İnceleme Makalesi / *Review Article* **Doi: 10.48146/odusobiad.1207364**

Geliş Tarihi / *Received Date*
19.11.2022

Kabul Tarihi / *Accepted Date*
22.05.2023

The Coal Phase-Out Policy and the Just Transition in Coal-Dependent Settlements

Kömürden Çıkış Politikaları ve Kömüre Bağımlı Yerleşim Yerlerinde Adil Dönüşüm

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Öz

Bu makale, iklim değişikliği olgusuyla mücadele bağlamında beliren kömürden çıkış politikalarının toplumsal sonuçları ile kömüre bağımlı yerleşimlerde adil dönüşüm olasılığı üzerine bir tartışma sunmaktadır. İklim değişikliğinin yaygın olumsuz etkileri sonucunda tüm dünyada enerji üretim yöntemleri hızla değişmektedir. Bu durumun Türkiye'de de yansımaları olacağı aşikardır. Bu bağlamda araştırmanın temel amacı, ekonomik ve sosyal olarak kömüre bağımlı yerleşim yerlerinde yaşanacak olası kömürden çıkış deneyimleri için öne çıkan ve güncel bir yaklaşım olan adil dönüşümün incelenmesi ve tanıtılmasıdır. Makalenin ilk bölümlerinde iklim değişikliğine ve karbon yoğun sektörlere, kömür madenciliğinin enerji üretimindeki rolüne ve kömürün aşamalı olarak kullanımdan kaldırılması politikalarına genel bir bakış sunulmaktadır. Ardından, Türkiye'de kömürün enerji üretimindeki rolü ile ekonomik ve sosyal olarak kömüre bağımlı yerleşim yerleri hakkında genel bilgiler aktarılmaktadır. Adil dönüşüm yaklaşımı ve bu yaklaşımın amaçları ele alındıktan sonra sonuç bölümünde çeşitli önerilerde bulunulmuştur. Muhtemel kömürden çıkış süreci sonucunda kömüre bağımlı yerleşim yerlerinde yaşamını sürdürenler üzerindeki olumsuz etkilerin en aza indirilebilmesi için önlemler alınmasının ve adil dönüşüm yaklaşımının ilkeleri doğrultusunda planlamaların yapılmasının gerekliliği vurgulanmıştır.

Anahtar Kelimeler: İklim değişikliği, kömür madenciliği, kömürden çıkış, adil dönüşüm.

Abstract

This article presents a discussion of the social consequences of coal phase-out policies determined in the context of addressing climate change and the possibility of a just transition in coal-dependent settlements. Energy production methods are changing all over the world to tackle climate change. This situation will inevitably be reflected in Türkiye as well. In this regard, the main purpose of the research is to examine and introduce the just

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Bu makale araştırma ve yayın etiğine uygun hazırlanmış ve Dergimiz tarafından iThenticate intihal incelemesinden geçirilmiştir.

transition, which is a prominent and contemporary approach to possible coal phase-out experiences in settlements that are economically and socially dependent on coal. An overview of climate change and carbon-intensive sectors, coal mining's role in energy production, and coal phase-out policy objectives is presented in the first part of the article. Then, presented in the following is general information about the role of coal in energy production in Türkiye, as well as settlements that are economically and socially dependent on coal. After providing an overview of the just transition approach and its objectives, suggestions are made for Türkiye in the conclusion. Several measures can be taken to minimize the negative effects on groups involved in coal-dependent settlements and vulnerable groups as a result of possible transformation.

Keywords: *Climate change, coal mining, coal phase-out, just transition.*

Introduction

It is hard to imagine a more pervasive phenomenon than climate change. All humanity shares a common destiny under the sky, which belongs to all. Any point under the blue sky cannot be isolated from the atmosphere and the climatic conditions it creates. Considering this, climate change is a global issue impacting billions worldwide. A variety of adverse events threaten not only the present, but also the future, including extreme weather events and disasters they trigger, environmental degradation, air pollution, a decline in biodiversity, droughts, a reduction in food production, climate migrations, rising sea levels, and deaths caused by high temperatures. World Economic Forum's report "Global Risks, 2022" indicates that climate change is directly or indirectly related to the first five of the 10 risks that countries must address in the next 10 years (WEF, 2022). Among the challenges humanity will face in the coming years that need to be resolved, those on the axis of climate change are particularly prominent. The report cited above (WEF, 2022) identifies the global risks that are associated with the climate crisis as a failure of climate action, extreme weather events, biodiversity loss, access to natural resources crises, and human damage to the environment as the top risks among all risk factors. Scientists and policymakers seriously consider the observed and potential impacts of the climate crisis because of its capacity and global scope.

On Climate Change

Throughout history, the world's climate has changed, and it enters natural warming and cooling cycles periodically (Ersoy, 2009; Türkeş, 2008). The phenomenon of rising global average temperature is called global warming. Türkeş (2009: 27) defines climate change as statistically significant changes in the average state of the climate or its variability over tens or more years. It is important to note, however, that the primary difference between long-term historical changes (which we are experiencing today) and the rapid increases in the average temperature of the earth is indisputably caused by human activity (IPCC, 2014, 2018, 2021). As a result of the daily routines we follow, a variety of production and consumption patterns, such as accessing energy, food, sheltering, transportation, and heating produce considerable amounts of greenhouse gases. The accumulation of greenhouse gases in the atmosphere reduces the rate of long-wave radiation reflected after the sun's rays hit the earth and some of them are absorbed, and thus more heat is trapped in the atmosphere (Türkeş, 2008). The greenhouse effect is primarily caused by carbon dioxide (CO_2), but methane (CH_4) and nitrous oxide (N_2O) are also responsible. Global warming is primarily caused by carbon-based fossil fuels (such as coal, oil, and

natural gas), which have been consumed intensively since the industrial revolution. Even though they can be absorbed at certain rates in carbon sink areas like oceans and forests, carbon dioxide from burning fossil fuels remains in the atmosphere and causes global warming.

The United Nations established the Intergovernmental Panel on Climate Change (IPCC) in 1988 to scientifically scrutinize and combat climate change worldwide. In the first part of The Sixth Assessment Report (AR6-WGI), which is the most recent study published by the IPCC, it is stated that the greenhouse effect caused by human-induced gas emissions has resulted in an increase of approximately 1.1°C in global average temperature from the 1850s to the present. Climate change has a wide range of consequences. The frequency, duration, and severity of extreme weather events such as floods, overflows, storms, droughts, and notably high temperatures are on the rise. These events cause vast losses on a global scale every year. Environmental degradation is increasing, biodiversity is decreasing, and many species are facing extinction (IPCC, 2021). As a result of climate change caused by human activity, glaciers are melting, sea levels are rising, and oceans are becoming acidic (IPCC, 2018).

The Role of Coal Phase-Out to Tackle Climate Change

The Covid-19 pandemic caused global greenhouse gas emissions to decline by 5% in 2020. However, the number of tons per year increased dramatically in 2021 and reached 40.8 billion tons (IEA, 2022). Carbon dioxide (CO_2) emissions from energy production play a major role in this increase. The largest increase across sectors is in the electrical energy sector. Almost half (46%) of the big increase in electricity demand in 2021 was attributed to fossil fuel use, particularly coal. Over 40% of global CO_2 emissions in 2021 were attributed to coal consumption, merely (IEA, 2022).

In combating climate change caused by human activity, reducing carbon dioxide emissions has become the most prominent mitigation strategy. In this regard, numerous countries have committed to reducing the use of fossil fuels, especially coal, to combat climate change through the Paris Agreement in 2015. European countries are leading those who plan a coal phase-out within a given period.

The first to abandon coal-fired power plants were Belgium, which completed its process in 2016, and Sweden, which became coal-free in 2020. By the end of 2021, Portugal was the third country to stop using coal in energy production (EBC, 2022). On the other hand, many European countries have set a schedule to phase-out coal activities. Austria and France by 2023, the UK by 2024, the Republic of Ireland, Italy, and Hungary by 2025, Denmark and Greece by 2028, Finland and the Netherlands by 2029, Spain, Romania, and Slovakia by 2030, Czechia, Croatia, and Slovenia by 2033, and Germany by 2038 have committed to giving up coal in electricity generation (EBC 2022).

Other countries on every continent are also working towards a coal-free future. Twenty-three new countries committed to a coal phase-out within the specified periods during the 26th United Nations Climate Change Conference (COP26) in Glasgow, Scotland, in November 2021. These countries include South Korea, Indonesia, Vietnam, Poland, and Ukraine, which are among the top 20 countries that consume coal the most. As well as these large consumers, Egypt, Spain, Nepal, Singapore, and Chile have announced new commitments to phase-out coal (UNFCCC, 2021). Additionally, the fact that international financial institutions and banks do not provide funding for the establishment of new

thermal power plants makes the production of energy from coal a non-profitable investment. As a result, in the six years between the Paris Climate Agreement and the COP26 Summit, a 76% decrease was observed in the number of thermal power plants planned to be built worldwide. This infers that potential thermal power plant constructions would be canceled with a total capacity exceeding 1000 GW (UNFCCC, 2021).

The Place of Coal in the Energy Supply of Türkiye

Considering the current situation in Türkiye, fossil fuels play a significant role in electricity generation. According to the Turkish Electricity Transmission Corporation's (TEİAŞ) power plant report as of August 2022, 25% of installed power was generated by natural gas, 23% was generated by hydroelectric plants with dams, 10.9% was generated by wind, 8.6% was generated by solar, 10% was generated by imported coal, and 10% was generated by lignite (TEİAŞ, 2022a). Nevertheless, when it comes to the data on daily power generation in Türkiye, fossil fuels are clearly in the lead according to resources. As of August 2022, 35% of the electricity in Türkiye has been generated at a coal-fired power plant (21% imported coal, 13% lignite, and 1% hard coal) (TEİAŞ, 2022b). Coal is followed by natural gas with 28%. In total, coal, and natural gas account for approximately two-thirds (63%) of the whole electric energy produced. During the same period, solar energy consisted of 6.1% of electricity production, wind power produced 4.2%, and geothermal energy consisted of 3% (TEİAŞ, 2022b).

TURKSTAT data indicates that the total greenhouse gas emissions in 2020 were 523.9 million tons of carbon dioxide equivalent, an increase of 3.1% over the previous year (TÜİK, 2022). Carbon dioxide accounted for 79% of all greenhouse gas emissions. It is important to point out that 85.4% of Türkiye's carbon dioxide emissions are generated by the energy sector. When all greenhouse gases (carbon dioxide, methane, nitrous oxide, and fluorinated gases) emissions are evaluated together, the energy sector comes first with a share of 70%. The energy sector is followed by the agricultural sector (14%), the industrial sector (12.7%), and the waste sector (3.1%) (TÜİK, 2022). TURKSTAT estimates that the energy sector's emissions in 2020 increased by 163.3% since 1990, and by 0.6% from the previous year, and amounted to 367.6 million tons of carbon dioxide equivalent.

Türkiye’s Approach to the Climate Change

In October 2021, Türkiye ratified the Paris Agreement within the scope of combating climate change. As a consequence of this considerable step, the relevant ministry was converted into the Ministry of Environment, Urbanization, and Climate Change, and the Climate Change Directorate was established. A nationwide-ranged consultation meeting on climate change was convened in February 2022. As stated in this Council, studies conducted under the headings of adaptation to climate change, making projects to mitigate climate change effects on a local basis, national energy policy, micro-mobility in transportation, fair migration, industry, and technology would provide the main basis for the climate law, which is expected to be issued in the first half of 2023 (TCCSB, 2022).

In another notable development, the government announced the goal of achieving net zero emissions by 2053. Despite all these steps, the “nationally determined contribution” (NDC) submitted by Türkiye to

the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat still belongs to 2015 (UNFCCC, 2015). The nationally determined contributions are roadmaps that define mitigation and adaptation processes that countries commit to implementing to combat climate change. Countries submit their NDCs to the UNFCCC to declare how and to what extent they plan to mitigate their greenhouse gas emissions in the next five years. Although it is important to give verbally declared guarantees, only NDCs of countries are taken into account in the international arena. Towards Türkiye's net zero emission goal of 2053, the nationally determined contribution will play a vital role. The critical turning point in this course is the 2030 targets. The path to net zero emissions could be opened in the coming years if 35% of emissions are mitigated by 2030. As various non-governmental organizations performing within the scope of combating climate change announced in a joint declaration in 2022, to achieve 35% absolute mitigation, abandoning the use of coal in electricity generation until 2030, ascending the share of renewable energy in electricity generation to 75%, increasing the rate of all-electric vehicles to 20% in passenger vehicles and at least 10% in load-bearing vehicles, directly increasing the use of renewable energy in agriculture, service, and industry sectors and increasing energy efficiency, ending the using all types of fossil fuels in buildings and using electrical heating is recommended (2030 İklim Hedefi, 2022).

Türkiye presented a new nationally determined contribution at the 27th United Nations Climate Conference (COP27) on the 15th of November 2022. Türkiye has pledged a 41% reduction from the increase in carbon emissions for 2030, which is notably below the demands of civil society. Despite that, the Presidential Annual Program for 2022 states that the use of domestic coal will continue within the framework of national energy and mining policy (Strateji ve Bütçe Başkanlığı, 2022: 211). Thus, it can be interpreted that Türkiye has not clearly decided on its position regarding coal yet. On the other hand, concrete practices should be followed to combat climate change. Among these, abandoning fossil fuels, primarily coal, in electricity generation will make mitigating carbon emissions a reality. Phasing out of fossil fuels, however, could have radical effects on settlements that depend on carbon-based industries. The just transition approach aims to minimize these negative effects.

The Just Transition

Reducing carbon emissions is one of the most significant pillars of the fight against climate change. As emphasized in the introduction of the study, the energy sector, and more specifically the use of fossil fuels in electricity generation, constitutes a considerable part of global carbon emissions. Mitigation practices are the most efficient way to prevent human-induced climate change. In addition, phasing out carbon-based fuels such as oil and natural gas in producing electricity is one of the prominent mitigation activities. The most practical and efficient commitments of countries that pledged to reduce greenhouse gas emissions in their nationally determined contribution (NDC) are the closure of thermal power plants, which are among the main pollutants. At this point, it appears as a salient question mark how those who are employed in carbon-intensive sectors such as coal mining and thermal power plants could survive after the closure of the facilities. Just transition, a concept that has recently been discussed in the relevant literature, covers the answers to these considerations.

The just transition brings a broader perspective on green and circular worldview and goes beyond labor and employment policies. It should be noted that the energy sector is not the only focal point of the new transition. In fact, from a holistic perspective, it is aimed to present a new social organization and a set of principles that form its basis. On the other hand, only the application of new technological developments will not be sufficient and effective to combat climate change. It is thought that a social transformation is needed on a larger scale, starting with individual consumption patterns. There is a possibility that the principles put forward by the just transition approach can serve as a basis for new social forms to be constructed.

To elaborate, the just transition approach encompasses principles such as the promotion of clean, renewable energy sources that have become relatively accessible and efficient in line with technological progress. With the replacement of carbon-based energy production methods with renewable energy, those working in existing sectors are expected to be employed in new sectors. Creating decent work that leaves no one behind is essential in just transition (ILO, 2022; ITUC, 2009). This aim is also supported by the 8th goal (which is titled decent work and economic growth) of the Sustainable Development Goals (hereafter SDG) of the United Nations. Increasing the quality of the workforce is among the other elements that constitute just transition, and this target can be placed within the scope of the 4th SDG target, “quality education”. Supporting vulnerable social groups is another essential component of just transition (ILO, 2019) and this issue overlaps with the 10th SDG of the UN, "reducing inequalities". Public participation in the decisions to be taken in the region and enabling democratic decision-making in governance mechanisms are also strongly supported (ITUC, 2010). This is also covered by the United Nations' SDG 16 which is titled “peace, justice, and strong institutions”. A just transition is possible with economic support and the public authority should play a leading role. In this respect, new investments should also be supported (European Commission, 2020). The 8th SDG which is “decent work and economic growth” also overlaps with the just transition perspective.

The spread of environmentally friendly sectors will bring new employment areas. Among these, electricity generation from renewable energy takes the lead. Renewable energy and its sub-sectors would create significant employment capacity. Many new job opportunities will arise from the development, production, and operation of materials needed to generate, transfer, and maintain green energy. All kinds of electric vehicles and devices will increase energy efficiency, and their production and applications will also increase employment diversity (ILO, 2018).

Innovation is needed to reduce carbon emissions in the agriculture, tourism, industry, and transport sectors and transform them into greener forms. In addition, innovative practices would likely emerge in the livestock, fisheries, insurance, health, and infrastructure sectors within the scope of adaptation to climate change (ETUC, 2007). Environmentalist approaches could ensure the emergence and development of innovative employment opportunities. According to a report published by the ILO, 71 million jobs might be lost globally with the transition to a green economy; on the other hand, it is predicted that 78 million new jobs will be created (ILO, 2019b). It has been argued that while 29 million of these jobs will appear in the same or similar sectors, 49 million will be realized in newly established sectors. According to the projection of the International Renewable Energy Agency, it is claimed that 43

million new jobs will be created on a global scale by 2030 in the renewable energy sector and its sub-sectors (IRENA, 2021).

It is aimed to provide vocational training for up-to-date sectors in line with the needs that are currently emerging, thereby increasing the quality of the workforce (IRENA, 2021; OECD, 2017). Green economies will inevitably induce job losses in older carbon-based sectors. On the other hand, the creation of new environmentally friendly business opportunities could ensure employment security for those who worked in the liquidated sectors (ILO, 2019a). In this case, the development of professional skills would play a critical role (ILO, 2019b). For instance, a worker who has worked in a coal mine for years should have access to knowledge about solar panels. The importance of encouraging the development of environmentally friendly green technologies and revising existing education programs in line with current requirements is emphasized by the just transition approach (OECD, 2017). At this point, the continuity of the old rights should be taken into consideration and should not cause any loss in the transition to new employment areas (ETUC, 2007).

A crucial component of the creation of innovative low-carbon jobs is technological advancement. Supporting and promoting new technologies developed in line with current needs is an integral part of a just transition (European Commission, 2020). In this regard, it would be beneficial to provide the necessary financial support for the research and development to be implemented and to encourage these in both economic and legislative contexts.

The just transition highlights not only innovative technologies and related job opportunities but also the necessity of a new and egalitarian approach in the social context. It includes eliminating social inequalities and supporting particularly vulnerable social groups (ILO, 2019b; ITUC, 2010). Daily routines and behavioral patterns regarding production and consumption exacerbate the negative effects of climate change and deepen social inequality (ITUC, 2010). Vulnerable groups are severely affected by extreme weather events such as floods and storms besides the negative consequences of the rapid increase in energy and food prices. Thus, social inequalities become chronic, and the cycle of poverty continues. The just transition approach prioritizes the support of disadvantaged social groups such as women, the disabled, the elderly, minorities, and immigrants. This principle emphasizes the social benefit provision side of the transition, especially for the advantage of the aforementioned groups. For example, in requirements for newly emerging job opportunities, priority could be given to these vulnerable groups in new skill development activities or training. Thus, the possibility of eliminating poverty patterns, which are becoming permanent and difficult to break, from social life could be strengthened. In other words, just transition could have a functional role in fighting against social inequalities (Climate Justice Alliance, 2018).

Supporting democratic processes in the transition to an environmentally friendly social formation and prioritizing participation in decision-making mechanisms are among the main components of the just transition approach (Climate Justice Alliance, 2018; ILO, 2018). Taking pluralistic decisions in planning for the future will be effective in establishing sustainable development as well as preventing environmental degradation. While the just transition encourages governance, it also aims to make the social decision-making steps more transparent and participatory (ITUC, 2010). Thus, a common future

in which all social components take place would be achievable. It is emphasized that dialogue channels are essential to creating new opportunities in the social and economic context.

Finally, structuring ways to reach the necessary financing to enable all these innovations is a prominent part of the approach (ITUC, 2010; Shue, 2014). The state is expected to play a leading role in planning the cash transfers and recruitment processes to be allocated to those who might be affected by the transition.

Conclusion and Recommendations

It can be argued that the just transition approach outlined above enables an egalitarian transformation, especially in residential areas that are economically and socially dependent on coal. The settlements that have existed with coal, whose history and culture are blended with coal, and where carbon-based sectors are dominant, would be the most affected by the coal phase-out. Furthermore, in the axis of decarbonization policies, it is possible to assert that after a certain period, the coal phase-out processes will occur.

Achieving net zero emissions by 2053 has been set as a target in Türkiye's combat against climate change. However, the roadmap (nationally determined contribution, NDC) which shows how to reach this goal has not been officially announced yet. First, the new NDC of Türkiye should be stated and intentions related to coal mining and fossil-based power generation should be presented. If the 2053 net zero emissions target is realistic, it can be predicted that coal mining will shrink significantly, and coal will be abandoned entirely in electricity generation. Considering this, coal phase-out is likely to be adopted as a policy in the near future. In Türkiye, it is critical to make serious plans for a coal-free period in regions where coal mining and related sectors are the leading economic occupations. At this point, the just transition approach includes the most efficient policy proposals that can maximize the social benefit in the transition to the new era with the set of principles it has set forth.

Employment losses due to the coal phase-out process in areas that are economically and socially dependent on coal should be taken into account first. In this respect, it is necessary to provide decent job opportunities for everyone without leaving anyone behind. Significantly, all precautions are taken within a certain plan. Implementation of environmentally friendly innovative technologies will lead to increased employment potential. Investments in newly established sectors would be functional in employing the workforce to be transferred from carbon-based sectors. In this direction, qualifications required by up-to-date jobs could be increased through training to be given to employees. To eliminate social inequalities in settlements that will be affected by the transition, practices should be developed to support especially vulnerable groups. In other words, while developing social policies, disadvantaged groups such as women, the elderly, and the disabled, who are likely to be more severely affected by the transition, should not be ignored. It should be recognized that the new carbon-free era offers opportunities to establish social cohesion, and the active participation of residents should be essential in the construction and implementation of environmentally friendly policies. Open consultation and dialogue processes could contribute positively to improving the quality of governance in these regions.

In areas dependent on coal mining, mining activity gives the region an identity and a world of meaning to the residents. Changing the views of residents on coal mining is possible by convincing them that a just transition will be performed place which involves them. Residents should be shown through pilot implementations that non-coal alternatives could exist. There is a wide range of sectors that might be strengthened through vocational training programs and microcredits. In coal regions where fertile lands are accessible, schools providing agricultural education at both high school and college levels could be opened. Residents could also be encouraged to farm with incentives that enhance employment. In addition, regions with appropriate land structures and suitable geographical locations for solar power plants have great potential to generate carbon-free renewable energy. Climate change and environmental pollution awareness training, which are carried out together with just transition practices, could make an exceptional contribution to overcoming the prejudices regarding the coal phase-out process.

As the combat climate change and decarbonization policies continue to be implemented, the coal phase-out discussions will remain on the agenda. The closure of thermal power plants, which is expected to realize in the near future and would be covered legally by the nationally determined contribution (NDC) statement of Türkiye, would directly affect coal-dependent settlements. It would be utterly beneficial to conduct comprehensive studies to present the possible effects of the coal phase-out which would experience in settlements highly characterized by coal like Zonguldak, Çayırhan, Soma, Afşin-Elbistan, Kangal, Çan and Yatağan.

Moreover, the coal phase-out and a determined transition to a green economy will provide remarkable economic benefits in Türkiye and could escalate employment. According to a report by ILO (2022) exiting fossil fuels and investing in renewables could trigger economic growth, employment opportunities, and reduction of greenhouse gas (GHG) emissions. More specifically, adopting a green economy perspective could generate an additional 45 billion Turkish Lira (TRY) in annual GDP, create over 300,000 extra jobs by 2030, and lower CO2 emissions by 60,000 Mt CO2-eq (ILO, 2022, p. 37). Furthermore, the long-term effects of investing in renewables on employment and the economy are positive, mainly because of long-term structural changes in the energy and electricity industries. These changes increase the demand for goods and services from other industries in the Turkish economy to maintain these new green industries. Additionally, investment in renewable energy creates more jobs than fossil electricity due to the distributed nature of wind and solar energy compared to thermal power plants (ILO, 2022, p. 37). In this regard, accelerating the coal phase-out process of Türkiye, which has significant potential in terms of renewable energy sources, could bring notable economic and environmental outcomes.

Last but not least, according to the recently announced nationally determined contribution (NDC) statement, it is understood that Türkiye is not determined enough to exit from fossil fuels. Türkiye has declared that it will increase its emissions until 2038, claiming that it has a developing economy and that emissions will start to decrease tangibly after reaching that peak year (İklim Değişikliği Başkanlığı, 2022). Ensuring a just transition to a green economy should be a top priority in order to benefit from the remarkable results of reducing greenhouse gas emissions.

Yazar Katkı Oranları

Çalışmaya 1. Yazar: %50, 2. Yazar: %50, oranında katkı sağlamıştır.

Çıkar Çatışması Beyanı

"The Coal Phase-Out Policy and the Just Transition in Coal-Dependent Settlements" başlıklı makalemizin herhangi bir kurum, kuruluş, kişi ile mali çıkar çatışması yoktur. Yazarlar arasında da herhangi bir çıkar çatışması bulunmamaktadır.

Kaynakça

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Atıf / Citation: Üstün, A. & Cizreli, B. (2023). The coal phase-out policy and the just transition in coal-dependent settlements. ODÜSOBİAD, 13(3), 3561-3574, Doi: 10.48146/odusobiad.1207364

Genişletilmiş Türkçe Özet

İklim değişikliği, dünya çapında etkileri gözlenen küresel bir sorundur. Aşırı hava olayları ve bunların tetiklediği felaketler, çevresel bozulma, hava kirliliği, biyoçeşitlilikte azalma, kuraklık, gıda üretiminde azalma, iklim göçleri, yükselen deniz seviyeleri ve yüksek sıcaklıkların neden olduğu can kayıpları gibi çeşitli olumsuz olaylar sadece bugünü değil geleceği de tehdit etmektedir. Bu bağlamda bilim insanları ve politika yapıcılar, etki kapasitesi ve küresel kapsamı nedeniyle iklim krizinin gözlemlenen ve potansiyel etkilerini ciddiyetle değerlendirmektedirler.

İnsan faaliyetlerinin neden olduğu iklim değişikliğiyle mücadelede karbondioksit emisyonlarının azaltılması en önde gelen azaltım stratejisidir. Bu bağlamda, çok sayıda ülke 2015 yılındaki Paris Anlaşması ile iklim değişikliğiyle mücadelede başta kömür olmak üzere fosil yakıtların kullanımını azaltmayı taahhüt etmiştir. Belirli bir süre içerisinde kömür kullanımını aşamalı olarak azaltmayı planlayan ülkelerin başında Avrupa ülkeleri gelmektedir. Bu çerçeveden baktığımızda Türkiye'deki fosil yakıtlara bağımlılık durumunun net bir şekilde görünür olduğu alan, en yüksek seviyede sera gazı salımına neden olan enerji üretimi sektörüdür. Türkiye'de günlük elektrik üretimine ilişkin veriler dikkate alındığında, fosil yakıtların kaynaklara göre açık ara önde olduğu görülmektedir. Ağustos 2022 itibariyle Türkiye'de elektriğin %35'i kömürlü termik santrallerde üretilmektedir (%21 ithal kömür, %13 linyit ve %1 taş kömürü) (TEİAŞ, 2022b). Kömürü, %28 ile doğal gaz takip etmektedir. Toplamda kömür ve doğal gaz, üretilen tüm elektrik enerjisinin yaklaşık beşte üçünü (%63) oluşturmaktadır.

Öte yandan iklim değişikliğiyle mücadele sürecinde kimi önemli adımlar da atılmaktadır. Türkiye, Ekim 2021'de Paris Anlaşması'nı onaylamıştır. Devamında, ilgili bakanlığın ismi Çevre, Şehircilik ve İklim Değişikliği Bakanlığı'na dönüştürülmüştür ve İklim Değişikliği Başkanlığı kurulmuştur. Şubat 2022'de iklim değişikliği konusunda ülke çapında bir istişare toplantısı (İklim Şurası) düzenlenmiştir. Bu Şura'da iklim değişikliğine uyum, yerel bazda iklim değişikliği etkilerinin azaltılmasına yönelik projelerin yapılması, ulusal enerji politikası, ulaşımda mikro hareketlilik, adil göç, sanayi ve teknoloji başlıkları altında yürütülen çalışmaların, 2023 yılının ilk yarısına kadar çıkarılması beklenen iklim yasasına temel dayanak oluşturacağı belirtilmiştir (TCCSB, 2022).

İklim değişikliğiyle mücadele süreçlerinde göz önünde bulundurulması gereken önemli bir kavram, adil dönüşümdür. Adil dönüşüm yaklaşımı, yeşil ve döngüsel perspektiflere daha geniş bir bakış açısı getirmekle birlikte işgücü ve istihdam politikalarının ötesine geçmektedir. Bu çerçevede enerji sektöründe yenilenebilir kaynaklara geçişin, iklim değişikliğinin etkileriyle mücadelede tek odak noktası olmadığı unutulmamalıdır. Aslında bütüncül bir bakış açısıyla yeni bir toplumsal örgütlenme ve bunun temelini oluşturan bir dizi ilkenin ortaya koyulması hedeflenmektedir. Öte yandan bu kapsamda sadece yeni teknolojik gelişmelerin uygulanması yeterli ve etkili olamayacaktır. Bireysel tüketim kalıplarından başlayarak daha geniş ölçekte toplumsal bir dönüşüme ihtiyaç olduğu düşünülmektedir. Adil geçiş yaklaşımının ortaya koyduğu ilkelerin, inşa edilecek yeni toplumsal formlar için bir temel teşkil etme potansiyeli bulunmaktadır.

Adil geçiş yaklaşımının özellikle ekonomik ve sosyal olarak kömüre bağımlı yerleşim alanlarında eşitlikçi bir dönüşümü mümkün kıldığı söylenebilir. Kömürle var olmuş, tarihi ve kültürü kömürle harmanlanmış, karbona dayalı sektörlerin baskın olduğu yerleşimler, kömürden çıkıştan en çok etkilenecek yerler olacaktır. Ayrıca, karbonsuzlaştırma politikaları ekseninde, belli bir dönemden sonra kömürden çıkış süreçlerinin yaşanacağını söylemek mümkündür. Kömür madenciliğine bağımlı bölgelerde, madencilik faaliyeti bölgeye bir kimlik ve bölge sakinlerine bir anlam dünyası kazandırmaktadır. Bölge sakinlerinin kömür madenciliği hakkındaki görüşlerini değiştirmek, onları kendilerini de kapsayan adil bir dönüşümün gerçekleşeceğine ikna etmekle mümkündür. Pilot

uygulamalar yoluyla bölge sakinlerine kömür dışı alternatiflerin var olabileceği gösterilmelidir. Mesleki eğitim programları ve mikro krediler yoluyla güçlendirilebilecek çok çeşitli sektörler bulunmaktadır. Verimli toprakların erişilebilir olduğu kömür bölgelerinde, hem lise hem de üniversite düzeyinde tarım eğitimi veren okullar açılabilir ve eğitim imkanları çeşitlendirilebilir. Bölge sakinleri de istihdamı artırıcı teşviklerle çiftçiliğe özendirilebilir. Ayrıca, uygun arazi yapısına ve güneş enerjisi santralleri için uygun coğrafi konumlara sahip bölgeler, karbonsuz yenilenebilir enerji üretmek için büyük bir potansiyele sahiptir. Adil dönüşüm uygulamalarıyla birlikte yürütülen iklim değişikliği ve çevre kirliliği farkındalık eğitimleri, kömürden çıkış sürecine ilişkin önyargıların aşılmasına önemli katkılar sağlayabilecektir.

Son olarak, yakın zamanda açıklanan Ulusal Katkı Beyanı'na (NDC) göre Türkiye'nin fosil yakıtlardan çıkış konusunda yeterince kararlı olmadığı anlaşılmaktadır. Türkiye, gelişmekte olan bir ekonomiye sahip olduğunu ve tepe noktasına ulaştıktan sonra emisyonların somut olarak azalmaya başlayacağını ifade ederek 2038 yılına kadar emisyonlarını artıracağını beyan etmiştir (İklim Değişikliği Başkanlığı, 2022). Sera gazı emisyonlarının azaltılmasının dikkate değer sonuçlarından faydalanabilmek için yeşil ekonomiye geçişin adil bir dönüşümle sağlanması birincil öncelik olmalıdır.

Atıf / Citation: Üstün, A. & Cizreli, B. (2023). The coal phase-out policy and the just transition in coal-dependent settlements. ODÜSOBİAD, 13(3), 3521-3574, Doi: 10.48146/odusobiad.1207364