



Milas Beyond Coal

Climate Action Network (CAN) Europe is Europe's leading NGO coalition fighting dangerous climate change. With over 185 member organisations active in 38 European countries, representing over 1,700 NGOs and more than 40 million citizens, CAN Europe promotes sustainable climate, energy and development policies throughout Europe.

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Introduction

Since the Industrial Revolution, there has been a significant increase in the global average temperature due to the greenhouse gas emissions caused by human activities. Currently, the world is experiencing a temperature rise of 1.2°C compared to the pre-industrial period. The ongoing rapid increase in global average temperature has far-reaching consequences, contributing to significant social and economic crises. These include a surge in the frequency and intensity of extreme weather events, such as devastating floods causing substantial loss of lives and prolonged, intensified forest fires fueled by heatwaves, as well as a rise in related health issues. The Paris Agreement signed in 2015 and the subsequent Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C (SR15), authored by 91 contributors and informed by the work of hundreds of scientists, emphasise the importance of constraining global warming to 1.5°C as a critical threshold for the future of human civilisation. To ensure that the average global temperature rise remains under this crucial threshold, it is necessary to reduce greenhouse gas emissions responsible for climate change to a minimum and achieve a global balance between emissions produced and removed from the atmosphere by mid-century (what is known as ‘reaching net zero’).

Because coal is the fossil resource with the highest carbon intensity, leaving it in the ground rather than extracting and burning it to generate power is the most effective single step that can be taken to reduce emissions. Producing electricity from coal is the industry that causes the single highest amount of global emissions, and affordable renewable replacement options are already readily available. Following the adoption of the Paris Agreement, many countries expedited their efforts to fight climate change by implementing emission reduction policies and setting targets to phase out coal in electricity production by 2030 or earlier — objectives that remain unchanged despite the energy crisis triggered by Russia’s invasion of Ukraine in 2022. The negative external costs of coal, the declining cost of renewable energy production and storage, and the growing demand for flexibility in energy markets have all contributed to a global decline in coal usage that is expected to continue at an even more rapid pace in the coming years. Despite all this, coal still accounts for 35 per cent of Turkey’s electricity production, with no official policy in place for phasing it out. But discussions are accelerating in Turkey around the transition to a net zero economy and the elimination of coal-generated power due to global developments such as the European Green Deal (EGD) initiated in the European Union in 2019.

While it is technologically feasible to phase out coal, the necessary transition also entails broader social and economic transformations, including those related to employment and skills sets. **For a transition to a net zero economy to be just and inclusive, it must prioritise the well-being of people along with that of the environment, and be structured in a way that allows individuals to adjust and adapt to the changes while reaping the benefits that arise from them.** To achieve this, it is crucial for governments, local authorities, businesses, and financial institutions to develop a **comprehensive framework for a just transition in consultation** with trade unions, local communities, and environmental organisations.

By focusing on the coal-producing district of Milas as a representative region in Turkey, this report seeks to formulate recommendations on addressing the social and economic consequences and mitigating the challenges associated with a rapid coal phase out, particularly on local economies and employment. It aims to explore the advantages associated with transitioning to a net zero economy while identifying the needs and expectations in the local community for a just and equitable transition away from coal power in Turkey.

Within the adjacent districts of Milas and Yatağan in Muğla province, there are three coal-fired power plants along with open-pit coal mines that supply fuel for these facilities. Moreover, new coal mines are being established and existing ones expanded. The active presence of coal-fired power plants in the region, coupled with the ongoing expansion of coal mines, is creating high levels of air and water pollution, degrading forested lands, and causing forced displacements of local residents. Testimonials gathered from people living in Milas highlight the negative impact of power plants and coal mines on their communities and the urgent need to phase out coal in the region.

In addition to these serious impacts, Turkey's stated target of reaching net zero emissions by 2053 requires that coal-based electricity production be completely eliminated by 2030, a goal that extensive scientific studies show is both feasible and realistic.

If Muğla is to successfully achieve an exit from coal by 2030 in alignment with global and national climate goals, including the closure of its existing thermal power plants and coal mines, it is imperative to develop just and comprehensive transformation plans for the local communities currently reliant on the coal sector. These plans should facilitate their shift towards a net-zero economy, taking into account not only the population directly employed in the coal sector but also all people who will be affected by its closure. Without such plans in place, the energy transformations necessary to protect our environment run the risk of harming local economies and leaving regional populations behind.

This report begins by analysing the concept and definition of a just transition; exploring various approaches, principles, and tools; and assessing existing relevant case studies. The second part of the report focuses on examining the detrimental impact of coal-fired power plants and mines in Milas, including the perspectives and expectations of both local residents and national stakeholders regarding a potential coal phase-out. Lastly, it evaluates environmentally friendly, economically feasible alternatives that can facilitate a just and equitable coal phase-out in Milas.

Just transition: An energy transformation that ensures no one is left behind

Historical background

The notion of a just transition first emerged within the contemporary discourse when workers' movements in the 1970s highlighted the environmental and health issues caused by industrial activities. By the 1990s, the concept took on a new significance as the United States tightened environmental regulations and controls and began to implement measures that targeted

polluting industries. Trade unions that joined the call for stronger environmental protections also advocated for the inclusion of support programmes to assist workers who faced the potential loss of their employment. Their aim was to safeguard the incomes previously provided to workers and communities by polluting industries while improving working conditions and environmental health. Closer collaboration between the trade union movement and the environmental justice movement was established in the US during this period, leading to the establishment of the Just Transition Alliance (JTA), which subsequently began to gain global traction and become a part of international negotiations.

From the mid-2000s onwards, the global expansion of calls for a just transition gained momentum, primarily through the efforts of the International Trade Unions Confederation (ITUC), with trade unions becoming increasingly active in the Conference of the Parties (COP) to the United Nations Convention on Climate Change. Starting in the early 2010s, the concept of a just transition became widely embraced by civil society actors in the environmental and climate movements.

A significant milestone for just transition occurred during the COP21 in Paris in 2015, where the Paris Agreement was signed. The introduction of the Paris Agreement as a road map for global climate policy explicitly acknowledges 'the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities'. Then at COP24 in 2019, representatives of more than 50 states signed the *Silesia Declaration on Solidarity and Just Transition*. The following year, the Climate Action for Jobs Initiative was launched at the COP25 Summit. In 2021, the COP26 Summit was held with the slogan 'green growth, decent jobs and economic welfare in the transition to net zero emissions' and 15 governments from North America and Europe, in addition to the European Union, signed the *Just Transition Declaration*.

What is a just transition and what does it aim to achieve?

Though the concept of a just transition does not have a single definition, approaches to this framework can be broadly divided into four categories: status quo, administrative reform, structural reform, and transformative. The status-quo and administrative-reform approaches do not aim to change the current economic order but instead propose adjustments within that system. The structural-reform approach questions social power relations and aims to change them. By identifying distribution and participation injustices in the current system, it aims to create long-term structural and institutional changes. The transformative approach proposes a more radical critique of the dominant economic and political order due to the climate crisis we are presently experiencing. Trade unions and social movements that argue for this latter approach urge a complete transformation of the current fossil-fuel-based economic structure and relationships built on the goal of 'constant growth'.

Proponents of reformist and transformative approaches see securing social justice and the struggle against the climate crisis as the main components of the energy transition. In terms of implementation, both of these approaches place the fundamental principles of climate justice at the centre of just transition programmes in three fundamental areas: recognition justice, distributive justice, and participatory justice.

Recognition justice, in short, means determining which social groups will be negatively impacted by energy transition and recognizing and understanding their differences in terms of access to

knowledge, governance, values, etc. Distributive justice meanwhile refers to the fair distribution of both benefits and costs; and participatory justice means providing the necessary conditions to ensure the direct participation of affected groups in the transition.

Although Turkey has taken some actions in response to the European Union's European Green Deal, such as its Green Deal Action Plan preparations and its announcement of a net zero emission target for the year 2053, there is no indication that these moves have resulted in any structural transformation in Turkey's economic, energy, or climate policies. At present, there has been no decision to exit fossil fuels or put in place a just transition policy that would support a transition to a net zero economy.

Just transition programmes: Fundamental principles, common features, and widely used tools

Different approaches to ensuring a just transition all share certain **fundamental principles**, including:

- Placing the lives of workers and community members at the centre of both policies and actions;
- Investing in climate-friendly businesses and economic diversity;
- Securing the participation of the local population in decision-making, including through social dialogue;
- Emphasising inclusivity and intersectionality, including gender equality/justice;
- Incorporating social protection policies and programmes.

Successful implementations of just transition programmes in different parts of the world also have additional **common features**, including:

- Forming and planning a vision and acting in accordance with that plan;
- An integrated, multi-scale approach;
- Adequate just transition financing;
- Working with local and national decision-makers who develop visions and act on a regional scale;
- Forming and operating special support mechanisms;
- Supporting an increase in capacity;
- Ensuring local compliance.

The most **common tools and practices** used in establishing just transition programmes and policies include:

- Early retirement, pension, and financial compensation programmes;
- Professional skill development and vocational training programmes;
- Infrastructure renewal projects;
- Regional support mechanisms and programmes;
- Participation and social dialogue mechanisms and processes.

Without these core principles, common features, and tools, attempts to create a just energy transition are likely to face similar barriers to success. Frequently encountered obstacles include: a lack of social support; inadequate models and examples; an increase in inequalities and injustices; a political atmosphere that does not allow for participation; a failure to institutionalise knowledge and expertise; high unemployment rates; high rates of unregistered business activity; low trade union membership; a workforce lacking the necessary skills for net zero economies; continued investments that prioritise fossil fuels; and insufficient access of highly fragile socio-economic groups to financial support.

Milas in the shadow of coal

Two coal-fired power plants in Milas have had a dramatic detrimental impact on the region. The Kemerköy Thermal Power Plant, operating for 30 years, and the Yeniköy Thermal Power Plant, operating for 37 years, have taken a serious toll on both residents and the natural environment.

Coal is changing the topography of Milas

Open-pit lignite coal mining is carried out over approximately 5.000 hectares of land in Milas and Yatağan, causing great damage to the ecosystem and biological diversity. The resulting change in topography not only destroys fertile agricultural soil but also triggers the risk of soil erosion.

Coal causes water pollution and water shortages

Thermal power plants and coal mines are degrading the quality and quantity of underground and surface water sources in Milas. Digging coal mines destroys underground water resources, while thermal power plants use large volumes of water in the cooling process. In addition, both thermal power plants and coal mines pollute surface and underground waters with toxic substances by releasing wastewater, slag, and flue dust that contain heavy metals.

Coal destroys forests

The coal industry is damaging or completely destroying a constantly increasing amount of forest land in Milas and its surrounding region. More than half of the approximately 5.000 hectares of land where mine pits are operated in Milas and Yatağan is estimated to have been forest land.

In Milas, a total of 23.000 hectares of land have been allocated as a lignite coal mining permit zone.

According to the report *The Real Cost of Coal: Muğla*, published in 2018 by CAN Europe, if all current mining permit zones are brought into operation over the next 30 years, 11.200 hectares of forest land in Milas will be damaged and deforested. Coal mining also directly threatens the Akbelen Forest, part of İzköy village in the Milas region. In addition to its ecosystem value, the Akbelen Forest also has social and cultural importance for the local residents who gather, socialise, and enjoy recreation activities there. Akbelen Forest is also home to olive trees and is an important catchment area for the region's surface and underground water sources.

Coal causes air pollution

Coal-related activity in Milas is creating intense levels of polluting gas and particulate emissions, contributing both to climate change and high levels of air pollution in the region. The total amount of carbon dioxide (CO₂), a primary driver of climate change, released by the Kemerköy and Yeniköy thermal power plants in Milas and the Yatağan thermal power plant in Yatağan from 1983 to 2017 is calculated to be around 360 million tonnes. If these three thermal power plants continue to operate until 2043, an additional 328 million tonnes of CO₂ emissions will be released into the atmosphere.

Coal threatens human and natural life

Air pollution caused by thermal power plants threatens public health in the region on many levels. The particulate matter they send into the air causes the formation and development of serious illnesses including pulmonary and heart diseases, stroke, Alzheimer's, and obesity, and can have a negative effect on paediatric development. Sulphur dioxide (SO₂), a toxic gas released by thermal power plants, causes fatal pulmonary diseases and chronic diseases such as asthma. Nitrogen oxides (NO_x), among the other toxic gases released into the atmosphere by thermal power plants, also cause serious health risks, including inflammation of the respiratory tract, deterioration of normal cellular mechanisms, tissue damage, and, as a result, a decline in immune function.

Since the date they were opened until the year 2020, the Yatağan Thermal Power Plant has caused a documented 33.319 early deaths, while the Yeniköy Thermal Power Plant has caused 23.595 early deaths and the Kemerköy plant, 11.600 early deaths. In addition to their human toll, the illnesses and early deaths created by the coal industry also constitute a large drain on the public budget due to increased health costs and productivity losses.

Coal causes displacements

Since coal mines were first built in Yatağan and Milas, a total of 10 villages and their residents have been displaced. The first such case took place in Sekköy in the 1980s. This was followed

over the years by the expropriation of homes and land in Hüsamlar, Alatepe, Çakıralan, Karacağaç, and the Işıkdere-İkizköy area in order to develop new mine pit areas. There are ongoing attempts today to transform other areas of İkizköy and the Akbelen Forest, a common area for the village, into a mine site. The realisation of new coal mine projects in Yatağan will directly impact the livelihoods and/or housing of approximately 30.000 people, thereby threatening their social, cultural, and economic existence. Due to the expansion of the fields of activity of coal mines, it is estimated that a total of 48 olive cultivation areas – 27 in Yatağan and 21 in Milas – will either be damaged or completely destroyed.

A coal phase out in Milas that leaves no one behind

Phasing out coal: What do the people of Milas want?

Field research shows that the people of Milas have no social, cultural, or emotional ties with coal. When they are asked about their livelihoods, both individuals and local partners list olive cultivation, agriculture, beekeeping, and animal husbandry. Mines and thermal power plants are not perceived as a primary way of making a living, or as something that contributes to regional development. Instead, the damage caused by coal – including air pollution, loss of agricultural productivity, increased incidence of cancer and respiratory tract diseases, and drought – is the issue most widely emphasised in field interviews. The majority of the local population perceives coal as the source of these negative consequences, with the displacement of villagers through expropriation seen as the top issue of concern.

Coal-fired thermal power plants and coal mines are, however, seen in a more positive light as a source of ‘secure employment’, offering pay above minimum wage, the right to a pension, and transportation to the workplace. This perception is especially prevalent among young people working at power plants and mines, and those who seek employment in these facilities as a way to gain the economic benefits they are seen to offer. Therefore, in order to successfully phase out coal and secure public support for such a transition, it is necessary to protect the acquired rights of workers at mines and thermal power plants, and to develop alternative jobs that will match their current conditions of employment.

Young people in the region who have become accustomed to working on a salaried basis state that they are not interested in returning to agricultural production if coal mines and thermal power plants are closed down, as they view it to be difficult and costly work. Instead, they would prefer to seek employment in sectors such as tourism, aquaculture, and the airline industry. Therefore, when creating a plan to develop alternatives to the coal industry, such sectors must be assessed not only in terms of their economic viability but also in terms of the job security they provide and whether they are seen as attractive by young people.

When suggesting alternative economic options to enable the phase-out of coal, the focus should thus not be on any single sector. Research findings indicate that no one means of livelihood can

alone provide an alternative to coal in Milas. But the regional population's production know-how is suitable for different income-generating activities to be carried out at the same time and in an integrated fashion. By empowering local economic actors, it is possible to establish a new economy designed on a regional scale that follows the principles of just transition, including sustainability and solidarity without contributing to environmental destruction and harm to human health.

Opportunities for transformation: A vision of Milas without coal by 2030

Olive cultivation

Olives and olive cultivation have long been an essential part of social and cultural life in Milas, where human settlement dates back five millennia. In 2020, olive oil from Milas became the first in Turkey to be registered as an EU geographical indication. Nearly 5 per cent of the 187 million olive trees found across Turkey are in Milas, and olive cultivation is a significant source of income for the 114 villages in the region. Yet there is still much untapped potential for olive cultivation and olive-oil production in the region – a key component to the future of a Milas without coal.

Approximately 20 per cent of the 100.000 tonnes of olives produced in Milas, or a total of 20.000 tonnes, is sold to producers in other provinces without being processed. This constitutes a significant loss in terms of regional economic and employment potential. Significant added value from these 20.000 tonnes of olives can be created – and remain – in Milas by establishing 50 facilities for olive processing, 15 for olive-oil production, and five for the manufacturing of olive-oil-based soaps and shampoos. This would create a total of 685 new jobs: 105 at the olive-oil production facilities, 500 at the olive-processing facilities, and 80 at the soap-and-shampoo manufacturing facilities.

Additional new employment opportunities can be created through integrated local economic development based around the olive. For instance, establishing three olive pomace facilities to process olive-oil extraction by products would create 30 new jobs, while setting up two accommodation facilities as part of a tourism strategy developed around olive production would create 40 new jobs. In total, 755 new jobs could be created by investing in the olive-based service and production sectors. Considering that 800 people are currently employed in Milas's coal-mining sector, a just phase-out from coal by means of integrated, inclusive local economic development programmes appears realistic and feasible for Milas.

Additionally, establishing new facilities of this kind may make a contribution to the regional economy which goes beyond the total income of the people they would employ, due to the multiplier effect. Based on 2021 data, the six-month total income/expenditure balance is estimated to reach 17.75 million TL, while the annual total would stand at 35.5 million TL. With the multiplier effect factored in, the increase in income in the region is estimated at 40.6 million TL over a six-month period, and 81.2 million TL annually.

Estimates also show that if the amount of incentives paid over one year to coal-fired thermal power plants in the region was instead spent on establishing olive-related facilities, it would be

possible to create new, climate-friendly, decent jobs for almost the same number of people as are currently employed at coal mines. According to 2021 data, the total investment required to establish 70 new olive processing, olive-oil production, and soap-shampoo manufacturing facilities is around 240 million TL. In contrast, 260 million TL in subsidies in the form of capacity payments alone were provided in the year 2021 to the Yeniköy and Kemerköy Thermal Power Plants in Milas.

Milas has also not fully capitalised on the status conferred on its olive oil by the EU geographical indication (GI) registration it received in 2020. As the source of Turkey's only olive oil with EU geographical indication, Milas could set itself a target of a 4 per cent share in the market – the level achieved by fellow GI recipient Tuscany olive oil in Italy in its region – and a price per litre of 7.5 Euro. At the targeted rate and price, production of GI-registered Milas olive oil is projected to reach 800 tonnes, and the price per litre, 75 TL. If these targets are achieved, the value created by GI-registered olive oil may increase from 4.5 million TL to 60 million TL. In addition, investment in international marketing and advertising can increase the export potential of Milas olive oil, which is currently exported in very low amounts. A well-organised producers' association has the potential to create significant export revenue.

In summary, the steps that need to be taken to develop olive cultivation and production of olive-related products in the region can be listed as follows:

- Establish new olive, olive oil, and olive-based product and service facilities;
- Increase olive productivity;
- Utilise inactive olive groves;
- Stop expansion of coal mines;
- Solve issues with water supply;
- Concentrate on production of EU GI-registered olive oil;
- Develop collaboration mechanisms for producers;
- Form and strengthen producer unions and cooperatives;
- Target new foreign markets;
- Develop olive-oil inspection mechanisms and processes;
- Develop olive- and olive-oil-based tourism;
- Design an integrated, inclusive, and participatory approach that bridges different sectors and policies.

Beekeeping

Bees and beekeeping play a critical role in the preservation of biodiversity and ecological balance in the Milas region and in the greater Muğla province to which it belongs. As one of the main sources of livelihoods and employment in the region, this sector holds great socio-economic importance. Turkey produces 92 per cent of total global pine honey, with 75-80 per cent of that share coming from Muğla province. Within Muğla, Milas is the district that produces the most pine honey, with an 18 per cent share. Even when beekeeping is not a household's main livelihood, it is considered valuable as an additional source of income.

The beekeeping sector in Milas however faces a number of challenges, some of which are related to environmental health.

Firstly, the scale insect species *Marchalina hellenica* that is the main actor in pine honey production is migrating northwards because of the increasing temperatures caused by climate change. This in turn leads to diminished productivity in beekeeping. The frequency and severity of uncontrolled wildfires is also increasing as an outcome of climate change, posing a further threat to beekeeping in the region. In addition, increasingly arid weather means less dew is produced, which results in bees producing less honey or honey that is not sweet enough.

The reproduction of *Marchalina hellenica* is also directly threatened by the region's coal mines and thermal power plants. Toxic gases emitted from such facilities, including SO₂, NO_x and CO₂ lead to the accumulation of sulphuric acid and nitric acid on *Pinus brutia*, the Turkish pine tree where *Marchalina hellenica* lives, hindering their reproduction and leading to a drop in honeydew productivity. High SO₂ and NO_x levels in the air can also impact the respiratory tracts of both *Marchalina hellenica* and honey bees, causing death to both species.

Other obstacles to reinstating beekeeping as an attractive economic activity are related to the production process and socio-economic factors:

- Demographically speaking, the majority of people who keep bees in Milas belong to the elderly population who have been involved in this activity for a long time. The younger population prefers not to work in beekeeping for various reasons.
- Current methods of beekeeping are not being adapted to changing conditions.
- Problems in the current supply chain from production to consumption are leading to revenue losses.

Despite these issues, beekeeping still has the potential to once again become an important component of the local economy in Milas. To achieve this requires a series of transformations at all levels of the supply chain, beginning with production. Some of the necessary steps can be summarised as follows:

- Adopt an integrated, interdisciplinary approach that brings together related work in different natural and social sciences;
- Develop an ecological approach to beekeeping that preserves biodiversity and ecological balance;
- Harmonise production methods with the impacts of climate change, with a focus on resilience;
- Diversify beekeeping products;
- Introduce training programmes on beekeeping in the region;
- Encourage the proliferation of new-model cooperatives and organisations;
- Develop the brand value of Milas honey;
- Put in place incentive and financing programmes for beekeeping.

Tourism

At present, tourism is not a main source of livelihood for the people of Milas, but it offers the potential to be a significant field of economic activity that can produce an alternative to coal. Milas neighbours some of Turkey's important tourism centres, including Bodrum, Fethiye, and Marmaris, and has the potential to develop tourism activities related to coastal tourism, history and culture, and olive cultivation. Tourism also leads among sectors that young people state they would prefer to work in if thermal power plants were to be shut down.

Tourism is a sector that seriously compounds climate change and is also directly impacted by the climate crisis. Therefore, new approaches are needed to make tourism more resilient – and less of a contributor – to climate change. While conventional tourism practices that exacerbate climate change dominate across Muğla province in general, the lack of an existing tourism sector in Milas offers a chance to start from scratch in a more resilient, less damaging way. Because of the area's existing cultural and natural resources, there is great potential to develop ecotourism that has a low ecological footprint and is more resistant to climate change. This could include:

- Olive and olive oil tourism centred around Milas's olive cultivation areas, monumental olive trees, and EU geographical indication;
- Wellness tourism at geothermal wells with high mineral concentrations;
- Historical tourism at the many historical monuments and ancient cities within the borders of Milas;
- Coastal tourism along the 120 km-long shoreline;
- Bird-watching, photography, and speleological tourism around the area's wetlands and caves;
- Camping and trekking tourism.

Developing these types of ecotourism would help allay the reservations that people in Milas have about tourism, which they generally view positively as a potential source of income. Designing ecotourism activities with an alternative approach that has a small ecological footprint and prioritises social justice and climate resilience would address local concerns, which generally stem from the ecological damage conventional tourism has caused in the Muğla region, as well as its potential impact on social and cultural life and other sources of income.

Agriculture and plant production

Milas district contains around one-third of the total agricultural land in Muğla province. According to 2018 data, there are 760,765 decares of agricultural land in Milas, 543.674 decares of which are reserved for the growing of fruits and herbs. Of the total agricultural land in the area, 71 per cent is reserved for fruit growing, 21 per cent is field land, and 6.5 per cent is used for vegetable planting. Almost all the fruit-growing land – 98 per cent – is reserved for olive groves. Agricultural production is mostly carried out on small plots of land owned by villagers. Those

who do not own land contribute to agricultural production by working on the land of others in return for wages.

Residents of Milas have identified certain ecological, economic, and social problems related to agriculture, including:

- A drop in productivity due to environmental pollution and ecological damage caused by coal mines and thermal power plants;
- High input costs;
- Drought conditions exacerbated by climate change;
- Plant pests that negatively impact productivity and product quality;
- Unwillingness of young people to work in the agriculture sector.

Despite the challenges it poses, local people of Milas favour the continuation of agricultural production. Phasing out coal from Milas is expected to create positive outcomes for agricultural production – including olive cultivation. With the increase in profits to be made in agriculture, it is believed that younger people will again show greater interest in working in this sector as well. In addition to increasing the productivity of currently grown agricultural products, the introduction of new products with high added value and an emphasis on organic farming could further increase revenues from agriculture in Milas.

Renewable energy

The average solar energy production capacity of Milas and its surrounding areas is estimated to be 1587 kWh/m² – above the Turkey average of 1527 kWh/m². With small-scale investments, individual solar-energy system implementations may be realised in the Dağpınar, Pınarköy, and Çakıralan neighbourhoods, which are in the part of Milas that has the most potential for solar development, as well as in the flat areas of the Bencik and Yayla neighbourhoods where agriculture is not practised. In addition, both small and large solar-energy system investments could be made in the non-arable flat areas around the Karacahisar, Çiftlikköy, Pınararası, Söğütçük, Hasanlar, Kısırlar, Derince, Demirciler, Beyciler, Gökpınar, and Bayır neighbourhoods. It has also been determined that unlicensed solar energy production of 1 MW or less can be carried out in the less solar-intensive areas in the Beçin, Menteş, Baharlı, Ağaçalıhüyük, Koruköy, Akyol, Yaşyer, and Avşar neighbourhoods.

In addition to these locations, solar power systems could potentially be established on sites currently operated as open-pit coal mining areas in connection with thermal power plants. In order to realise this potential, coal mines must first be closed, a detailed assessment immediately carried out, and plans put in place that will uphold the rights of the local people and cause the least damage to the ecosystem.

The people of Milas voice two main reservations regarding renewable energy. The first is their concern regarding the possible harm solar and wind plants could cause to agricultural land and forest areas. The second reservation is that the renewable-energy sector may not provide sufficient employment. But residents have been accepting of renewable energy plants as long as they are established in areas other than agricultural zones.

Renewable energy plants that are harmonious with the ecosystem, do not prevent or hinder agricultural activities, and are based on plans made with the participation of people in the region can be expected to contribute to the realisation of just transition in Milas. Such facilities will also reduce energy costs for individual households as well as key sectors such as olive cultivation and tourism by meeting their energy needs in a more inexpensive and cleaner manner.

Carpet weaving

Other economic activities in Milas can also contribute to the livelihoods of the local population. Carpet weaving is one such activity, and although it is among the leading traditional crafts of Milas, it has almost disappeared today. Traditional Milas carpets have the potential to generate considerable income as an authentic product that reflects the local culture and uses fully natural raw materials and methods. However, high costs for raw materials, a long and arduous production process, and insufficient market prices have made it difficult for them to compete with machine-woven and factory-made carpets. It is possible to increase income from carpet weaving through incentive, support, and training programmes. Creating new types of cooperative structures at the local level and encouraging the use of new marketing methods can also be effective in transforming carpet-making into an income-generating activity.

Forestry products

Forestry products hold an important place in the lives of the villagers of Milas, who collect various fruits that grow in the area's rich forests for their own consumption. However, forest products other than wood are not considered by the regional population as having income-generating economic value. Those items collected from the forest that do have economic value, such as bay leaves, thyme, and sage, are sold to buyers outside the region without being processed into higher-value products since there are no such processing facilities in the area. This leads to a loss of potential income.

Furthermore, the increasing number of uncontrollable forest fires in recent years have damaged wide swaths of forest, making it difficult to access forest products. For forest products to contribute to the local economy and the livelihoods of the people of Milas, processing facilities must be established in the region to manufacture and sell products with a higher added value. In addition, work must be done to discover and develop new products and determine their

economic value, while also rehabilitating forest land to increase the opportunities for forest products to contribute to the local economy.

Conclusion

As this report shows, a just transition is possible in Milas, despite the intense environmental injustices that have been created there by the coal industry. Doing so would mean adopting a concept that has rapidly spread and been accepted across the world within the scope of the climate struggle and taking action to equally achieve environmental and social objectives in the affected communities. Today, not only trade unions and climate and ecology movements, but also many other actors argue for a just transition, including states, the private sector, and different institutions and corporations involved in official climate negotiations. On a global scale, just transition approaches converge on two fundamental aims:

- 1) **Phasing out fossil fuels to transition to renewable energy sources, and**
- 2) **Realising this transition without leaving anyone behind.**

Climate change is already playing a major role in deepening inequalities between different social and regional groups. Transitioning away from fossil fuels as an energy source is vital to limit climate change, even if many sectors that need to be part of this transformation will face job losses. Just transition aims to prevent additional harm to workers and communities tied to coal, in other words, to complete the energy-transition process in a way that ensures social, economic, and political justice. In order to achieve this outcome, it proposes the introduction of a series of policies and regulations aimed at mitigating the harm to those who might lose their jobs during the energy transition.

The will and support of the local population is a highly significant component in both the successful realisation of energy transition and the effective implementation of just transition policies. If there is support from the community, the necessary policies and actions will be embraced, enabling the preparation of a platform for their implementation with the active participation of society. In the Milas area, one of Turkey's key coal regions, we see that the local population desires a life without coal and yearns to make their living from sources outside the coal sector.

The possible fundamental principles and actions for a just transition process in Milas that is shaped by local conditions and needs can be summarised as follows:

Multi-scale, interdisciplinary, integrated planning: The first stage of transition entails the display of political will regarding a coal exit, the establishing of a long-term vision which includes binding milestones and aims, and the design of transformative actions that have inclusive, comprehensive, and detailed road maps. Given Turkey's centralised political structure, it is important that the just transition programme to be implemented on a local scale is planned and shaped in a way that harmonises with and complements local, regional, and national-scale policies, investment, and development plans. As part of this process, a detailed plan must be

made about the roles of and coordination between the numerous social partners that will take part on different scales, including the central government, the Southern Aegean Development Agency, the Muğla Metropolitan Municipality, the Milas Municipality, trade unions, professional chambers, universities and educational institutions, and civil society.

Social dialogue and participation: The active participation in decision-making processes of societal groups within the scope of just transition allows policies and actions to be shaped and implemented in a bottom-up, democratic manner, in accordance with the needs of these groups. A mechanism widely used in just transition programmes to ensure this kind of participatory process is the three-tier social dialogue mechanism, which is made up of governments/policy implementers, employers, and trade unions. In Milas, it is necessary to design a comprehensive social dialogue mechanism that will directly bring together the people in the region with decision-makers and employers, along with groups that either represent or defend the rights of workers and farmers, such as trade unions, representatives of environmental movements, and cooperatives.

Inclusivity: In order to actively carry out the just transition process, it is important that the transition includes all communities that are dependent on coal. But it is also important to acknowledge that not all groups and individuals in these communities are impacted equally by the outcomes of environmental injustices, and that factors such as gender, age, and disability can compound such injustices. Accepting the fact that some individuals within these communities experience more than one disadvantage or injustice, and recognising the distinct needs and demands of these groups, forms an important dimension of just transition.

Investment in new facilities: A crucial step in developing alternative sectors in Milas and creating new jobs to replace those that would be lost in the coal industry is an investment in remedying the deficit in the number of olive processing and tourism facilities in the area. A total of 685 new jobs can be created by establishing 50 facilities for olive processing, five for soap and shampoo production, and 15 for olive-oil production in order to create value-added products from the 20.000 tonnes of olives that are currently sold outside Milas at low benefit to the local economy.

Training programmes for skill acquisition and refreshing: Almost all sectors in Milas that can provide alternatives to coal are traditional sources of income for the regional population, with all other than carpet-weaving still being carried out as side activities even among the majority of households whose main source of income is working at coal mines and thermal power plants. This indicates that there is a broad base of know-how and experience among the local population in fields including olive cultivation, beekeeping, and animal husbandry. However, due to factors such as climate change and changing market conditions, new production methods in these fields must be developed and implemented in a manner suitable to the region. As a result, there is a need for skill acquisition and refresher training programmes that blend traditional knowledge and scientific, modern methods that increase productivity, added value, and revenues while carrying out production in a way that has a small ecological footprint and is in harmony with nature.

New and democratic forms of organisation: Protecting rights, providing social security, and increasing the income of small producers in the fields of agricultural production such as olive cultivation and beekeeping, as well as tourism workers in the service sector, could lead to these fields being preferred as main sources of livelihood rather than as supplemental income in the the Milas region. In order to do so, participatory forms of organisation that would foster democracy in production and at the workplace must be realised. For instance, at present, olive growers and beekeepers have to directly sell their products to wholesalers, which results in a loss of potential income. In contrast, new types of production organisations can allow producers to supply their products directly to consumers using different marketing techniques which will allow them to keep a larger share of their income. Such organisations have established horizontal relationships, reach consumers directly through democratic decision-making processes based on the principle of participation, are open to social innovation, aim to provide added value to products, and also involve practices of social solidarity and reciprocity.

Improvement of the quality and brand value of local products: The EU geographical indication (GI) certification bestowed on Milas olive oil and the fact that no pesticides are used in the majority of olive groves in the region create a great amount of potential for Milas olives and olive oil both in Turkey and in international markets. As long as standards required by GI certification and organic agriculture in production, storage, and transport are implemented, it is possible to create higher added value from olives and olive oil, improve incomes, and create new job opportunities. Similarly, the pine honey of Muğla, produced in Milas, also has EU GI certification and represents a large share of the world's total pine honey production. If standards required by GI certification in production, storage, and transport are properly implemented, the quality and brand value of beekeeping products in Milas will increase, creating a considerably higher added value. The establishment of research and development centres through collaborations with education and research institutions in the area such as Muğla Sıtkı Koçman University, and with civil society institutions focusing on these subjects, will also contribute to the quality of products and production methods in the areas.

Innovative and ecological approaches: The preference for agricultural production using natural methods over the industrial production approach with its high ecological footprint is important for the development of production that is harmonious with nature and uses methods that protect biodiversity, ecological balance, and the climate, and secure sustainability in the real sense of the word. With its rich natural, cultural, and historical assets, Milas has the potential to avoid the conventional mass tourism that dominates other districts of Muğla province and become a centre for climate-friendly ecological tourism (eco-tourism) where activities are spread across the entire year, no pressure is imposed on natural resources, ecological balance and biodiversity are preserved, and extreme construction development does not take place.

Though the destruction caused by the coal sector in Milas over the past four decades continues, the dream of a nature- and climate-friendly Milas where no one is left behind is not too distant to realise. The future we live in will be shaped by the dreams we have, our desire for change, and our collective will that we express around this desire. The aim of this report, too, is to invite everyone – and first and foremost the people of Milas – to dream of a Milas beyond coal. We believe that this report shows that it is possible to realise this dream by utilising concrete

opportunities, and hope that it contributes to the strengthening of struggles for a Milas without coal and the development of concrete policies for just transition all across Turkey.

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