural resources, a stable climate and a healthy planet.

Note: *Adopted using the "Environmental Justice Principles" developed at the 1991 People of Color Environmental Justice Leadership Summit, Washington, DC, as a blueprint.*

Endorsed By

CorpWatch, US
Friends of the Earth International
Greenpeace International
groundwork, South Africa
Indigenous Environmental Network, North America
Indigenous Information Network, Kenya
National Alliance of People's Movements, India
National Fishworkers Forum, India
OilWatch Africa
OilWatch International
Southwest Network for Environmental and Economic Justice, US
Third World Network, Malaysia
World Rainforest Movement, Uruguay.

ANNEX 2: CLIMATE CHANGE CASES

Introduction

Looking at the discussions of recent years in the global community, it is observed that a climate revolution is taking place. According to the alarming reports prepared by the Intergovernmental Panel on Climate Change (IPCC) of the UN , the issue of climate change has moved to the top on the public agenda, with the hottest summers until now and icebergs and glaciers melting before our eyes. As it is known, since the climate change is not restricted to the borders of the countries, it has a complex structure and for that reason real and effective solutions can only be accomplished through international cooperation and efforts. A positive result can only be reached if the governments, business world and the consumers accept their responsibilities and contribute to the solutions related to climate change. If we want to overcome the climate change, everyone should fulfill their responsibility and no means should be disregarded. An important question in this context is whether there are any legal means that can help us stop the climate change. Legal actions against those who cause the climate change can be a key for revealing the solutions and also the "victims" of climate change can be awarded with compensations coming from countries that have high greenhouse gas emissions. For example, people in Bangladesh or Pacific Islands are the ones, who suffer the most from the effects of climate change despite the fact that they did not cause it or have very low contribution in it (Amsterdam International Law Clinic, Faure and Nolkaemper, 2007: 1)

Our study is about the disputes regarding environmental protection, as a realm where the individuals and nongovernmental organizations can best express their objections and claims in relation with the protection of the environment and nature both in our Country and worldwide, and the legal struggles related therewith. And the "Climate Struggle" leads this struggle. As the effects of climate change on earth increase, climate struggle shows itself much more and tries to have its voice heard through various means. The fact that the effects of results of this struggle are multifaceted as they are related to many sectors and fields, such as health, agriculture, energy, transportation and economy make it even more important and, on the other hand, causes its effects to be long termed. When we examine the climate change cases filed in the world, we see that generally there are two types of cases. The first type is made up of the cases filed against the governments, generally aimed at inquiring the policies of governments in relation to climate change. The other type consists of the cases filed for a single project based on the problem of climate change. In fact, it is apparent that the impacts of such type of cases will be less. Because, it is not possible in many legal systems refer the first type cases to judicial authorities and demand the courts to hear such cases.

Climate change cases have been attracting more attention recently in the international works. It is necessary to benefit from international law as well as economy in addition to national law in the discussions regarding responsibilities for climate change.

In the last decade, there has been an increase in the number and level of importance of national and international legal regulations against climate change. As these regulations introduce new obligations and create new duties, cases have started to be filed in an attempt to question validity or special implementations thereof. Besides, there are cases which aim at making the lawmakers and policymakers to be more determined in their approaches towards climate change and to complement what they lack, as well as cases which aim at filling out the gaps left by inactivity in relation to legal and regulatory rules. These cases are being discussed in the judgments in many countries and are connected with some new principles. However, it is not possible to file any cases at the administrative jurisdiction so as to urge the lawmakers and policymakers to take positive action in

the field of climate change within the legal system of our country. Within the framework of all these remarks, it should be noted that climate change cases – and in particular the liability cases – are not the cure-all that will solve all the important problems, which the world faces as a result of global heating.

Despite the fact that there are many disputes and judgments in our country in relation to protection of nature and environment, there is no dispute directly in the field of climate change. For issues which are under the responsibility of the government in relation to climate change, if the government fails to fulfill these obligations, is it possible to force the government to fulfill its obligations with judicial decisions or to file any case on this issue? In order to respond to all these questions, first the cases filed in different countries on this issue were examined and afterwards the conditions of filing these cases were researched within the administrative judiciary system of our country.

I. Oslo Principles on Global Climate Change Obligations

In March 2015, law experts from all around the world came together in order to discuss the leg al obligations of the countries related to climate change and came up with the Oslo Principles[5]. In the preamble of Oslo Principles, it is stated that it is necessary to define the necessity to act in relation to climate change, to indicate the necessity of not exceeding the existing temperature increase of 2°C as per the scientific evidences and to clarify the uncertainties in relation to government obligations related to climate change.

A group of experts from the fields of international law, human rights law, environmental law and other legal branches participated in the establishment of the principles and these experts comprise the members of numerous national and international courts, universities and organizations around the world. These principles, which aim at determining the scope of legal obligations related to climate change, signify (Ovacık, 2017: 13):

1. The obligations of the governments and the entrepreneurs to defend and protect the climate of the world and thus its biosphere, and
2. The basic tools required for fulfilling these obligations.

II. An Overview of Climate Change Cases in the World

In some countries of the world, courts rule on an increasing number of disputes related to actions or lack of actions related to mitigation of climate change and adaptation by the governments. The general characteristics of these decisions are explained below:

1- What makes climate change cases particularly important at the moment is that they explain the environmental, diplomatic and political conditions (UNEP, 2017: 4).

- Effects such as heat waves and destructive coast storms have been increasing in frequency and severity as a result of human emissions.
- Costs are important for the governments, private sector and communities organized for coping with these effects.
- National and international policymakers have struggled to develop important tools for handling both the reasons that underlie climate change, as well as its effects. The mitigation and adaptation policies of climate change are determined quite slowly. These policies have set targets, which are based on

[5] See https://globaljustice.yale.edu/oslo-principles-global-climate-change-obligations

political applicability rather than a consensus on what is required to stop the climate change at an acceptable level.

- National and international policymakers have managed to create certain legal frameworks for climate action. Many countries have laws or policies that address various aspects of the climate problem. Paris Agreement determined a list of national commitments aiming for the target of preventing average global warming exceeding 1.5°C to 2°C. The petitioners have started to use these regulations in the discussions on the adequacy or inadequacy of the efforts of national governments for protecting the individual rights against climate change and its effects.

2- With a climate change case, it can be possible to ensure discussing conspicuous trends (UNEP, 2017: 4) (ibid).

- Citizens and civil society organizations try to hold their governments responsible for the commitments related to climate.
- In many cases, objections raised for the purpose of struggling against government actions or lack of actions refer to the constitutional and legal provisions which are not specific to climate change. In such cases, references to international climate agreements that include scientific targets in addition to political targets frequently support this claim.
- In many cases, difficulties towards a project or a policy determine the connections between resource extraction and climate related effects in the form of emissions arising from the burning of fossil fuels extracted and also the distortions in flexibility and adjustable capacity. These challenges make it necessary to make these connections legally meaningful or to take them into account, or to have an alternative approach to natural resource management.
- Upon the scientific understanding of the relationship between emissions and climate change (cause and effect relationship) which the policymakers accept to be true in general terms (except some striking exceptions), in many cases, it is tried to create responsibility on organizations which produce emissions with full knowledge of their effect on the global climate.
- Technical understanding of climate change and the future temperature and weather conditions improve the quality of relevant estimations. Petitioners that accept that adaptation efforts cannot keep at pace with these developments have asserted claims in relation to imposing the responsibility to relevant parties in cases where the failures in adaptation ended up with foreseeable and material losses.
- The petitioners assert objections for climate action relying on the public trust doctrine which determines the government responsibility for the future generations within the integrity of trust resources of a country[6]. Such claims also bring together the questions related to the fundamental rights of individuals and intergenerational equality as well as the concerns on the balance of

[6]Public Trust Doctrine, which is one of the foundation stones of modern environmental law, is about ownership, protection and use of nasic natural and cultural resources. Public Trust Doctrine holds that the state protects certain natural resources in trust and on behalf of of all the citizens due to their specific characteristics and central importance. Traditionally, the natural resources are subject to either the sovereignty of a state or the so-called global commons. Wherethe resources are held by a state, the essence of the Public Trust Doctrine is a duty of trust for the state or state authority, as the trustee, to manage the "environmental capital" of the people . Such resources must be kept in trust by the state for the benefit of and use by the community in general. The scope of people includes the current and future generations. The state must not loose and transfer its trust characteristic, unless the public benefit to be assessed weighs more heavily than the loss of public use or the "social wealth" derived therefrom.

power between the executive, judicial and legislative bodies or the functions of governments.

- So far, most of the climate change cases now were heard at the courts of developed countries on the northern hemisphere and of Australia and New Zealand. Cases and courts in the Global South have newly learned to use and implement the developing climate change case theories.

III. Three Legal Elements Discussed in Climate Change Cases

1- Justiciability: Whether a case is admissible or not– in other words, whether a court has the authority to hear and settle the claims demanded or not – the jurisdiction of the court. Whereas traditional practices change, courts can only handle the dispute in cases where there is a causal link as claimed between the damage and the action (or inaction) that is being complained. In climate change cases, this situation sometimes creates an important obstacle for the petitioners. In relation to the separation of powers, in particular in cases, where a court is demanded to hear the dispute in order to assess inaction by a public institution, the courts must be able to decide which authority is not exercised or must be able to order the institution to allow the court to guide them in reviewing their approach.

2-Sources of Climate Liability:

Climate change cases can apply various legal norms, including international law, constitutional provisions, and legal or administrative regulations. In some cases, the petitioners can refer to one or a combination of these as the legal basis for their demands. In cases, where a legal provision stipulates commitments to reduce the climate change and if this situation authorizes the citizens to file a case on grounds of non-compliance, it is quite easy to fulfill the duty of enforcing the law with the facts claimed. However, in cases, where the petitioners demand implementation of a legal authority which does not foresee climate change clearly, the court has a very hard mandate. Because, the judicial authorities act more carefully with the concern that they will face the claim of putting themselves in place of the legislative power in their decisions.

3. The legal means that ensure justice (solution):

Courts can accept only the legal means that the laws permit. If the solution sought for is a more efficient climate action in the name of a public authority, the courts should determine a basis for asking this institution for compliance or for indicating exactly in what manner the institution should change its approach.

In 2010's, the number, content and importance of the laws that regulate these issues have increased as a result of national and international efforts towards climate change (Somanathan et al., 2014: 1049). As these laws granted new rights and created new tasks, new cases followed them which tried to question their compliance or special implementation. Hence cases were filed against lawmakers and policymakers aiming to make them more committed and whole in their approaches related to climate change. Besides, cases have also been filed that aim at filling out the gaps left by legal and regulatory inaction.

III. Importance of Climate Change Cases

The way of filing cases at the courts has not been seen as more important than it is today in terms of forcing the policymakers and market participants to develop and implement effective tools for mitigating of and adaptation to the effects of climate change. It does not seem possible to trust non-climate policy initiatives in order to prevent climate imbalance and technological developments. According to this, laws and policies related to climate are a necessary element of any rational action plan. Paris Agreement considers the governments, which have adopted laws

related to climate, as an important legal power for forcing the implementation of these laws. Up until the ratification of Paris Agreement, there was no international tool that was directly related to the whole issue of coordination of international actions related to greenhouse gas emissions. Constituents in countries other than the European Union (EU) cannot point out an authority beyond respective constitutions, common laws or statutes (or ratification of international human rights conventions) of the countries in order to locate the climate action into an important framework in legal and practical terms within the country. Paris Agreement makes it possible for the voters to express their concerns with a sharper and stronger way in relation with the gaps between the existing policies and the policies needed to reach the mitigation and adaptation objectives. In particular, in countries which ratified the Convention, the voters can assert that the easy explanations of their governments related to rights and targets are hard to be politically supported. Cases filed in countries like Pakistan, where development is prioritized, and in countries like Netherlands, Sweden and Switzerland, where the governments handle the issue of climate change actively, reveal that this situation needs to be used for the purposes of concretizing the case in the court. In this sense, the case option is used for testing whether certain actions or inactions are in compliance with these agreements or not.

Paris Agreement inspires the question as to whether it has changed the role that the cases can play or not. In general, law concretizes numerous agreements among the members of the society and between them and their governments. The case also aims at expressing how the commitments given for defending certain rights can be turned into action despite the changes in the direction of political winds. Under its own terms, Paris Agreement may not be referred to as mandatory in any case filed before a court or may not impose practicable limits on the national emissions of the member countries. However, the cases may ensure that the governments place their actions and efforts within the context of an international climate change policy. Locating the activities within this framework on a national or regional level facilitates characterizing the efforts towards political commitments specified as well as the environmental needs. At the end of the day, although Paris Agreement does not assign a carbon budget for every country, it presents a basis for deriving this budget from national commitments. Besides, this situation also clearly demonstrates that policies were not adopted which lead to clear increases in emissions.

IV. Condition of Climate Change Cases

Within this framework, it will be beneficial to briefly mention the status of the current climate change cases including the condition of climate change cases, their categorization and the recently arising tendencies. Within the framework of obligations in the laws related to efforts for adaptation to climate change and mitigating the effects of climate change and climate change science, as well as those in the administrative regulations that bring the problem onto the agenda, cases which put these forth these before administrative and other inspection bodies are considered as “climate change cases” (Wilensky, 2015; Markell & Ruhl, 2012). Such situations are generally defined with such key words as climate change, global heating, global change, greenhouse gas and rising sea levels. However, the existence of one or more keywords is not a necessary condition for definition. Moreover, the existence of the keywords is not determinative either. Cases which only temporarily refer to climate change, its reasons or its effects do not necessarily, directly or significantly address the laws, policies or the actions that involve facilitation of reducing the effects of climate change or adaptation thereto (UNEP, 2017: 10).

1. Climate Change Cases Filed Worldwide

Climate change cases were filed in 25 countries as of March 2017. 654 cases were filed in the USA alone and over 230 were filed in all the other countries (UNEP, 2017: 10-11).

Cases filed outside the USA:

- highest number of cases after USA is in Australia, with 80 disputes;
- 49 cases in the UK,
- 40 cases in EU Court of Justice,
- 16 cases in New Zealand,
- 13 cases in Spain,
- 13 cases in Canada,
- 4 cases in France,
- 3 cases in Germany,
- 2 cases in Pakistan, India and Ukraine,
- 1 case in each of Austria, Belgium, Columbia, Czech Republic, Ireland, Micronesia, Netherlands, Nigeria, Norway, Philippines, South Africa, Sweden, Switzerland.

Recently there has been an increase in the number of countries where climate change cases were filed. There were only 12 countries, where a decision was made before 2014, including the USA. (Wilensky, 2015 151-152). However, it is also true that no case was filed in relation to climate change in many countries. Apart from the important exceptions,[7] governments are almost always at the position of a respondent in the climate change cases (UNEP, 2017: 13).

2. Trends in Climate Change Cases

Recent court decisions demonstrate various results of climate change cases in relation to their purposes.

Five tendencies are observed in these cases. These are;

- Keeping the governments loyal to legislative and policy commitments
- Linking the effects of the merits of the applications to climate change and flexibility;
- Determining that certain emissions are the primary reason for certain negative effects of climate change
- Making determinations in relation to accountability for failures (or efforts) towards adaptation to climate change
- Applying the Public Trust Doctrine to climate change.[8]

The Public Trust Doctrine relies basically on the principle that it would be completely unfair to subject certain resources such as air, seas, waters and forests, to private ownership.

3. Legal Problems in Climate Change Cases

Global climate change cases bring to the agenda some common problems that exist in many judicial systems. As the first problem, when the courts come across with justiciable demands, the petitioners and attorneys can encounter with certain problems such as the stages and separation of the principle of authority, and they can have a wide source including the international law, constitutional law, common law (Anglo Saxon legal system) and national policies which they are required to implement. Finally, courts which have a valid legal basis for the claim of right and rule that the laws have been violated, are required to handle the issue of precautionary measures. For that reason, it is beneficial to explain the paths of emergence of these problems in different stages of cases related to climate change.

[7] Most of the exceptions are the USA cases filed against companies in the fossil fuel sector.
[8] For public trust doctrine see "Amsterdam International Law Clinic, Faure and Nolkaemper, 2007: 1".

a) Justiciability (Capacity to Litigate)

Justiciability refers, in general, to the ability of a person to litigate before a judicial authority when a violation of right occurs or is possible to arise. The term in question implies access to the proper mechanisms for protecting the rights granted. If a court has the authority to rule on an issue and also to hear the dispute, it is considered that the case can be filed before such court (UNEP, 2017: 27).

- First, whether the court is authorized to make a legal decision on the case (depends on particular authorization granted to the court in the constitution).
- Second, the question of whether the court is the right court with the jurisdiction to hear the dispute and make a decision.

The theory of justiciability depends on the jurisdiction. According to the Supreme Court of the United States, the dispute on justiciability "should be concrete and certain, and touch on the legal relationship of parties that have negative legal interests." It should be a real and important dispute that involves a final provision and a special solution.

Although the definite lines of the principle of justiciability are different, there are two elements that are common in many judicial systems. The first is that the petitioner should have "standing" in order to litigate. As it is indicated below in detail, the criteria foreseen are closely related to a real "case and controversy" and "manageable standards" principle in order to manage the case decision. The second is that the judicial decision of the court should not violate the principle of separation or balance of the powers (UNEP, 2017: 28).

b) Standing *(Locus Standi)*

The legal definition of the "Standing" or the right to litigate differs among the countries and this can be more or less clear or restrictive depending on the country and the legal system, in which it is being carried out. Basically this concept refers to the criteria that one should fulfill in order to become a party to legal processes. These criteria ensure the parties to have sufficient interests from the consequences of cases and also judicial decisions can be taken on claims asserted by parties. For example, in some jurisdictions, the petitioners are required to demonstrate that they have incurred a damage caused by or will be damaged by the behavior of the respondent that is claimed to be in violation of law, or that the court has the capability to provide a solution that can remedy this damage or alleviate it in some other way. The criteria for standing can constitute an obstacle in climate change cases. For example, it can be hard to establish an adequate causal link between the actions or inactions of a petitioner which are claimed to be illegal, and the effects of climate change (UNEP, 2017: 28). This appears to be a special problem before us in the judicial systems that require the petitioners to "incur a certain damage" to have the "standing". However, some judicial systems permit the individuals and groups to litigate relying on the general losses of people, facilitating the petitioners to follow up the claim related to climate. The problem of the standing has a great importance in climate change cases in the USA (UNEP, 2017: 28). In Massachusetts v., various states, cities and civil society organizations focusing on environment have filed a case against the federal government on grounds of its decision not to regulate the greenhouse gas emissions from new motor vehicles pursuant to the Clean Air Act. USA Supreme Court concluded that the petitioner states have the standing within the framework of their rights and responsibilities against the state due to their special status as judiciary-sovereign states in the federal

system and the possible losses of soil on the coast.[9] As opposed to this, in the Comer v. Murphy Oil USA case in the USA, the Court of Appeals ruled that the petitioner land owners who suffered loss from Katrina Hurricane did not have the standing to litigate against fossil fuel and chemistry companies for the claims that they were in collusion for engaging in a prohibited action. Because, it was considered that imposing the damages to these companies was not just.[10] In particular the court ruled that the causal link between the greenhouse gas emissions produced as a result of the activities of these companies and the damages caused by Katrina Hurricane, was very weak.

The struggle in terms of the standing is not specific to the USA. In the Urgenda Case, which will be explained in detail below, the Hague District Court of the Netherlands rules that Urgenda had the standing on its own behalf due to a Netherlands Law that permitted the civil society organizations to apply to a court in order to protect general interests or common interests within the framework of other interests. However, due to "partially practical reasons" 886 individual petitioners, who were included in the case, were not permitted to litigate with separate standing from Urgenda.[11]

In the Australian Dual Gas Pty Ltd v. Environmental Protection Authority case, the Administrative Court ruled that the petitioners, who claimed that a new electric plant will emit greenhouse gas and cause climate change and objected to the approvals issued to the plant, can litigate pursuant to the Environmental Protection Law.[12] Land and Environment Court of New South Wales also made a similar decision and ruled that the petitioner can not only file a case based on the claimed "up to date or emotional relationship" but also on a legally acceptable "special interest". [13] The problem of the standing to litigate on the issue of climate change was not found to be very important by courts in the developing countries. For example, in Leghari/Pakistan, the Pakistan Supreme Court indicated that the petition relates to a citizen, who wants to exercise fundamental rights; however, the issue of the standing was not discussed in any other way.[14]

c) Principle of Separation or Balance of Powers

The principle of separation or balance of powers means that the legislative, executive and judicial powers shall not exceed the authority granted to them by the constitution or other laws and that they shall not let another power to interfere in their own jurisdiction. The fundamental question here is whether the courts are the proper authorities to solve the problems related to equality, rights and obligations that are connected to climate change or not. The principle of separation of powers has been significantly effective in the climate change cases of the USA. The standing, as discussed above, reflects the purpose of limiting the exercise of judicial power instead of legislative and executive powers. However, the principle of separation of powers can also be in other forms.

In Connecticut/AEP, the judge of a federal court in New York concluded that the climate change is "clearly a political problem" and "a matter of legislative supremacy", and that political question doctrine prevented the court from hearing this case. The United States Court of Appeals for the Second Circuit reversed this aspect of the decision and concluded that the regulation of emissions that caused the climate change was not naturally a political problem and that the court had the direct authority to hear this case against the sources of greenhouse gas emissions. US Supreme Court finally rejected to hear the basic demands in the case for

[9] Massachusetts v.U.S. Environmental Protection Agency, 549 U.S. at 526.
[10] Comer v. Murphy Oil USA, 585 F.3d 855, 860 (5th Cir. 2009).
[11] Urgenda case, paras. 1-408, 1-409.
[12] Dual Gas Pty Ltd. v. Environment Protection Authority [2012] VCAT 308.
[13] [2011] NSWLEC 217, paras. 101-102.
[14] Leghari v. Pakistan, (2015) W.P. No. 25501/2015 (Supplemental Decision) at 3.

different reasons, although they were put forth, keeping the political power concerns separate. US Supreme Court concluded that, by passing the Federal Clean Air Act and by authorizing the US Environmental Protection Agency to address the issue of climate change, the power of Congress (being the legislative body) to bring such issues onto the agenda and to solve them was replaced by the judicial power. The issue of the principle of separation of powers has also been addressed by the Hague District Court in Urgenda case.

The attorney to the government (respondent party) expressed that the remedy sought by the petitioners (a court order requiring the state to limit greenhouse emissions) should be left to democratically elected leaders and that the principle of separation of powers will be violated if this issue is left to the judicial authorities. The Court ruled that, in Netherlands law, the judiciary should evaluate the actions of the political organs when these relate to the rights of the citizens even if the court decision has political consequences. The court explained that Urgenda required judicial intervention with the claim of "legal protection of the rights in principle". This aspect of Urgenda decision was not surprising. It should be indicated in general that the trial of controversies related to constitutional or human rights is among the authorities of the judicial body. In fact, there are other climate change cases involving protection of constitutional and human rights that have not been the subject of any dispute when they are included within the jurisdiction of the judiciary body, without any discussion on the principles of separation of powers in relation to disputes related to rights. Among these cases are the Ashgar Leghari v. Federation of Pakistan and others case, and Gbemre v. Shell Petroleum Development Company of Nigeria cases (UNEP, 2017: 30).

V. Position of Climate Change Cases in Turkish Law

1- Evaluation from the Point of Justiciability (Ability to Litigate)

Since climate change cases will be evaluated within the framework of the obligations of states on this issue, the cases can be filed only as cancellation case before administrative judiciary or in the form of full judgment case. In other words, there is a need to bring "administrative cases" before "administrative judiciary bodies" to resolve the "administrative controversies". In Turkish Law, the judicial supervision of the administration relates to whether the processes of the administration are being carried out accurately and within due procedure, and this supervision is carried out by the way of cancellation cases. By means of cancellation cases, the judiciary can ensure that the administration acts within the legal framework and cancel its process if limits are exceeded. In other words, the type of case, which ensures that the administration (state) acts within legal limits, is the cancellation case.

Administrative judiciary is a judicial order which has unique adjudication procedures and rules outside the judiciary in order to perform the judicial inspection of the administration. Administrative cases are the cases checking the discretion of the administration in terms of compliance with laws and also checking whether the public services are fulfilled in accordance with law and service requirements or not.

Under Article 125 titled "legal recourse" of 1982 Constitution, it was foreseen that the legal recourse was file to any type of actions and processes of the administration and it was ruled that the administration was "liable to compensate the damage arising from its own actions and processes". The principle of "state of law" specified as one of the pillars of the state in Article 2 of the Constitution underlies this rule. According to this principle, the

Administration is required to act in accordance with legal rules in its procedures and actions. Within this framework, in addition to cancelling an administrative process which is in violation of law, the administrative judiciary can also resolve the disputes on the claims of fulfilling a right, which is violated in the field of administrative law, or remedying a damage incurred. As specified under paragraph 1/(b) of Article 2 of Administrative Adjudication Procedure Law No. 2577, "those whose personal rights are directly violated due to the actions and processes of the administration" can file full remedy actions. In full remedy actions, those whose rights are violated due to such reasons as the actions, processes and negligence etc. of the administration can request at the administrative judiciary bodies to remedy the unjust treatment they suffer by filing a case against the administration. The sanction of legal responsibility is to correct the financial balance which is distorted due to administrative activities and in general terms, the full judicial cases are the cases for claiming damages filed against the state or another administrative legal body by those whose rights are damaged as a result of administrative activity. The person who suffers the damage can file full adjudication case pursuant to Article 12 of Law on Administrative Adjudication Procedure against the person who incurs the damage. According to Article 12: "*Whereas the relevant persons can file full adjudication case or cancellation and full adjudication cases together directly before the Council of State and administrative and tax courts as a result of an administrative process that violates their rights, they may also first file a cancellation case and upon ruling being made on such case, they may also file full adjudication case within the term of suing from the date of enforcement for the damages that arise due to the enforcement of a process or receipt of any decision to be made if legal recourses are applied.*"

Within this scope, it is necessary to determine the duties of the administration (public institutions) related to climate change as a priority and to see whether they duly fulfill these duties. Legislation related to climate change[15] brings various obligations to the Ministry of Environment and Urbanisation of the Republic of Turkey was well as public and natural persons and legal persons. The duty of inspecting whether these obligations are fulfilled belongs to the Administration. Cases to be filed in case the administration does not fulfill this duty in a good manner, or is delayed in fulfilling or fails to fulfill the same at all, can be directed to administrative judiciary bodies. In this framework, in order to rule for the responsibility of the administration on climate change, the link of causality between a damage that arises as a result of performing a public service and the actions of the administration, should be analyzed in a different way. Even if the Administration does not directly perform a damaging action, it will be responsible for not performing the duty of inspection and control for taking relevant measures, as it does not fulfill its duties and responsibilities arising from the laws. Cases related to environmental pollution, though not related directly with climate change, can be shown as an example of this. There are a series of cases filed in different periods due to Ergene River pollution. As the paddy yields planted by the petitioners got dried, they brought up a claim against the Administration (Republic of Turkey, Ministry of Environment and Urbanisation) with the claim of collecting the damages (a total of 22.315.930.000 TL) claiming that the damage caused by irrigation with the polluted water of Ergene River was caused by the failure of the Administration to fulfill its tasks and obligations arising from the Constitution and laws.

Decisions made by emphasizing the responsibility of the administration in relation to environmental problems have a precedent nature. The

[15] In addition to international regulations, the regulations in the internal law are as follows: Regulation on Following Up of Greenhouse Gas Emissions, the Regulation on Substances Depleting the Ozone Layer, Regulation on Fluorinated Greenhouse Gases

Administrative Court, which ruled that the compensation by the Administration of the damage incurred by the petitioner was a necessity of being a social state of law and principles of equity, and the Council of State which ratified this decision, indicated that the administration had the basic obligations of monitoring and inspecting any type of activity which has negative effects on the environment overall the country, determine the regions and sectors in the country where there is pollution, monitor these and engage in activities for the solution of these problems, and to carry out inspections in order to ensure that the wastes and pollutants which distort the ecologic balance and remain in soil and water are disposed of so as not to damage the environment (Alica, 2011). The same obligation of inspection is also applicable for the Ministry (Administration) which has the authority and duty in relation to climate change.

2-Analysis on the Standing

Who can have the standing in the climate change cases, where the legal recourse can be applied through a cancellation case? Under paragraph (a) of First Clause of Article 2 of Law on Administrative Adjudication Procedure No. 2577, it is stated that cancellation cases can be filed by those, whose interest are breached, for the cancellation of administrative processes on grounds of being illegal from the point of authority, form, reason, subject and purpose, and it was foreseen under paragraph 3/c of Article 14, which regulates the initial subjects of examination that the petition would first be examined in terms of the capacity and under paragraph 2/b of Article 15 that the case can be rejected of any illegality is found in this respect.

In general, the condition of capacity, which is necessary for a court to hear a cancellation case in our administrative judicial system, is divided into two, objective capacity and subjective capacity. Objective capacity means the capacity to litigate and follow up the case filed, and to become a party of the case. Article 31 of Law on Administrative Judiciary Procedure refers to the Civil Procedures Law on this issue and the condition of capacity in civil adjudication was also sought in the administrative judiciary. Article 50 of the Law Courts Code indicates that "One, who has the capacity to benefit from civil rights, also has the capacity to become a party in a case"; and Article 51 states that "the capacity to litigate shall be determined according to the capacity of exercising civil rights". In other words, the objective capacity to litigate shall be determined according to the provisions of Turkish Civil Code related to capacity to act and defend rights. The subjective condition for capacity is the violation of interests, and this interest should exist at the moment of filing the case and during its continuity. As a conclusion, in order to file a case for cancellation, not the condition of violation of a right, but the violation of an interest which is a rule of capacity specific to administrative adjudication, is deemed to be sufficient. It is a necessity that this interest should be a legitimate, current and personal interest established between the process which is the subject of the case, and the petitioner. Administrative judicial bodies determine the existence and limits of a relationship of interest according to the nature of the dispute. A legitimate interest is an interest which arises from a legal condition, is not in violation of law and ethics, and in order words which can be legally asserted. The characteristic of the interest being current means that it is an interest that has occurred and exists when the case is filed and throughout its continuity. Interest which will definitely occur in the coming future (contingent interest) is also considered as current interest. The fact that the interest is personal means that the administrative process directly or indirectly affects the interest of the relevant person. The determination of personal interest has become more important on such issues as protecting the environmental, historical and cultural assets, zoning practices, namely those which are closely related to the public benefit (Alica, 2018).

Within the framework of the foregoing remarks, it will be possible to determine who can file "climate change" cases in Turkey as well as the standing.

3- Principle of Separation or Balance of Powers

The principle task of the legislative organ is to perform the legislative function, and it fulfills this function by means of "legislative processes". Although it is not quite possible for the judiciary body to intervene in the processes in the legislative function, it is possible that it may engage in processes that can intervene in the executive function. Under paragraph 4 of Article 125 of the Constitution, it is regulated that: "*The judiciary power is limited to the inspection of legality of administrative actions and processes and may not in any way be enforced in the form of legitimacy inspection. No judicial decision can be made which can restrict the executive function to be fulfilled in accordance with the form and principles specified under the laws, and can change the nature of the action and process or to abolish the discretionary authority*." Besides, the executive organ has processes other than the duties of the administrative judiciary with names such as "the function of governing" "political function" "political affairs" "government's discretion" "government's actions"; and it is acknowledged that benefiting from the judicial immunity of the governance in relation to processes in this field will not be in violation of the principles of state of law (Giritli et al, 2011: 143-145; Kaplan, 2016: 47-48; Ulusoy, 2019: 658-660). It can be considered that procedures related to climate change are among the processes to be decided by the government and shall not be subject to judicial inspection. On this matter, it is especially possible to face the problem as to whether a case can be filed before the administrative judiciary against the provisions that imply obligation and responsibility as indicated in documents such as action plans, strategies, guidelines and reports related to climate change.

4- Executive Processes (Definitive Processes that need to be executed)

In addition to the problem of the scope of supervision authority of the judiciary within the framework of principle of separation of powers, the issue of whether any type of process, though being an administrative process, should be subject to judiciary inspection can also come to agenda. It should be first emphasized that a case can be filed only for "executive" processes before the administrative judiciary. Which processes have "executive" nature? Without any further process being necessary on the third persons, processes wherein the public power is enforced so as to lead to various legal consequences directly are characterized as executive (Erkut, 1990: 119). The executive nature of the administrative process is regulated as "process which is definite and needs to be executed" under Article 14/3.c of Law on Administrative Judiciary Procedure (IYUK) No. 2577. In order for an administrative process to be a subject to a cancellation case, it is apparent that this process should be "a process which should be carried out" as specified in the law, namely be "*effective*" and "*executive*". In a decision of the Council of State, the "*precondition*" of the cancellation case was that the administration process should be final and executable pursuant to Article 2/1 of IYUK, and it rejected the claim to cancel the relevant provision of "*Principles to be Taken Into Account in the Implementation of Law No. 2559*", which is an annex of the relevant Prime Ministry Circular related to the implementation of Law No. 2559, for the reason that the regulation does not have any further meaning than indicating the opinion of the Prime Ministry about the issue and that it did not have a final character that should be necessarily applied.[16]

[16] Decision of Council of State 5th Office dated 16.12.1987 No. E. 1987/275, K. 1987/1789.

Within this framework, preparatory processes such as processes that arise in various forms such as researches, examinations, recommendations, inspections and reports, minutes, proposals and opinions prior to an administrative process (there are research and analysis reports related to climate change), do not directly constitute the subject of the cancellation case. The Council of State ruled that the administrative processes should have the characteristics of being final and executable in order to be the subject of administrative processes, due to the justification that "the decision of the Competition Board on 'starting an investigation' was characterized as a preparatory process, that it did not have any legal impact on the relevant parties, that it cannot be a subject of the cancellation case, and that the essence of the case filed cannot be examined"[17] Within the scope of these remarks, action and strategy plans which bring general principles and rules on climate change in the form of investigation/ research, which provide recommendations and proposals cannot be the subject of the cancellation case due to not having any legal impact on their own on the relevant parties. For that reason, these written texts should be put into execution with legal regulations (directives, circulars, communiqués etc.) that have "executive" character in order to be implemented.

VI. Sources and Obligations on Legal Rights

After the determination that an issue can is justiciable and that a court has jurisdiction to hear the dispute, it is necessary to examine the case in terms of merits. As the climate change cases expanded throughout the world, attorneys and judges have dealt with numerous legal theories arising from various legal rights and sources of their obligations.

[17] Decision of Council of State 13th Office dated 16.03.2007 No. E. 2005/6715, K. 2007/1416.


ATE JUSTICE
There is no planet
OUR EXISTENCE OR EXPECT OUR RESISTANCE
THIS GOVERNME IS
BEE KIND
HE EARTH ISN'T GOING TO

1.International Law

a) Human Rights

In principle, the fundamental international human rights conventions that are known do not grant an individual right for a clean environment or a stable climate. However, it has been known for long that insufficient environmental conditions can undermine effective use of other mentioned rights such as life, health, water and food rights. In accordance with this definition, the right to a clean environment has been regulated in international human rights conventions, non-binding legal texts, regional human rights conventions and national constitutions (UN, 2009). The relationship between human rights and climate change has recently drawn attention of various institutions since recent times (UNEP, 2015). Relationship between climate change and human rights has been started to be discussed in the cases first.

In December 2005, The Chair of the Inuit Circumpolar Conference submitted a petition to the Inter-American Commission on Human Rights, asking for assistance on human rights violations arising from the effects of global heating and climate change. The petition claimed that USA, the largest greenhouse gas emitter by far, violates the human rights of Inuits by not undertaking sufficient greenhouse controls (Watt-Cloutier, 2005). Although the commission has not made a decision yet, the petition managed to draw attention to severe effects of global warming on the Inuits and start more discussion on the human rights effects of climate change (Osofsky, 2007). In another decision that was made in the same year but is less known, Federal Court of Nigeria indicated in the Gbemre v. Shell Petroleum Development Company of Nigeria that the large scaled flames due to the gas production activities in the Niger Delta carried out by Shell violated the human rights for a clean and healthy environment that is under production. Besides, it has ruled that human rights have been violated for a clean and healthy environment which is under protection pursuant to Constitution of Nigeria and the African Charter on Human and People's Rights.[18] The contribution of greenhouse gases to global climate change was among the matters pointed out to by the court.

More recently, international human rights law has been an element in both climate change issue and the climate change case. The petitioners in Urgenda indicated that the Netherlands government acted in violation of its commitment for greenhouse gas emissions, and in addition to other issues, they claimed that they violated the human rights protected in the international laws. The Hague District Court did not accept this argument; but referred to international human rights law in its decision related to the violation of the obligation of due care of the government.

The Lahore High Court has also adopted a similar decision in the Leghari v. Federation of Pakistan case. Petitioners in similar cases filed in Norway, Belgium and Switzerland also mentioned international human rights and obligations (UNEP, 2017: 32).

b) Refugee Law

It is claimed that climate change will drive millions of people from their homes in the coming years. According to the current estimations, by the year 2050, the number of "climate refugees" and "environmental immigrants" will be around 25 million to 1 billion people and if the greenhouse gas emissions are not significantly mitigated, this number can increase even further. However, there is no international agreement on the rights of people displaced due to climate change, or obligations of the countries about the same.

[18] *Gbemre v. Shell,* FHC/B/CS/53/05.

A few exemplary decisions from the New Zealand demonstrate how the courts can approach to these cases. In Ioane Teitiota v. the Chief Executive of the Ministry of Business, Innovation and Employment, an objection was filed before the New Zealand courts on grounds of not giving a refugee status based on the change of ocean levels and environmental distortions as part of effect of climate change on Kiribati.[19] The Supreme Court concluded that the applicant is not entitled to the status of refugee within the scope of international human rights law, which also includes the 1951 UN Convention Relating to the Status of Refugees, due to displacements arising out of climate change. However, the Court indicated that the decision did not exclude the possibility that "the person can apply judicial procedure under the Refugee Convention due to environmental distortions arising from climate change or other natural disasters.[20] Similarly, in New Zealand courts, another case was filed wherein a Tuvaluan family, who claimed that they can be under the risk of being exposed to the negative effects of climate change if they are deported to Tuvalu, applied for appeal after their residential visas were rejected. Pursuant to the new Immigration Act 2009, New Zealand Immigration and Protection Tribunal determined that the family "constituted one of the exceptional conditions of humanitarian aid, and that, this situation forced deportation of the appellant from New Zealand in an unjust and excessively hard way.[21]

c) Right to a Clean or Healthy Environment

The states around the world have provided their citizens with a constitutional guarantee for a clean and healthy environment. According to a research that was conducted in 2012, there are minimum 92 countries that provide this right with a constitutional status and the constitutions of total 177 countries acknowledge the rights through approval of the climate change status under environmental legislation, court decisions or an international agreement (Boyd, 2012). Courts all over the world have started to discuss the effects of this right at the age of climate change. A court in India- New Delhi demanded constitutional protection for the environment and asked from the officials in Himachal Pradesh to take a few precautions for protection against environmental damages made possible and aggravated by the climate change.[22] By their decision dated 8 February 2016, No. C-035/16, Columbia's Constitutional Court struck down the provisions of laws in violation of the constitution as they threatened the high-altitude ecosystems called Páramos, which are known not only to provide water but also to capture carbon dioxide.[23] Greenpeace Nordic Association and Nature and Youth filed a case against the Norway Ministry of Petroleum and Energy based on the decision of the European Union that the Constitution of Norway was violated by the oil and natural gas licenses issued by Ministry of Petroleum and Energy for extraction of oil from the sea on the areas in Barents Sea.

Individual applications filed with the claim of violation of "environmental right" before the Turkish Constitutional Court.

By this legal remedy, which was introduced into our legislation by the Constitutional change made in year 2010,[24] people can apply individually to the Constitutional court if any of the fundamental rights

[19] A small Republic comprising small islands at the middle of the Pacific Ocean. It is an independent country since 1979.
[20] [2015] NZSC 107, para. 13.
[21] [2014] NZIPT 501370-371.
[22] State of Himachal Pradesh, M.A. Nos. 389/2014, 1145/2015, 1250/2015, 324/2016 & 325/2016 (Nat'l Green Tribunal).
[23] Constitutional Court, Feb. 8, 2016, Decision C-035/16.

[24] Individual application has become a part of our legislation with the amendments to Articles 148 and 149 of the 1982 Constitution introduced by the Law No. 5982, which was adopted by a referendum that took place in 2010, and with the provisions of the provisional Article 18 of the Constitution. They regulate the provisions ensuring more concrete application of the provisions of Constitution referred to especially in Articles 45 to 51 of the Law Regarding Foundation and Trial Procedures of the Constitutional Court dated 30.03.2011 and numbered 6216. The Statute of Constitutional Court published in the Official Gazette dated 12.07.2012 and numbered 28351 includes quite detailed provisions as to how the individual application is processed.

and freedoms, which are guaranteed under the Constitution and within the scope of European Human Rights Convention, is violated. The purpose in regulating the remedy of individual application in our legislation is to abolish the violations of fundamental rights within the national legal system.

Individual application can be filed by anyone covered by the scope of EHRC or any of its protocols, to which Turkey is a party, and who claims that his/her fundamental rights and freedoms under the Constitution have been violated by the public power, victimizing him/ her. In other words, applications which involve a claim for violation of rights outside the common protection area of the Convention and the Constitution, do not fall within the scope of the jurisdiction of the Court and therefore there is no possibility to trial the same (Ekinci and Saglam, 2015: 5). Within this framework, whereas there are not many decisions on individual application that are filed with the claim of violation of "environmental rights" and "right to live", it is considered that the applications in question will gradually increase.

In a decision made by the Constitutional Court on grounds of violation of environmental law, evaluations were made based on the concept of "environmental right", which was described by itself earlier with an already established association with the right to life. According to the decision: "*Environmental right becomes much more important today as it is of interest for the current generation, and the generations to come even more, since it is closely related both to the right to life and also to right to health. Due to the fact that, once the environment becomes polluted and distorted, it is very difficult, burdensome and at times impossible to reverse it, it is necessary to undertake the investments and activities for development and economic development so as not to destroy the nature and pollute the environment, and to place an emphasis on measures that prevent pollution and distortion rather than cleaning the polluted environment or restoring the distorted environment (AYM, E.2013/89, K.2014/116, 3/7/2014; E.2006/99, K.2009/9,15/1/2009). The right to live in a healthy and balanced environment is not among the rights that can be waived with the pretext that the rule to be introduced can lead to economic, bureaucratic and actual obligations and the production activities can be affected (AYM, E.2011/110, K.2012/79, 24/5/2012).*"

The Constitutional Court made the following evaluations in summary:

"*In case the interventions, which come onto the agenda within the context of environmental issues, directly affect the right to protect and develop the tangible and intangible assets defined in Article 17 of the Constitution, it is possible to carry out investigation by establishing connection with the legal interests within the scope of such Article. It is necessary to determine whether the public authorities take relevant steps in order to guarantee effective protection of this right, and whether a just balance has been established between the conflicting interests within the scope of the environmental effect in question.*"

2. Legal authority and national policy

In some examples, laws or national policies have regulated climate change obligations for private and public actors and the disputes have arisen afterwards in relation to the legality, applicability or fulfillment of these obligations. In the European Union, development of EU Commission Trade System pursuant to Kyoto Protocol (ETS) caused certain cases before both the EU Courts and national courts. Most of the cases in the EU related to ETS are the challenges related to the plan and the regulations that followed. There are a few of cases that are filed against the Directive that created the program and challenge the applicability from the point of certain

sectors or countries. 25 When the legislation was adopted in 2008 in order to include air emissions in the EU to the Program, another case was launched by the aviation industry. 26 Many other cases were filed in the process and after the development of National Allocation Plans by the Member States (European Commission, 2017). For example, at least eleven cases arose in Spain with the Royal Decree that approves the National Allocation Plans in the period between 2005 and 2007 due to Spain's implementation of EU Emission Trade System.

Important cases were filed in the USA within the scope of Clean Air Act, National Environmental Policy Act and Endangered Species Act. The First Clean Air Act case resulted in the decision of the Supreme Court that the Clean Air Act is involved in the definition of "air pollutant" and that therefore EPA has the authority to regulate it and hence, it is under the obligation to determine whether the regulation is necessary to protect the health and wealth of public. Since the decision in question, there have been various cases related to the Clean Air Act regulations issued by EPA in connection with the control of greenhouse gas emissions, and those related failure of EPA to immediately enact regulations for certain sources of greenhouse gas.[27]

VII. An Important Decision in Relation with the Climate Justice, Urgenda Case and Its Consequences (Gosseries et al., 2019; Ovacık, 2017)

This group consisting law experts from all over the world prepared a detailed legal document relying on the best common interpretation of Oslo Principles, international law, human rights law, national environmental law and tort law, which set out the existing obligations in relation with climate. These documents can help the judges to make decision on whether certain governments comply with their legal obligations in relation to climate change. The principles can also serve for many other purposes. For example, they can point out to the comprehensive obligations of rich countries, and strengthen the negotiation position of poor countries. Within this scope, there are court decisions made by different countries, though not many in number, on the issue of "Environmental Justice". As it was specified above, according to the report of the UN published in 2017, there are 894 cases that refer to climate change in the world (UNEP, 2017: 11). The most famous and effective among these is the "Urgenda Climate Change Case", which constitutes a legal lesson in itself as a turning point with its content and consequences (Gosseries et al., 2019: 6). In 2015, Urgenda Foundation applied to the court in the name of 886 Netherlands citizens, and launched the climate case. The subject of the dispute was that the Government of Netherlands did not take adequate measures against climate change and it was inactive and idle. In October 2018, Special Report on 1.5°C Global Warming was published by IPCC (IPCC, t.y.) Within this framework, IPCC has shared a very comprehensive report resulting from a very important study that lasted for long years, which indicated why the global temperature increase should be limited to 1.5°C, with global community. After this, on 9 October 2018, a ruling was made in the Urgenda Foundation case by the Hague Court of Appeals in Netherlands.

[25] *Société Arcelor v. Premier Minister,* Case C-127/07, [2008] E.C.R. I-09895 (dismissing challenge of Directive 2003/87/EC under the principle of equality); *Arcelor SA v. Parliament,* Case T-16/04 [2010] E.C.R. II-00211,
(dismissing a challenge of Directive 2003/87/EC on the basis that is violated several principles of common law); *Poland v. Commission,* Case T-183/07, [2009] E.C.R. II-03395 (dismissing challenge of Directive 2003/87/EC).

[26] *Air Transp. Ass'n of Am. v. Secretary of State for Energy & Climate Change,* No. C-366/10, [2011] E.C.R. I-13755 (challenging U.S. airlines' inclusion in EU's Emission Trading Scheme).

[27] *Americans for Clean Energy v. EPA,* No. 16-1005 (D.C. Cir.); *Center for Biological Diversity v. EPA,* 722 F.3d 401 (D.C. Cir. 2013). Summaries and pleadings for each of these cases are available from the Sabin Center-Arnold & Porter Kaye Scholer U.S. Climate Change Litigation database: http://wordpress2.ei.columbia.edu/climate-change-litigation/

Some of the climate change relied on collective action, taking the Urgenda Case as an example (Belgium[28], Norway[29], Switzerland[30], Ireland[31], and European Union[32]). The method employed by the Hague District Court when addressing the case is important so that the cases in question will result in favor of the climate justice (Gosseries et al., 2019: 8).

Urgenda ("Urgent Agenda") is a platform of citizens with members from different segments of the society. The platform deals with developing the plans and measures in order to prevent climate change. According to its own statute, Urgenda, which has the purpose of encouraging and accelerating a process of transition to a more sustainable society starting from the Netherlands, is a foundation (Gosseries et al., 2019: 8). Departing from the fact that the environmental problems, which the Netherlands can face due to climate change, are not the responsibility of the Netherlands Government only and climate change can arise in the global context and as a result of emissions of many countries and private companies; the respondent party, namely the Netherlands Government, asserted that no legal causal link can be established between the inaction of the Netherlands government and the climate change. Urgenda is of the opinion that among the mitigation targets, at least those corresponding to the process up to 2020, are not sufficiently stable. Urgenda asked from the first level court, *inter alia*, to rule on the requirement to accomplish mitigating the cumulative greenhouse gas emission volume at a rate of 40% or at least 25% compared to 1990 as of the year 2020. According to Urgenda, the government does very few things to mitigate greenhouse gas emissions, however, the state should undertake its responsibilities. Urgenda believes that there is a severe danger; and that, unless there is a swift intervention, the world is heading to a state, in which the world will be largely inhabitable for a significant part of the world's population it will be difficult to make to world habitable again since the climate system is not sufficiently active. Within this framework, Urgenda tried to evidence its claim by referring to reliable publications, especially including IPCC AR4 and AR5, which are addressed comprehensively in the court decision. Urgenda expressed that this was a global problem, that the government can intervene in the emissions only within the borders of the Netherlands and the emissions of the Netherlands is lower in the light of absolute data and acknowledged that, considering the fact that the climate problem is a worldwide problem, the mitigation it has undertaken corresponds to a drop in the ocean on a global scale. However, according to the claim of Urgenda, Netherlands is a rich and developed country which has profited from the use of fossil energy sources since the Industrial Revolution and is still profiting. It is one of Annex I countries in terms of UN Convention on Climate Change. Similarly, Netherlands is one of the countries with the highest per capita greenhouse gas emission rates in the world – especially including the hazardous CO_2 that remains for long in the atmosphere – and signing and ratification of UN Convention on Climate Change by the Netherlands should not remain as a simple formality. The convention sets the condition that the developed countries should lead on a national scale as per the principle of equity. Aside from this, Urgenda points out that the reduction target of 30%, which was set by the Netherlands itself until year 2011 and was valid until the end of 2020, was taken as the starting point. This target was later reduced to 20% mitigation target only by the end of 2020– throughout the EU – which clearly arises from a strictly political decision-making process. However, the government cannot manage to demonstrate any scientific justification

[28] *VZW Klimaatzaak v. Kingdom of Belgium (2015),* see https://affaire-climat.be/

[29] *Greenpeace Nordic Ass'n and Nature and Youth v. Ministry of Petroleum and Energy (2016),* see https://www.savethearctic.org/en/peoplevsarcticoil/background-documents/

[30] *Verein KlimaSeniorinnen Schweiz v. Bundesrat (2016),* see https://ainees-climat.ch/

[31] *Friends of the Irish Environment CLG v. Fingal County Council (2017),* see https://www.climatecaseireland.ie/

[32] *Armonda Ferrao Carvalho and others v.The European Parliement, The Council (2018),* see https://peoplesclimatecase.caneurope.org/

(Climatology) for this reduction. Meanwhile, Paris Agreement was adopted and under this Agreement, the Netherlands has undertaken to reduce greenhouse gas emissions in order to remain below the global warming limit of 2°C. The Netherlands also declared its intention to aim for a 1.5°C global warming target and called for strengthening the reduction targets by 2020. However, the government cannot be relieved from its responsibility based on the argument that its own emissions are less compared to the absolute data.

The Hague District Court ruled that since the petitioners claimed for a ruling in the form of precautionary measure relying on the compensation claim as a result of damage, a weak connection of causality was sufficient and established between the rights violated and failure of the Netherlands government to act. In this ruling, the Netherlands court held that, based on scientific research, international law and the emission mitigation target between 25% and 40% determined by the Intergovernmental Panel on Climate Change, policies that target reduction below 25% in carbon emission level will constitute the violation of "duty of care" by the government (Gosseries et al., 2019: 8).

In its decision, the Netherlands Court ruled for inadequacy of a policy that has not yet become a law and that the decision does not impose anything on the lawmaker, but only points out to how a legal climate policy should be upon the demand of the petitioners. It has also indicated that this fact therefore strikes out the claim that this issue contradicts with the "principle of separation of powers".

Another point emphasized in the decision is that the desire of the Urgenda Foundation to represent the future generations is not legally acceptable and that is can only represent the existing persons.[33] The court has accepted that the fact that in case no measures are taken, the youngest individuals living today will face the negative effects of climate change throughout their lives constitutes the sufficient and required grounds for the case. (Gosseries et al., 2019: 8).

The decision in question is important in terms of employing human rights law in climate cases due to its assessment that failure to take adequate measures against climate change violates the "right to life" under Article 2 of European Convention on Human Rights and the "right to respect for private and family" under Article 8 thereof. Although Article 8 of European Convention on Human Rights is titled the right to respect for private and family life, it is the article to be relied upon for cases related to environmental right in individual applications since 1990. As the Hague District Court uses the article in question in the climate case, the scope of the Articles was expanded further and also, as opposed to European Court of Human Rights, it demonstrated that the provisions of European Convention onH uman Rights can be implemented in a case that deals with collective rights rather than individual rights. In this decision, the court relied on the justification that "Netherland Courts are bound by their own procedures, they are not bound by the procedure specified in the European Convention on Human Rights".[34]

As a conclusion, The Hague District Court ruled for a minimum mitigation of 25% by the end of 2020 as compared to 1990, and rejected all other claims of the petitioner (Urgenda). Urgenda did not refer the court decision to appeal court with respect to rejection of other claims and the claim for mitigation of more than 25%.

Once the decision was made, the government applied to the court of appeal. It was indicated that

[33] This opinion marginalizes the doctrine that develops the concept that the future generations – people are not yet born – can be legally represented originating from the Opposa case filed in the Philipinnes.

[34] See https://www.urgenda.nl/en/themas/climate-case/climate-case-explained/

the issues determined by the Hague District Court were not the subject of dispute among the parties, and the Court of Appeals ruled relying thereon. As indicated above, the case process relates to the claim of Urgenda to foresee reaching a more stable greenhouse emission mitigation target than the one foreseen in the state policy by the end of 2020.

Analysis for appeal started outlining general scope of the dispute and the events and continued with a short explanation based on the current status in the EU and Netherlands and a global level, as well as agreements, international conventions, policy recommendations, and the process of the Court up until the verbal defenses on 28 May 2018. (Gosseries et al., 2019: 13).

In the analysis for appeal, it is emphasized that since the beginning of the Industrial Revolution, humanity has been consuming energy and that this consumption was mainly performed in the form of burning the fossil fuels (Coal, oil, natural gas), and that there was a general consensus on the requirement that the global temperature should not exceed 2°C worldwide. Besides, it was emphasized that everyone overall the world accepted that something should be done for mitigating greenhouse gas and in particular CO_2 emissions and that this issue was urgent. Within this framework, it was indicated that the Government of Netherlands supported the target to mitigate radically and eventually end the CO_2 commissions, that the Council of Europe and the European Union resolved for mitigating the greenhouse emissions by 20% by 2020, 40% by 2030, and 80-95% by 2050 all compared to 1990, that for Netherlands, this corresponds to a mitigation target of minimum 16% for non-ETS (Emissions Trading System) sectors by 2020, and 21% mitigation target for ETS sector; that the government has announced minimum 49% national emission mitigation compared to 1990 by 2030 and the emissions in the Netherlands in 2017 has decreased by 13% compared to 1990 (Gosseries et al., 2019: 22).

In the appeal decisions, agreements, international conventions, policy recommendations and the real status are referred to in relation with climate change and what is to be done to combat its negative impacts on a global level was explained. Besides, climate conferences were mentioned chronologically and the emphasis was placed on important decisions made in these conferences. Moreover, within the context of this case, the importance of IPCC reports was emphasized and it was expressed that it was expected to have an emission mitigation of 26-27% compared to 1990 in 2020 for the EU.

The status of the Netherlands was explained in detail in the decision. According to this, the Netherlands started with a mitigation target of 30 % by 2020 as compared to 1990 as an Annex I country pursuant to UN Framework Convention on Climate Change until 2011. In a letter dated 12 October 2009, the Ministry of Housing, Spatial Planning and Environment informed the House of Representatives about the targets of Netherlands in the climate negotiations held in Copenhagen (COP 15). "The total emissions mitigation targets proposed by the developed parties up to now are inadequate in terms of realizing a 25% - 40% mitigation in 2020, which is required to progress safely in order to make the 2°C target reachable.

The mitigation target of the Netherlands after 2011 has been adjusted so as to comply with the 20% target overall EU for 2020 – which corresponds to minimum 16% mitigation for non-ETS sector and 21% mitigation for ETS sector as compared to 2005 – and with the minimum targets of 40% for 2030 and 80-95% for 2050. On 6 September 2013, the Energy Agreement for Sustainable Growth was concluded, which aimed at mitigating the energy consumption and increasing the share of renewable energy.

The Netherlands has higher per capita CO_2 compared to other industrialized countries. When it comes to emissions, the Netherlands currently ranks 34 among 208 countries. Only nine of 33 countries

that have higher emissions have a higher per capita emission and none of these is a European Union member. 85% of the total greenhouse gas emissions in the Netherlands are the CO_2 emissions arising from the energy sector to a large extent. CO_2 emissions have rarely fallen in the Netherlands since 1990 and have started to increase in particular in the past few of years. The reduction arises from the mitigation of emission of other greenhouse gases. In the period between 2008 and 2012, the biggest 15 EU Member States realized a mitigation of 11.8% and ensured overall reduction in the EU by 19.2%; while the Netherlands reduced CO_2 emissions by 6.4% during the same period. In addition, 30% - 50% of the mitigation in 2008-2012 period arises from crisis. If there was no economic crisis, the emissions in the period in question would largely be higher and the mitigation would be less.

The Petitioner (Urgenda) accepts the justifications specified in the court decision and shares the same idea. Taking into account the significant risks in relation to uncontrolled climate change, the duty of care of the government requires immediate measures. In particular, taking into account the "idleness" of the state, namely its failure to commit more emission reductions by the end of 2020, Urgenda is of the opinion that the Government has acted in violation of the law against it, that such an attitude violated proper social management and is in violation of the obligation of positive and negative care, which regulates the family life, covering also the right to protection against environmental effects as stipulated under Article 2 (right to live) and Article 8 of EHRC (with such substance and extent as the case in the present case).

The respondent government claimed in its defense that if the Netherlands takes a precaution that mitigates the greenhouse gas emissions that is included into the ETS system, this will constitute a "waterbed effect" and this will true because the emission ceiling created for ETS system is applied for the EU as a whole. Therefore, less emission in the Netherlands will file a place for more emission in some other place in the EU. Hence, the national measures towards mitigating the greenhouse gas emissions within the framework of ETS do not have any meaning. Like the Netherlands, other EU Countries are also separately obliged to mitigate their CO_2 emissions to the extent possible (Gosseries et al., 2019: 31). The government also pointed out the risk of "carbon leakage" which the government perceives as the risk that the companies shift their productions to other countries with less greenhouse has mitigation obligations (Gosseries et al., 2019: 31).

The government has done very few things to prevent dangerous climate change by the end of 2020 and does very little not to fall behind. Targets set for 2030 and afterwards do not demonstrate the reality that a dangerous situation is close which requires taking the measures by now. Within this framework, in addition to the risks, social costs are also in question. If it is late for the mitigation measures to be taken, the accessible carbon budget will disappear quicker, which consequently will require taking stricter measures at the next stage in order to reach to the desired mitigation level of 95% by the end of 2050. In conclusion, the Court ruled that, due to its violation of the duty of care under Articles 2 and 8 of EHRC, the government did not target a more stable reduction by the end of 2020 and acted in violation of law and that the government is required to reduce its emissions by minimum 25% by the end of 2020 (Gosseries et al., 2019: 36).

Evaluation of Urgenda Decision and Implications

- It is a decision that draws attention to the climate change and is a turning point on the issue of environmental justice.
- In the decision, emphasis is put on the existence of a relationship between human oriented greenhouse gas emissions that occur as a result of burning the fossil sources and global heating.
- In the decision, attention is drawn to the serious and dangerous situation that can be caused by

global warming in the future. First, it is emphasized that the earth has warmed up by 1.1°C since the pre-industrial periods. It is explained that the level of global warming was 0.4°C between 1850 and 1980, and for the period of less than 40 years afterwards, the earth warmed up by further 0.7°C and reached to the current level of 1.1°C. It is pointed out that, therefore, the global heating is expected to increase further since the full heating effect of the greenhouse gases would be apparent only after 30 or 40 years, that in case the Earth is heated up more than 2°C, resulting in the rising sea levels leading to more floods, heat pressure due to more intense and longer heat periods, respiratory track diseases in parallel with the worsening air quality, drought as a result of forest fires, increase of contagious diseases and severe floods due to increasing showers, and shortages of food and drinking water. It is stated that, for all these reasons, the ecosystems, flora and fauna will also be affected and loss in biodiversity will arise.

- The Netherlands Government could not provide answers with satisfactory justifications to all these claims explained above and even could not disprove the claim of Urgenda that an inadequate climate policy in the second half of this century will cause hundreds and thousands of victims even in the Western Europe alone.
- Policies targeting a reduction below 25% at the carbon emission level will constitute the violation of the "duty of care" by the government.
- In the decision, the existence of a weak causal link is acknowledged between the failure of the Netherlands government to fulfill this duty of care and the rights which are violated by their inaction.
- The decision also holds that a policy that has not yet translated into laws beyond the practice is inadequate.
- The decision rules as to how a legal climate policy should be.
- The Court decided that Urgenda Foundation's request to represent the future generations is not legally acceptable; and it can represent the current people only. The fact that, unless measures are taken, the youngest individuals living at present will face the negative effects of the climate change throughout their lives, is considered to constitute adequate grounds for the case.
- It was ruled in the decision that failure to take adequate measures against climate change violated the right to life and to respect for privacy – family life (Articles 2 and 8 of European Human Rights Convention) and provisions of European Human Rights Convention can be implemented in a case, which is related not to individual rights but to collective rights.

CONCLUSION

The remedies have arisen as an important aspect of the ongoing struggle to reduce the effects of climate change and to encourage the efforts for adaptation thereto. They are especially relevant for the petitioners, who directly address the issue of climate change and thus try to hold the governments and private actors responsible for taking into account the obligations of mitigation and adaptation. They also owe to the unifying role played by Paris Agreement, which places the national laws and policies into a global context and thus enabling interpretation of the commitments and actions of the governments as sufficient or insufficient in the cases. As the climate change cases expanded, they came to deal with the effects of the climate change on the ecosystems, the societies and the rights and interests of individuals; and the scope of activities ranging from coastal development to infrastructure planning and resource extraction, by following legal efforts of a long time in various forms. Moreover, an increasing list of legal problems was also faced, such as proving the causal link, which is necessary to create responsibility; and relevance of the public trust doctrine with the governments' reduction of effects of climate change and their approach to adaptation to these effects. In addition to becoming rapidly widespread, it is observed that climate change cases are increasing with more enthusiasm and influence. Cases in the world provide examples for the governments to take into account with respect to actions or inactions in relation with the weather condition and the changes in the rights on the coastal areas.

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