

Presentation and results of the project
„Developing labour market adaptability and supporting the transition in
sector "B" Mining and Quarrying”
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The Union of Mining, Energy and Industrial Workers



and the

Hungarian Mining Association



have successfully applied as a consortium for the call "Thematic projects for the development of labour market adaptability" under the title "Developing labour market adaptability and supporting the transition in the sector "B" Mining and Quarrying". The amount of the awarded grant is 49.960.000 HUF.

The project will be implemented in the Region „Northern Hungary”. Its primary objective is to prepare the region's key employer, Mátra Power Plant, for the expected structural change, mainly by strengthening the adaptability of employees to the labour market and the new knowledge, skills and competences required by the modern economy. The aim is that the two main components of the project - the accurate situation assessment and the pilot project – can support a smooth labour market transition for the employees and the proposals to be developed can provide information for decision-makers.

The planned duration of the project is 18 months, during which time a pilot project will be carried out. The project analyses, the proposals based on them and the results of the pilot project (the methodology developed) are designed to be suitable for being used in the other Convergence B sectors.

Project website: <http://mepa.banyasz.hu/>

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Introduction

The aim of the factsheet is to present the project and its results - through English translation - to the European Social Partners. We would like to acquaint the reader with the reasons why the Union of Mining, Energy and Industrial Workers (BDSZ) and the Hungarian Mining Association (MBSZ) applied for the call for “*Thematic projects aimed at developing adaptability in the labor market*”, why the studies and analyzes prepared in the project were necessary, and how their results help to make the labor market transition smoother in the period before and after the closure of the mines of Mátra Power Plant (ME Zrt.) (Visonta, Bükkábrány) and the reduction of its production, being the goal of the project.

In the European Union, a significant proportion of greenhouse gas emissions come from the production and use of energy. In order to achieve climate neutrality, the modernization and transformation of the economy and industrial production have already begun.

The Communication of the G7 Summit in June 2021 also stated: “Leaders reaffirmed their commitment to the Paris Agreement and jointly committed themselves to achieving zero net greenhouse gas emissions as soon as possible, but not later than 2050.

Specific commitments include accelerating the shift from coal mining without carbon capture and storage to CCS and, in parallel, supporting the workers concerned, as well as abolition of new direct government support for international coal-fired thermal energy production without carbon capture and storage by the end of 2021. ”¹

The EU's 2009 Climate and Energy Package already contained that a 20% reduction in greenhouse gas emissions should be achieved in the decarbonisation process in 2020, which is also binding for Hungary. According to the Hungarian National Energy and Climate Plan, this requires the phasing out of conventional coal-fired power plants. The biggest loser in the reduction of coal-based energy production is the coal mining sector, therefore it is necessary to be properly prepared for the restructuring, its unfavorable employment and social consequences must be minimized.

The aim of our project is not to offer technological and technical solutions for achieving climate goals, it focuses primarily on the future problems and opportunities of employment. That is why we examined the employment and labor issues of mining in the region, their critical points, taking into account the effects of the mining restructuring programs of the last decades, the structure of the transforming industry and the relations and critical points of labor supply and demand.

We introduced Mátra Power Plant, as one of the largest employers in the region, showing the impact of the restructuring on the industry of its surroundings and the labor market.

We also analyzed the commuting and mobility characteristics of the labor force in the region Northern Hungary in order to see whether working away from home can be a problem for MPP's employees. To help the transition to the labor market, we conducted quantitative research at companies in Northern Hungary, which are located within a 50-kilometer radius of Mátra Power Plant and may be future employers of the vacated workforce based on their sectoral classification. We analyzed whether sustainable jobs could be created during restructuring.

It is not only necessary to prepare for the transition technically and technologically by analyzing the labor market, but improving the adaptability of workers to the labor market is also crucial. Most of the employees have been working for the company for several decades, adapting to the

¹ <https://www.consilium.europa.eu/hu/meetings/international-summit/2021/06/11-13/>

expectations there. It is also important to know what motivations and incentives can be used to prepare them for accepting new, different employment conditions. With the help of specialists, we tried to find a solution to this problem within the framework of our project.

The last years and decades have shown the challenges of a mine closure for the company, the employees, the regions, that the transformation can create a degressive spiral in the absence of proper preparation, which constantly causes insecurity in the lives of workers and families. This can be reduced by the responsible behavior of government, regional and ownership decision-makers, the constant dialogue between employer and employee representatives. An important tool for this is the sectoral and workplace collective agreement, which contains mandatory rules, rights and obligations in the employment relationship. This is extremely important during the transition period, which is why we have focused on the existing sectoral and corporate collective agreements in the project.

1. Professional methodological developments

Analytical study

There is also a growing need to explore current conditions in terms of labor market and labor market demand and supply during planning processes and decision-making. Although there are current needs in the field of employment, in most cases longer-term processes are to be taken into account. Therefore, with the aim of facilitating the labor market transition, we prepared our analytical study, which revealed the current labor market / employment structure and situation in the mining sector, and the development of labor market demand and supply. We analyzed the critical points in terms of adaptability and transition, the current tendencies and future perspectives in the region Northern Hungary (Borsod-Abaúj-Zemplén, Heves, Nógrád county), by regional and county breakdown, as well as the mining sectors of other convergence regions looking back to a period of ten years.

Problems related to mine closures have been present across Europe since the 1960s, and changes in coal and ore mining have been particularly noticeable. The reason for the cessation of extraction was the depletion of the mines, as well as a change in the economic perception of the mined raw material and an increase in the cost of extraction above an acceptable level.

Even a few decades ago, there were a number of small and medium size deep mining enterprises in northern Hungary that produced brown coal, various ores and non-metallic minerals. Today, all of these mines have ceased to exist, with only the opencast plants operating. The decline in the number of mines in the region accelerated half a century ago. This process took place at about the same time as the mechanization of the mines, and from the 1980s onwards with automation and an increase in the performance of new equipments.

The significant decrease in the number of people employed in mining is therefore a consequence of mine closures on the one hand. On the other hand, due to a high degree of mechanization, automation and targeted quality assurance, physical work has been significantly reduced and production systems can be operated efficiently with a small number of specially trained workers.

In Hungary, the Central Statistical Office (CSO) classifies coal and ore mining and quarrying as parts of the mining sector, accordingly collecting both the number of enterprises and the headcount data together, official name of this sector is mining, quarrying and the abbreviation is sector “B”. The number of registered “B” sector enterprises was 735 in 2011, by 2020 this number had decreased to 594. The number of employees was 11.1 thousand in 2011 and 8.7 thousand in 2020. The decline is clearly visible. More than 80% of businesses have 1 to 19 employees. Alone Mátra Power Plant has a larger number of workers among the solid mineral mining companies (2124 on 2 June 2020), but this appears in the electricity industry sub-sector.

Coal resources consist of hard coal, brown coal and lignite. Out of these, lignite is currently mined in Northern Hungary with significant production capacity in the mines of Visonta and Bükkábrány belonging to Mátra Power Plant, brown coal for residential and small-scale industrial use (Ormoszén Zrt.), in small open-cast mines around Sajókaza and Felsőnyárád. From the ores, the ores of the most important non-ferrous metals found at the Reck polymetallic ore deposit were highlighted. Stone and gravel mining is significant in the extraction of non-metallic mineral raw materials, and zeolite and perlite mining is important in mineral extraction. Ceramic raw materials are mined not only in and around the mountains, but also in the Great Plain. Cement and lime production raw materials are currently produced only for the cement factory of Duna-Dráva Cement Kft. in Vác. Limestone is produced from Sejce

limestone pit and clay in the Gombás clay pit. In addition, significant limestone deposits remained in Miskolc-Tapolca in the former pits of the cement factory in Hejőcsaba and Bélapátfalva. The plant of the Hejőcsaba work is currently down, and the Bélapátfalva factory was demolished.

Thus, in the Region of Northern Hungary, the labor market in the mining and energy industries has been reorganized several times in recent decades due to the processes related to economic restructuring. The situation was also difficult to be resolved because there were problems in three important areas that also determined the characteristics of the workforce: 1) the sectors showed a strong geographical concentration within Hungary; 2) the firms were large in size and predominated within employment as well as in production; 3) a one-sided industrial structure arose.

The counties of the region also differ in terms of settlement structure and population. Due to its geographical and natural endowments, it is one of the most diverse regions in the country.

The labor market structure of the Region of Northern Hungary has been analyzed for the last decade (2009-2019). The development of the supply side of the labor market is determined by several factors. The first factor is the demographic process, ie. the change in the actual population, as its development determines the change in the age composition of the population and the proportion of the working age population. Demographic trends affect labor market processes in the longer term. The next factor is the size of the labor source, which has an impact on labor supply in the short and medium term. The source of labor is influenced by several factors, such as, in addition to the average age, the health status of the population, the laws regulating the lower and upper working age limits (eg. the retirement age). The third factor is the willingness of the working age population to work, which may vary among the population depending on the economic situation. The fourth factor is the development of the characteristics of the economically active population (employed, unemployed).

The demographic processes of the Region of Northern Hungary have developed in such a way that the population decline has been typical since the 1980s, the primary reason for this being the low birth rate and low fertility, as well as the persistently high level of deaths in recent years. In addition to natural decline, migration losses in the region have also contributed significantly to population decline.

Analyzing the labor market data of the counties of the region, we get a different picture. The labor market of *Borsod-Abaúj-Zemplén county* has been constantly expanding since 2013, but it is still one of the disadvantaged counties of the country. According to the statistics of 2019, 68.5% of the county's population aged 15-64 was employed or active jobseekers, ie. 268,600 people were employed and 12,700 people were unemployed. The employment rate was 56.5% and the unemployment rate was 4.5%. In *Heves county* 2019. III. quarter, there were 131,100 people in the population aged 15-74. According to the data published on the CSO's website, the number of unemployed was 3,400. The employment rate of the population aged 15-74 in Heves County was 58.7%, and the unemployment rate was 2.7% in 2019. The activity rate in the county was 60.3% in the same year. *Nógrád county* is among the last in the ranking of counties in terms of the most important economic indicators, which is coupled with a significant labor market disadvantage. In the county, within the population aged 15-64 an average of 78,500 people were employed, while the number of unemployed was 6,300 in the third quarter of 2019. The employment rate was 56.0%, coupled with an unemployment rate of 7.0% in 2019. The level of employment was the second lowest in the country, while the unemployment rate was the 3rd highest. The activity rate in the county was 60.2% in 2019.

In the case of the Region of Northern Hungary, it is particularly important that structural unemployment does not develop from the differences between labor demand and supply. In the resolution of sectoral and structural disparities, the development of territorial characteristics is important, ie. in which region the new job opportunities appear. However, projected developments may be influenced by active employment policy instruments and programs. It is important that the available labor reserves or the capabilities of those who have just entered the labor market as jobseekers meet the needs of companies with vacancies. It is therefore worth assessing the skills, sectoral and occupational characteristics of the workforce. An important issue from the point of view of labor market processes is the development of the number and proportion of vacancies available in the mining and quarrying sector. It can also be a critical point if vacancies that increase job opportunities are available in larger quantities in other regions of the country than where there is a higher number of jobseekers. In this case, the willingness of labor mobility will be important.

Data collection and processing

As part of the mapping and needs assessment of the mining sector, data collection and data processing related to the current production, enterprise and employment structure of the sub-sectors in question was carried out for the mining industry and related enterprises in Northern Hungary.

Hungary's territorial inequality is a boundary condition that has not changed significantly in recent years, despite attempts by several governments to reduce this gap. In the last 30 years, Central Hungary and Western Transdanubia were in the most favorable position concerning all economic indicators, and Northern Hungary and the Northern Great Plain were in the most unfavorable position. In addition to the outstanding strength of Budapest, Győr-Moson-Sopron, Komárom-Esztergom and Pest counties had the most favorable indicators in terms of county data, and Szabolcs-Szatmár-Bereg, Nógrád and Borsod-Abaúj-Zemplén counties had the most unfavorable indicators. Many studies around the world have sought to uncover the reasons why workers in some areas are willing to work in a place away from home or just change their place of residence, elsewhere are not; what factors promote or inhibit this kind of 'mobility' of workers. Hungary's internal migration data show that "the willingness of the Hungarian population to migrate is rather low". Hungarian society is "immovable", not only from a historical point of view, but also from the point of view of employment. A novel challenge in recent decades has been to increase Hungary's labor market mobility in order to match labor market demand and supply in different geographical areas, which would have a positive impact on both employment and business efficiency.

The two regions most affected by emigration are Northern Hungary and the Northern Great Plain. In the case of both regions, domestic migration is more significant, in 2016 the international migration gap in Northern Hungary was still negative, which predicted the worsening of the labor shortage in the region, indicating that the region's population is looking for better livelihoods within and across borders. The wave of emigration in Northern Hungary is the second highest in the country in 2019 as well, as the data of the Northern Great Plain, which had previously shown some moderation, have increased again in the last three years. The regional data of the region of Northern Hungary were examined separately from the national data series based on the 2017 MEF statistical data. In Northern Hungary, a total of 440,603 people commute to work, and in all three counties it can be said that the proportion of men exceeds that of women.

Taking into account the general and specific employment characteristics of the region - there is a labor shortage and a labor market active layer who cannot get a job - we prepared our research plan - quantitative research - about the employability of the region. *In the course of the research, we first started from the employment data of Mátra Power Plant, as the aim is to solve the labor market transition of the people working here.* For the mobility capability survey, the distribution of the employees of Mátra Power Plant according to the settlement of commuting and the number of commuters was collected. During the development of the questions of the questionnaire used for the research, we also took into account what professional groups and occupations are there in the company and the weighted occupations developed from this database were included in the questionnaire.

The key question of the empirical study was: What are the employment opportunities for those working in sector “B” in Northern Hungary?

The key issues and research aspects of the quantitative research are related to the exploration of the labor market characteristics of the companies in the sample area. The first step was to collect and sort out the employers located in the 50-kilometer radius of Visonta and Bükkábrány, who were the target group of the questionnaire. *During the sampling, 101 settlements and 401 enterprises were included in the sample of A to H (A: agriculture, forestry, fishing, B: mining, quarrying, C: manufacturing, D: electricity, gas, steam and air conditioning supply, E: water supply; sewage collection, treatment, waste management, decontamination, F: construction, G: trade, repair of motor vehicles, H: transport, warehousing), enterprises with more than 10 employees.*

The enterprises also include small, medium and large enterprises, the total number of employees (based on the data of 29 August 2020) was 80,406. During the development of the questionnaire, we included several key topics in the final version:

- Survey of shortages of professions
- Number and type of vacancies
- Ability to support mobility for organizations
- Support for retraining
- Application of fringe benefits
- Are there any plans to expand the number of employees?

Some of the questions were closed, some were open, and we also used questions that could be measured on a scale, as well as a tabular format that allowed us to get more information. During the questions, in addition to assessing objective factors, we also felt to be important to query subjective factors (measuring low levels of mobility on a 10-point scale). During the compilation of the questionnaire, we tried to get as complete picture as possible in order to answer our main question and to assess the local characteristics.

The quantitative research was carried out between September and November 2020, with repeated contacts with companies. The database was closed on 30 November 2020, as even after the multiple inquiries, only 42 companies provided a meaningful and valuable response, which corresponds to a response rate of 10%.

The regional distribution of the firms selected from the OPTEN database and of the responding firms was as follows: small firms 47%, medium firms 35% and large firms 18%. The 10% sample of respondents can be considered as a good distribution by firm size, as there was only a few percent difference in the distribution rates compared to the firms in the OPTEN database (small firms 52%, medium firms 36%, large firms 12%).

Key research findings are:

- *Employer subsidies related to mobility:* responding firms are most likely (78.6%) to provide commuting ticket support to employees, mainly to meet labour demand and strengthen employee loyalty. 59.5% of firms also provide car allowances to employees, again with the aim of meeting labour needs and strengthening employee loyalty. Half of the companies have a company car, mainly to boost employee loyalty and employer image. 21.4% of firms own or hire a bus service, mainly to meet labour demand. Weekend travel home is supported by 10% of companies. Sub-rent subsidies are paid by only 5% and 1 company can provide a hostel, but 15% have the possibility to provide a company flat. None of the responding firms pay a resettlement allowance.
- *Commuting tolerance limits set by firms:* firms hire mainly dilutees and unskilled workers from municipalities up to 25 kilometres away. For skilled workers, this limit is extended to even 50 kilometres, which is still included in the limit for the subsidies that can be granted. Administrative workers are mainly recruited from localities within 25 kilometres. For professionals with higher education, commuting from 25-50 kilometres is more common and even from 75-100 kilometres can be an option. For managers, the tolerance limit is even more stretched, with a higher proportion of commuting from 75-100 and more than 100 kilometres than for other jobs.
- *Job vacancies in responding enterprises:* there were 95 vacancies at the time of the survey. The most frequently mentioned (16 mentions) was motor vehicle driver, the second most frequently mentioned (14 mentions) was car engine mechanic and the third most frequently mentioned (10 mentions) was lathe operator (NC, CNC machine operator). In the ranking, carpenter and locksmith were mentioned more than once (more than 5 mentions) for vacancies.
- *Respondents' willingness to increase their staff:* 66.7% of firms plan to increase their staff in the future. In terms of size, 15 firms plan to increase their staff between 1 and 5, 11 firms between 6 and 10 and one firm plans to increase its staff by a larger number between 11 and 20 in the near future. In terms of redeployment and new employment, it is also worth examining whether there is availability for support for retraining, with 38.1% of responding firms indicating that this is available.
- *Shortage occupations cited by responding firms:* the most critical labour shortages reported by firms were in the following occupations: engine fitter, locksmith, dilutee, driver, electrician, small engine mechanic, car mechanic, carpenter, PLC programmer, certified welder, CNC technician and pipe fitter.
- *Low level of labour market mobility:* firms were also asked to what extent they perceive the low level of labour market mobility in Hungary as a serious problem for their core business. Measured on a scale of 1 to 10, the average was 4.27, indicating that firms perceive low labour market mobility as a significant but not serious problem.

The research explored the labour market conditions, supply and demand and shortage occupations in the Region of North-Hungary. There is still a legacy of inequality in the region,

which has improved in recent years, but the three counties in the region differ from the central and western parts of the country in terms of economic indicators. As a consequence, among the three counties, Borsod-Abaúj-Zemplén county has worse indicators in terms of the internal migration gap, while in Heves county the situation has improved in the region, as nearly 40% of vocational school graduates commute to their workplace due to the geographical distribution of jobs. The number of job vacancies, related to the potential workforce, is also unequal across the region, with the number of vacancies in the B sector also decreasing by the beginning of 2020 compared to 2018. In order to help the labour market transition, we conducted a quantitative survey of companies in Northern Hungary, which are within a 50 km radius of the Mátra Power Plant. The responding companies are active in sectors C (manufacturing) and G (trade and repair of motor vehicles) and offer a range of support to help workers to move around and get to work. At the time of the survey, there were 95 vacancies in the firms, mainly for skilled jobs. The survey also determined the extent of the labour shortage and the planned future increase in staff numbers. We also received information from firms on whether they intend to redeploy their workforce, offer new employment opportunities and support retraining, and the response was positive. In terms of the future placement of the workforce within the Region of Northern Hungary, the research found overlap and opportunities to promote a solution.

On the project's website, the collected data can be accessed and searched by keywords after registration, helping labour market mobility within the sector and labour market transition.

Providing a basis for policy proposals to strengthen the labour market adaptability of workers in the mining sector

The analysis of labour market conditions, the evolution of supply and demand, the factors influencing them and the proposed solutions to the labour market challenge aim to alleviate the problems of labour market transition.

In the first part, we looked at the external factors shaping the processes affecting the mining sector, such as the decarbonisation process, EU requirements and their domestic impact. From the point of view of our study, the factors influencing the economic environment and labour market processes in the Region of North Hungary, in the context of Mátra Power Plant are also important. *In the second part*, we examined some of the weaknesses, strengths and endowments of the three counties in the region from a labour market perspective, using the findings of the *Analytical Study* and the *Data Collection and Analysis* part. *In the third part*, we look at the conditions of Mátra Power Plant that affect the employees in its mining departments, the potential labour absorption capacity of the area and the feasible solutions.

According to the Government's Energy Strategy Review announced in January 2020, nuclear and renewable (mainly solar) energy will secure Hungary's electricity future. Currently, lignite mining accounts for 15-17% of the domestic electricity system. Mátra Power Plant, the second largest electricity producer in Hungary after Paks, accounts for 15% of total domestic electricity production, but is also the largest emitter of carbon dioxide (CO₂) in Hungary. Mátra Power Plant is an important player not only in terms of security of supply, but also in the labour market. A significant part of the population of the affected districts (Gyöngyös and Mezőkövesd) is directly or indirectly employed in this industry (2 100 jobs directly, 7 500 indirectly linked to the company, with a total of around 27 000 family members). Many employees of Mátra Power Plant started their careers here and retired from here. The company's sites in Visonta, Halmajugra and Bükkábrány have always provided a good living, with employees enjoying a high wage, electricity discounts and working in a cohesive team.

In Hungary, Mátra Power Plant and certain energy-intensive industries are the biggest problem. During the transition, the recultivation and rehabilitation of areas affected by mining activities and the training to promote the employability of workers will be a major challenge. The transition to low carbon electricity generation will also change the demand for labour. In order for the labour market supply to match this, the training structure of the sector will also need to adapt, providing appropriate retraining and upskilling opportunities for current workers in the sector. Young people entering the labour market in the future need to be provided with modern vocational training that understands new technologies and processes. New jobs replacing outdated production and jobs must also meet occupational health criteria.

We have mapped the industrial area around the power plant and the major companies in Bükkábrány. It can be concluded that the existing industrial park has a low labour absorption capacity, as most of the companies are based on raw materials from the power plant.

BDSZ proposed the establishment of a social fund for the employees of the Mátra Power Plant to operate a company benefit scheme to replace the early retirement pension in the light of the expected mine closures and plant downsizing, in order to ensure a fair and equitable green transition.

Our reasons are:

- the workforce in the company is ageing, with around 300 employees due to retire by 2025 and another large group of similar numbers who will be over 60 by 2025. For them it is extremely difficult to ensure a fair transition, because their chances of finding a new job at the previous wage level after retraining are quite low due to their age. 341 people are affected in the mines, 170 in the power plant and 104 in the CO.

- the company had a company benefit scheme replacing the early retirement pension before the retirement age after the abolition of the early retirement pension and the coal open pit mining occupational pension in Hungary. This was called the POOL scheme. Under its rules, disabled workers or workers who had worked for at least 20 years in a multi-shift system were entitled to benefit from the service on the basis of an agreement with a trade union. There was a set of rules for this, which we used to propose the main elements of the scheme.

At the end of the benefit period, the worker reaches the age at which he or she is entitled to a retirement pension. The worker may submit a claim for an old-age pension. Under the current rules of the Social Security Pensions Act, the actual social security pension will be determined by taking into account the period of payment of the benefit as the period of additional service and the amount of the payment as the pension fund.

Training

Mátra Power Plant is in contact with several secondary vocational training institutions and supports several vocational training institutions. It is necessary to consider how this network could be used for employees who are about to change jobs, either in terms of career guidance, career change or even vocational retraining.

The role of interest representatives

At the beginning of 2020, a dialogue was started between the BDSZ, the United Electricity Workers' Trade Union Federation (EVDSZ) and the Central Works Council of Mátra Power Plant and the Ministry of Innovation and Technology (ITM) (at the initiative of the trade unions) regarding the future of Mátra Power Plant and its employees. The first necessary step was the setting up of a consultative committee of the social partners (Ministry, Mátra Power Plant

management, trade unions, Mátra Power Plant Central Works Council). The task of the Committee is to discuss the transition and to develop proposals for the creation of new sustainable jobs in the area of Bükkábrány and Visonta.

As a result, ITM supported the creation of the committee with the involvement of the trade unions and the works council.

Financing the transition of Mátra Power Plant Zrt.

From the point of view of financing the transition, we have reviewed the EU options that can support workers. These were:

- Platform for Coal Regions in Transition,
- European Just Transition Platform,
- Just Transition Fund,
- Sustainable Europe Investment Plan,
- Modernisation Fund
- Innovation Fund
- 10c derogation support under the EU Emissions Trading Scheme (ETS), as part of ETS reform
- Operational Programmes (2021-2027) - KEHOP+, GINOP+, TOP+
- Horizon Europe
- METÁR (national resource): Support scheme for the transfer of heat and electricity from renewable and alternative energy sources
- Energy and Climate Policy Modernisation Mechanism (ECMR, national resource)
- Instrument for Recovery and Resilience

From the perspective of Mátra Power Plant, it is important to note that the National Energy Strategy 2030 states that "economic structural changes towards lower carbon intensity energy production and consumption may bring significant changes in employment needs and opportunities outside the energy sector. To achieve a 'Just Transition', the strategy aims to:

- provide the opportunity to monitor labour market developments associated with the energy transition and to reverse any negative trends;
- help to improve job opportunities in the green economy sectors, thereby improving the competitiveness of the area;
- provide support for the upskilling and retraining of vulnerable workers;
- extend certain development policy support to vulnerable social groups and regions;
- promote equal opportunities for women and vulnerable social groups and regions, either through specific "just transition strategies" or "just transition agreements"

The National Energy Strategy 2030 lists resources for the phasing out of the lignite-fired units of Mátra Power Plant and the plant's transition to clean energy. These are:

- Mechanism under Article 10c of Directive 2003/87/EC
- Mechanism under Article 10d of Directive 2003/87/EC (Modernisation Fund)

- LIFE Programme
- Council Decision 2010/787/EU on aid to facilitate the closure of uncompetitive coal mines (The Decision provides for the possibility of granting exceptional aid to alleviate the social and environmental problems caused by mine closures until 2027. The aid may be financed by a levy paid by non-residential consumers in their electricity tariffs (lignite levy).
- Market-based loans and loan products offered by the European Investment Bank

The Just Transition Fund and Mátra Power Plant

Annex D of the 2020 Country Report covers Mátra Power Plant in detail, mentioning that Mátra Power Plant and its two coal mines in Heves County are the largest carbon emitters. The shift away from fossil fuel production is likely to lead to a significant transformation of mines and energy installations, affecting a significant number of workers. The country report stresses that *workers affected by the transition need to acquire new skills in line with labour market demand to improve their employability prospects and receive personalised job search support from employment services*. The Just Transition Fund can promote *economic diversification and retraining* and increase the country's attractiveness to investors.

To address these challenges of transformation, priority investment needs have been identified to cover the socio-economic costs of transformation. It should be noted that the main actions of the Just Transition Fund in relation to the transformation could be, in particular:

- investments in affordable clean energy technologies and infrastructure, greenhouse gas emission reduction, energy efficiency and renewable energy;
- investments to promote the circular economy, including through waste prevention, waste reduction, resource efficiency, reuse, repair and recycling;
- investments in land restoration and decontamination, land reclamation and reuse projects;
- training and retraining of workers;
- job search assistance for jobseekers;
- active inclusion of jobseekers in the labour market;
- technical assistance (Annex D of the 2020 Country Report)

Mátra Power Plant - own contribution

The net production cost of the coal-fired units at the Visonta and Bükkábrány mines of Mátra Power Plant which rely on lignite from the Visonta and Bükkábrány mines, would have allowed it to compete with the production price of the Paks nuclear power plant, but the carbon tax, which has risen from 15 to 50 euros per tonne in less than a year, has significantly increased the price of electricity produced here. The company's loss in 2020 was HUF 43 bn and its operating profit HUF 800 m. Management is made unprofitable by emission allowance expenditure of more than HUF 20 billion. The cost of the emission allowance is paid into the country's budget. For electricity generation, a temporary allowance could be provided at a

discount or free of charge. The remaining profit in the company could help finance the transition.

If Mátra Power Plant cannot stay below €50, including the carbon price, as it did last year, it will not make a profit.

Mátra Power Plant - vision at the beginning of 2021

According to a statement by MTI on 5 February 2021, the nine-year transformation of Mátra Power Plant has begun, but the transition, which aims to make the company carbon independent and includes the recultivation of mining sites, energy efficiency and the promotion of regional green transport solutions, must not endanger existing jobs". That's what the Minister without portfolio responsible for the management of national assets and the Minister of Innovation and Technology said after talks with members of parliament and trade union leaders in the region.

In December 2020, ITM and the relevant executive agency of the European Union signed a grant contract with a total budget of HUF 5.2 billion to implement the National Energy and Climate Plan and the LIFE-IP North-HU-Trans project, which will help the sustainable and just transition of Mátra Power Plant. The restructuring, which will be implemented over a period of 9 years, will ensure that the situation of the workers concerned is resolved, that the mining culture is preserved and that the necessary retraining is provided through retraining and company mobilisation programmes. The conversion and the new economic capacities created will create sustainable jobs in the longer term (e.g. through the solar power plants to be installed at the sites of Mátra Power Plant, the operation of new types of power plant equipment and the labour needs of the companies supporting the operation).

In addition to the Ministry of Innovation and Technology, the project will be implemented with the participation of key government institutions in the energy sector, relevant actors in the region (county government offices, local governments, county chambers of commerce and industry, universities), trade unions and NGOs.

The technological transformation of the power plant will be implemented as a comprehensive regional development programme in line with the Climate and Environmental Action Plan, while maintaining employment in the region. The government and the company's management consider cooperation with local authorities, economic operators, interest groups and institutions to be crucial. The company's lignite-fired units are scheduled to be phased out by the end of 2025. The MVM Group's medium-term goal is to replace obsolete power generation units with new, more efficient, innovative and lower-emission technologies. The ideas include the creation of a pilot plant using clean coal technology, and the introduction of a chemical technology that will enable modern feedstock production with minimal climate impact and lay the foundations for the medium-term sustainability of the mining industry. It is expected that the investment will be financed by a grant of more than HUF 100 billion, which will be available in the form of free allowances to be distributed to electricity generating installations for the modernisation and sustainable transformation of the energy sector. Additional funding may come from the Just Transition Fund.

2. Publication of professional developments

Information leaflet and brochure

A short information material in the form of a leaflet on the nature, objectives and results of the project in sector B has been prepared, with on-line contact details of the material to be produced, for workers and stakeholders in the sector. Based on the results of the survey, the research and the proposals for solutions developed, an *information brochure* has been produced to provide information not only to workers but also to employers.

Information event (conference)

A conference will be organised to share the results of the project with employees and employee representatives, with the aim of presenting the results of the analyses and the database.

Proposal package

A set of recommendations will be prepared for decision-makers, based on the results of the data collection and the conclusions of the analyses on the labour market situation in the mining sector (labour market transition and labour market balance), concerning emerging needs for adult education and training, and the available opportunities and supply.

3. Implementation of a pilot project

Design, testing and adaptation of the pilot methodology

The pilot project planned within the project aims to improve the adaptability of the employees of Máttra Power Plant to the labour market by preparing a group of employees for the changes that will *affect their employment in the near future. At the same time, it is hoped that the concrete experiences and lessons learned from the pilot project will be useful for the mining sector as a whole, for other convergence regions and for other sectors.*

The methodology describes in detail the elements of the pilot project - training, personal counselling, service development, information event, information booklet, timetable -, the way of recruiting and involving participants in each programme, and the criteria. It contains the necessary document templates, guidelines for the preparation of leaflets, awareness-raising posters, evaluation sheets and evaluation of questionnaires. After analysis of the latter, the methodology used is refined, supplemented and modified.

Training

The 16-hour Williams Life Skills®² stress management and communication skills training for labour market adaptability was organised for 27 participants. The training is a small-group skills training, where it is important that the number of groups does not exceed 12. At Máttra Power Plant, the training was conducted in three small groups with the help of a facilitator.

The skills acquired during the training will help you to effectively deal with problems and stress in everyday life, develop self-awareness and emotional intelligence. They develop mutually supportive relationships and increase personal effectiveness. The training aims to develop self-

² The programme was developed by Dr Virginia Williams and Dr Redford Williams, leading experts at Duke University (Durham, NC, USA), based on the latest findings in stress research and drawing on decades of experience in group therapy. The Hungarian version of the programme was developed in 2004 by the Selye János Hungarian Society for Behavioural Science and Behavioural Medicine.)

awareness, problem-solving skills, increase adaptability, recognise and overcome stress at work and stress arising from new tasks and challenges in the workplace.

During the preparation of the training, in the first phase, the company's HR director and the chair of the works council (the local managers of the pilot project) discussed the essence and objectives of the pilot project and the details of the methodology used with the shop stewards.

In the second phase, the mine directors were consulted - the support of senior managers being particularly important - on the purpose of the training, the methodology, the topics of the training and possible methods for selecting the participants. The two mine managers asked for time to reflect on what they had heard and to read through the methodology booklet. At the second meeting, it was agreed to finalise the training, with both mine managers giving their full support to the training. Taking into account the staffing ratios of the two mines, it was decided to hold a 2x2-day training in Visonta and 1x2-day training in Bükkábrány.

The training was communicated to target groups through posters and information leaflets, both in writing and orally. In Bükkábrány, the selection of participants was based on an application (filling in an application form), which was not conditional, as all workers in Bükkábrány could apply for the training.

In Visonta Mines, a different selection method was chosen due to the larger number of employees and the more fragmented organisational structure. Using the SAP HR labour database of Mátra Power Plant, we selected the 50 professionals aged 54-59 with the longest employment at Mátra Power Plant.

These 50 persons were called together for a verbal briefing on two occasions and asked to apply for training in one of the two groups. In addition to the HR Director, mine directors and trade union leaders were present at each oral briefing. It was important that the staffing of the groups did not change during the training sessions organised on different days.

The significant positive change in the participants between the opening and the closing, in terms of openness, liberation and communication, was astonishing. This change was noticeable in all three groups. This outstanding result is due to the professionalism and sensitivity of the facilitator. The verbal and written feedback from the participants was very positive, as can be seen from the evaluations below.

How much will you use some of the skills you learned in the WÉK training in your daily life?	Not at all	Maybe I will use it	I will use it often	I will use it regularly
Calculated decision-making (FILE technique)		4	11	12
Thinking through situations from several angles		1	13	13
Relaxation techniques		6	12	9
Formulate requests effectively		2	12	13
Saying "NO" effectively	2	8	9	8
Problem solving by collecting ideas		3	16	8

Better understanding of the other person's point of view	1	14	12
Positive manifestations to improve relations	2	8	17

In the evaluation questionnaire, they were also able to express their own views, and it was particularly interesting to note that they would find such a training session useful for the management as well.

What did you find most useful in the training (self-completion question)
There was a lot of interesting stuff
Thinking through situations, problem-solving ideas
Broadened my "world view" in my efforts to manage conflicts peacefully.
Communication, ability, problem-solving conversation
I got a lot of new information
I will be more self-controlled with managers, I will be more thoughtful
Connecting with and getting to know peers, acceptance and learning new things
Talking to people with similar ideas and problems
I have learned many interesting things that I can and will use
Change of perspective and mindset
Talking, using exercises, listening to the other person, analysing situations. Many people should take such a course.
Help with workplace conversation, communication, work management. I would also recommend training for senior management once a year
I would consider it important to train the management to better communicate with employees.
Relaxation exercises. Techniques for calculated decision making.
These trainings should also be held for senior managers, they would make less bad decisions
I got reinforced in developing a positive vision.
Honesty, I see and handle many things differently than before.
Mastering the FILE technique
Managing the stress of possible job loss and everyday situations.

To see things and problems in different ways, so that we can deal with them and solve them as easily as possible.
It gave me a lot of practical material that helped me to understand the techniques better, so that I can apply them better in real life. Also, it was good to be able to talk about my problems, I felt relieved that others had similar problems and could give me advice.

In addition to the above, they were able to talk about their workplace problems and suggestions that they felt they could not do so in front of their managers. Many of them pointed out the poor quality of protective equipment, the lack of maintenance, the poor state of the fleet, the lack of minimum conditions for staff and the lack of professional respect, etc.

In the context of company restructuring, it is particularly important for workers to be properly informed and to avoid uncertainty. Even vocational retraining is being sidelined, as can be seen from the replies below.

How could your workplace support you in making a change?	
Vocational retraining	19
Covering the financial costs of retraining	11
Provision of individual consultation	7
Skills development training	9
Preparation for finding a new job (writing a CV, motivation letter, etc.)	8
Continuous information on expected organisational changes and opportunities within the company	24
Other information	Early retirement pension Training for senior management

A large number of them requested that the training should continue and that the trainer should also teach their colleagues to "dance", so that the "overall dance" in the workplace is impeccable. Many of them particularly recommended this training for middle managers.

Would you recommend the programme to your friends and colleagues?	No	Maybe	Yes
			27

In summary: the training was mainly given to low-skilled miners over 50 years old, who are expected to still be working here in 5 years' time, when the mine closures are implemented. Based on the positive feedback received from the training, we recommend that decision-makers create the possibility for these training courses to continue for other workers with the same topics.

Service/advice for workers and employers

During the recruitment selection process, employees can opt for personal counselling if they do not wish to attend training. Personal counselling will be useful for workers who are already thinking about a job/career change and need to identify how to adapt as smoothly as possible to the labour market and the (increasing) demand on the labour market.

Counselling for employers (HR manager, other managers), employed in the project and in charge of the implementation of the pilot project, is the responsibility of the professional implementers, either in person or in group consultations at the request of the employers. (Awareness raising for employers in providing opportunities for employees is essential.)

Service development methodology

The aim of the methodology developed is to facilitate the development of a package of services to facilitate the transition to the workplace, which can be applied in a company facing a similar situation to the mining operations as that of Mátra Power Plant. In the present case, given that the lead organisation of this project is an employee representative organisation, the importance of partnership in change management is emphasised, as well as the importance of preparing the employees concerned for change. In this case, one of the questions to be addressed is how to make people more open, how to get them to take more responsibility for shaping their own destiny and to be more creative.

In the integrated service model, the different parts (needs assessment, service plan, communication plan, outreach, recruitment, access, selection, involvement plan, diagnosis preparation, individual and/or group development plan) build on each other. The service development process also includes the preparation of the necessary documents for the service, e.g. the development diary, etc. In developing the *content* and nature of service development, we have also taken into account the results of a study of good practice abroad.

Information event on the pilot project

Information on the results of the pilot project at its closure. The participants of the event will be employees, trade union leaders and representatives of employers from the mining plants of Mátra Power Plant.

Participants will receive an information booklet produced by the project, which will also be published in printed form. Speakers at the Information Event will include the professional implementers of the pilot project. A round table discussion will be held with some of the workers who have received training and counselling from the pilot project, to talk about their personal experiences and the success or otherwise of the project. Preliminary press release on the event.

Information leaflet

An information booklet on the content, methods and first results of the pilot project will be produced and published in an accessible format, also in printed form. In addition, the information booklet will be available on-line, both on the project website and on the websites of the participating organisations.

4. Capacity building activities of social partners

Apprenticeship

Hiring a graduate trainee for 13.5 months, 9 months of which financed from the project budget and 4.5 months self-financed, to gain experience in the labour market and to open up to younger generations. The trainee was involved in a number of project activities.

Capacity building training

The training was organised with the participation of the social partners - the Hungarian Mining Association (MBSZ) and the BDSZ - officers, employees and secretaries of the BDSZ's organizations involved in the mining sector. The topics of the programme were:

- Developing adaptability in the labour market, thinking together, getting to know each other's points of view and positions
- A set of rules on collective and individual rights in the world of work. Levels, institutions, actors and functions of reconciliation of interests in the world of labour. Institutions for the protection of workers' interests and participation and their functions, possible forums and techniques for cooperation.
- A description of the main provisions of the collective agreement at the workplace.
- The legal provisions in force on the terms and conditions of employment, the content and form of the employment contract. Legal provisions on wages and working time.
- Characteristics of company wage and working time systems. The trade union's role in defending trade union interests in relation to the organisation of working time and pay.

Consultations were held both during and at the end of the programme, where the representatives of both sides gained valuable experience.

Social partners' capacity building seminar

The social partners, the MBSZ (Hungarian Mining Association) as the employers' side and BDSZ (Hungarian Mining Union) as the employees' side, organised a joint seminar with the aim of increasing their negotiating capacity and strengthening their collective bargaining ammunition by learning and discussing the results of the research and methodology developed during the project.

5. International and EU cooperation

International examples

The EU's climate protection measures to achieve decarbonisation targets for the energy system, as indicated in the introduction, will have serious consequences for employment, as trade unions have pointed out in good time. This has led to the concept of 'just transition' being put at the heart of the decisions.

Since the main element of climate agreements is to reduce carbon emissions, it is directly the coal-based energy production, indirectly the mining industry, that is forced to suffer massive cutbacks, creating entire regions with no prospects. "In order to ensure that no region is left behind in this transition, the Commission has launched an initiative for carbon and carbon-intensive regions. This platform, as a non-legislative element of the Clean Energy for All Europeans package, will help to reduce the social consequences of the decarbonisation

transition". These were the words used by the Commission to justify the creation of "The platform for coal regions in transition". The platform involves BDSZ, so that we have a direct insight into the processes in European coal regions that have either already taken action to mitigate the negative effects of transition or are planning to do so. The work in these regions is described in our study "Good practices abroad", available online and briefly described below.

Drawing lessons from its international programme to address the problems around coal mine closures, the World Bank makes the following findings in its report *Managing Coal Mine Closure: Achieving a Just Transition*, which is continuously updated:

The social and labour market consequences of mine closures can be successfully managed if *several factors are involved* in the strategy: governance is in the hands of the government, decisions are taken by a high-level body, the decision-making process is well coordinated, a special mine closure agency is established, and *consultations with stakeholders during the planning phase* can significantly reduce social conflicts. Mine closure is a systematic process aimed at reducing social and labour market impacts, *it must start well in advance of redundancies* in order to be an orderly, less stressful and ultimately less costly process.

After redundancies, redundant workers must be helped, if necessary with income support, to keep them in a condition that allows them to re-enter the labour market; a 'just transition' means recognising the different needs of *different groups of workers*: the pre-retirees, the middle generation, young people, women must be treated differently.

The collection of international experience has focused on these aspects. The study showed that the aspect of helping the workforce cannot be singled out from the other components of "good practices", they are interrelated and the result can only be assessed in a complex way. It is a truism, for example, that education is the primary driver of adaptability and transition. However, for this general statement to be translated into concrete terms, several conditions must be met: political will at all levels, social acceptance, legislative backing, financial resources and, not least, a concrete strategy for the post-closure (or not closure) period, which will determine the direction of education and training.

5.1. Germany

The German example is the most complex in terms of addressing the problems of coal regions, given that all levels of public administration were involved in the process and the widest range of stakeholders were consulted, resulting in broad support for the measures envisaged.

The federal government has set up a commission called the "Commission for Growth, Restructuring and Employment", or "Coal Commission". The task of this commission was to draw up proposals for a social and structural development strategy for the lignite regions and the development of their financial security. At the same time, and in parallel, due to the climate crisis, the government expected the Commission to make proposals for the phasing-out of coal. The Committee called for a phase-out of coal-based energy production by 2038.

In August 2019, the Government adopted the "Structural Strengthening Act", which sets out the financial resources needed to implement the recommendations.

The agency "Zukunftsagentur Rheinisches Revier", which is responsible for the phasing out of the coal mines in the Rhineland Coalfield, has developed an economic and structural change programme for the Rhineland Coalfield, which will form the basis for future funding decisions. The launch event was attended by representatives of the authorities, companies, associations,

local higher education institutions and ordinary residents. The restructuring process will be carried out with the full involvement of all stakeholders.

The concept of restructuring in the coal region of Lusatia in eastern Germany is similar to that of the Rhine mining region, which is considered a model. With an annual production of 180 million tonnes of lignite, Germany is the world's leading lignite miner. A third of this amount is mined in the Lusatia mining region. This means that mining is clearly the economic driver of this border region.

The biggest challenge for Lusatia is how to make up for the mining industry's contribution to the region's value creation. Important elements of this are the supply of well-paid jobs for future generations covered by collective agreements and the management of the negative impact that the disappearance of mining will have on suppliers and service providers.

Two key objectives of job creation are to balance labour supply and demand and to promote inter-professional and regional mobility. In addition to technological and structural change, the Vocational Qualification Opportunities Act also foresees the need to support the learning of so-called "bottleneck" occupations. A list of these occupations is published every six months by the Labour Office. Occupations related to those in the coal mining sector could be: automation engineering, construction electricity, electrical machinery, pipeline installation and maintenance, civil engineering, machine handling, railway vehicle driving. There is therefore a demand for professions and activities that are not unfamiliar to workers previously employed in the mining industry and are closer to their professional interests.

5.2. United Kingdom

Yorkshire was the centre of the coal and steel industry in the twentieth century. Thanks to the high quality of coking coal in South Yorkshire, the regional steel industry produced 2,848,000 tonnes of steel at its peak in 1970, which had shrunk to 131,000 tonnes by the 1980s. Today, coal is no longer mined in Yorkshire and the regional steel industry - the largest user of coking coal - has been on the decline since 1970. The number of steel workers employed in the region is now 9,000.

According to the TUC (Trades Union Congress), the British government has no established strategy for dealing with the mine closures. All the government has supported for the redundant workers is a two-day job-search course and a referral to some training. Many workers wanted a change of occupation, but only basic skills training was available, with a six-month waiting period if they wanted to apply for serious training. After that, there were only two options: unskilled work or unemployment.

The Coalfields Regeneration Trust, funded by the Department for Communities and Local Government, is helping local authorities to develop the economies of former coal mining regions. This support includes helping local communities and voluntary organisations to organise their programmes, providing financial support for social services, and loans for small businesses and start-ups.

Trade unions also tried to help workers in difficulty and played a key role in retraining the region's mining communities. A key role in this has been played by the Castleford Community Learning Centre, a TUC-sponsored training facility funded through Unionlearn (the union's state-funded training institution).

Industrial and business support institutions, such as the Local Enterprise Partnership, have an important role to play, as they can be involved as investors in the deployment of new low-emission technologies.

In partnership with local business associations, local government, the Greener Jobs Alliance, Friends of the Earth, the region's universities, the London School of Economics and a range of employers, the Just Transition Task Force has begun to develop – among others - a programme of training and other activities to revitalise the region's economy. The task force aims to promote change, adaptation of the primary industry, training and upgrading of existing workers and training of new workers in the use of new technologies.

Overall, the British example is not necessarily the one to follow. After all, despite the fact that 950 mines were closed in Britain by various governments between 1947 and 1994, one would expect that, after such a long period and such a large number of mine closures, some kind of procedure, some kind of good practice, should have been established.

5.3. Romania

Romania joined the Coal Platform in early 2018, making the Jiu Valley mines region the first part of the country to benefit from this initiative. The projects of the Jiu Valley Restructuring Plan aim at the economic diversification of the region, a healthy environment and technological development, while also contributing to the reduction of carbon emissions.

The Ministry of the European Funds has taken on the role of coordinator of the project in the Jiu Valley, given that the project involves actions in a number of areas. A meeting was organised with the leaders of the municipalities in the region and the project's Steering Board before the project was launched. At this meeting, the concrete development plans to be considered were reviewed and presented at the Coal Platform meeting on 12 July 2018. These projects are in the areas of transport infrastructure, energy efficiency, tourism, industrial development, land development and social areas.

National Company for Mine Closure, Jiu Valley: the Company was established on November 1, 2012 to operate until December 2021, when the closure and "greening" process, as foreseen in the closure plan, are completed. The objectives of its activities are: full exploitation of the whole coal resource, gradual closure by securing the mine shafts and rehabilitation of the site.

Among the restructuring measures included in the closure plan, the mass redundancies took place up to the closure of the activities of the three sites and the liquidation of the Company, and affected the entire workforce.

An important element of the social measures was the enrolment of workers in retraining courses prior to the mass redundancies. The amounts earmarked for the costs of the retraining courses were initially included in the budget of the former mining company and then in the budget of the Mining Closure Company, which was set up in the meantime.

In the framework of the Jiu Valley project, the RWEA (Romanian Wind Energy Association) educational institution has taken on the task of providing vocational retraining. The objective of this institution is to help to pave the way for a sustainable transformation of the country, modernising the economy and society. A prominent part of this is to facilitate the restructuring of coal regions, in a socially equitable way, by preparing them for the use of environmentally friendly technologies. The project has been implemented through the creation of a vocational training centre in the Jiu Valley, modelled on the existing RESS (Renewable Energy School)

in Constanta. Over the duration of the project in the JiuValley (10 years), the institution undertakes to train 800 technicians per year, totalling around 8,000 people, to operate renewable energy programmes and distribution networks.

5.4. Poland

The objective of the project "Direction Silesia 3.0, Internal Development Programme for Silesian Voivodship until 2030" is to respond to the current and dynamically changing challenges facing the regions. The title of the document refers to the development programme adopted by the government in 2015 to support Silesia's development alternatives in the context of the crisis in the mining sector, and to implement quickly and efficiently the restructuring process set out in the document "Silesia 2.0".

The programme 3.0 was adopted by the Polish government in January 2018 and has two parts: 1) analytical/diagnostic and 2) practical/implementation, covering specific objectives and actions. 10 specific objectives have been identified to achieve the main objectives. The Ministry of Energy is responsible for the implementation of the programme. A Mining Steering Board has been set up within the Ministry to monitor the implementation of the programme. The restructuring programme for the mining industry is part of the Sustainable Development Strategy.

One of the most successful projects of the programme, launched in 1993, was the Katowice Special Economic Zone (KSEZ), which was owned by the Treasury and the local municipality. The KSEZ's scope of activities: cooperation with the government, municipalities and business. It sells land for investment (brownfield and greenfield), carries out restoration work and participates in the financing of infrastructure investments. The objectives of the project are to support industrial activities, create new jobs, regional development, provide tax incentives for businesses investing in the zone, create industrial clusters and support dual vocational training. The programme is self-sustaining, the economic zone covers an area of 2 614 hectares and has 4 sub-zones. Results so far: more than 350 industrial enterprises, 600 industrial projects, 76,000 new jobs, more than 7.3 billion invested capital. The results have been recognised beyond the borders, as evidenced by the "Europe's Best Free Economic Zone" award in 2015, 2016 and 2017 in several categories, as well as the top ranking in the international Business Financial Times ranking.

There have also been attempts in Poland to tackle unemployment through employment pacts. The Employment Pact was set up as a municipal initiative in the south of Poland in September 2003. The pact has been signed by 17 cities with a total population of over two million.

The partial closure of unprofitable mines and related plants in the process of industrial restructuring has led to significant unemployment, and has also contributed to the closure of many vocational training institutions linked to the sector. This problem has been addressed by the project "Silesian Professional employees", which is being implemented under the Regional Operational Programme 2014-2020, from 2019 to 2022, with a budget of PLN 20 million, of which PLN 17 million is ESF, 2 million state aid and the rest own resources. The list of supported occupations is selected from the qualifications identified in the „Technological Development Programme 2010-2020” of the Silesian Voivodship (PRT 2010-2020). This document serves as a strategic blueprint for innovation development and aims to strengthen the region's competitive position.

5.5. Czech Republic

The Czech restructuring project covers three regions: the districts of Ústi, Moravia-Silesia and Karlovy Vary. The basic objective of the strategy is to restructure the economy and to overcome the economic backwardness of the regions. From the point of view of the population, the strategy focuses on two important objectives: to increase identity and confidence and to present a more positive image of the regions to the outside world. The Czech government adopted the Framework Strategy for the Economic Restructuring of Regions in 2015, and in 2017 the first action plan for the implementation of the strategy was prepared, containing 65 elements. These were framed by the RE:START project.

The Coal Platform has provided valuable support in solving problems in the following areas: the use of land restored after mine closures, exploiting the potential of pumped storage power plants, the use of geothermal energy, specific problems of brownfield investments, improving the quality of education according to the social needs of the region, tailor-made calls for proposals for structurally lagging regions, waste management, adaptation to climate change, improving air quality.

A well-established facility in the framework of the RE:START restructuring project is the Dolní Vitkovice (DOV) complex, which was created at the place where coal was mined between 1828 and 1998. In 1828, the Archbishop of Olomouc, Rudolf Habsburg, issued a document authorising the construction of an ironworks in Vitkovice. This authorisation led to the creation of a heavy industrial complex unprecedented in Europe, where everything from coal mining to coking and foundries was located in one place. Today, it is a unique educational, cultural and community-leisure centre, visited daily by countless local residents and tourists. DOV is a unique industrial site. It is managed by a private company (NGO) whose mission is to make former industrial facilities available for educational, recreational and cultural activities.

The Litomerice geothermal project was implemented also partly as part of the RE:START project. The RINGEN research institute was founded in 2016. The costs of setting up the institute were covered by the Operational Programme "Creation of Research Infrastructure" and the Ministry of Education and Youth. The objective of the establishment of the institute was to create a unique high-tech research centre providing the scientific background for the exploitation of geothermal energy.

The Moravia-Silesia Employment Pact, which covers three areas: economic development, employment and social inclusion based on occupational opportunities, plays an important role in addressing the region's employment problems.

RE:START belongs also under the umbrella of the employment agreement, which aims to plan the long-term development of the Moravian-Silesian coal regions and prepare them for the post-mine closures, and the national project called KOMPAS (Labour Market Barometer), managed by the Ministry of Labour. This project seeks to assess the labour market trends expected in the future. Another related project is Competences 4.0, assessing the competences expected in the future.

5.6. Spain

The 2018 Spanish "Just Transition Agreement" laid the foundations for the measures needed for a just transition of the coal mining industry and mining communities. It takes into account

the situation of the sector and the financial framework for aid to compensate for the losses of mining activity, in line with the EU regulations for 2019-2027. Another area that is central to the agreement is the promotion of the reactivation of mining settlements. An important element of the agreement is the need to use competitive domestic coal, as this will help to maintain domestic mining activity and employment, while also contributing to security of energy supply as a domestic energy source.

For workers, the solution was early retirement or severance pay, depending on their age. Another possible solution for both employees and subcontracted workers was the possibility of training or retraining, or participation in reclamation work. In addition to mines, workers in coal-fired power plants were also affected by restructuring. In April 2018, the Spanish trade union federations reached an agreement with the government and the companies operating the coal plants (Endesa, Iberdrola and Naturgy) that had started to close the plants.

However, it was not only the workers who needed support, but also the municipalities. Recognising this, the Action Plan for the Mining Regions was developed in dialogue with the regions and municipalities.

After the creation of the EU Coal Platform, the National Coal Platform Task Force was formed. Its first task was to set up a roadmap for linking national and European initiatives. It was also responsible for drawing up the criteria for assessing applications under the programme (employment, social cohesion, environmental objectives, etc.). Each region has its own programme in Asturias, Castilla y Leon, Aragón.

5.7. The potential of the Máttra Power Plant based on international experience

As to which of the European examples presented can be applied in the domestic mining industry and, if so, how, international experience shows that this depends on a great many factors. The most common idea for using closed mine sites is the industrial park. This has already been raised in relation to the Máttra Power Plant, where the core of a possible industrial park currently exists around the plant, but the problem in this case is that the plants there are based on feedstock from the coal-fired power plant currently in operation.

This means that the majority of these plants are out of the question for a possible future industrial park. However, following the Polish example, a special economic zone could make use of the land and infrastructure of the power plant and the plants that will be forced to close down, and new investment in the zone could absorb the redundant workforce. The question of whether the available workforce would be sufficient to meet demand and, in the long term, how the structure of the region's workforce would evolve in the future without a restructuring of vocational training, is of course a new problem. European examples also make it clear (see e.g. Poland) that the development of vocational training is one of the keys to the future of coal regions.

The vast majority of European examples (including those studied above) have transformed former lignite mines for cultural, recreational or both uses. This direction is not inconceivable for the Máttra Power Plant, as a multi-purpose sports and recreation centre could be developed in connection with the nearby Máttra Mountains (similar to the Petrilla project in Romania). The power plant itself (if it is completely decommissioned) could be one of the attractions of a leisure centre to be developed, following the German ("Liegender Eiffel Turm" in Lusatia) or Czech (DOV) examples, transformed or preserved as an industrial museum and linked to the European Route of Industrial Heritage.

As for mines (since it is the power plant that is responsible for carbon dioxide emissions), they should not necessarily be closed down, as the practice in several countries shows. Lignite has a wide range of uses as a chemical feedstock, from activated carbon to soil additives. Thus, the industrial park (or special economic zone) to be developed could accommodate plants for the chemical processing of lignite, which could mean that some miners could keep their jobs and others could (with short retraining) be employed in the new plants. The power plant could also be retained with some modifications: following the German example, it could be transformed into a thermal power plant, relying on the energy from the solar panels installed around it as a back-up and to balance the fluctuating production of renewable energy sources.

Another opportunity could be to join the EU's hydrogen strategy announced on 8 July 2020. According to the strategy, "Hydrogen can be used as a raw material, fuel or energy carrier, or for energy storage, and has a wide range of applications in industry, transport, energy and construction. Most importantly, it has zero carbon dioxide emissions and almost zero air pollution. Hydrogen therefore has an important role to play in meeting the European Green Deal target of making the EU climate neutral by 2050."

The EU Commission's Economic Recovery Plan highlights the need to stimulate investment in key clean technologies and value chains to promote sustainable growth and job creation. It stresses that clean hydrogen is one of the key areas to be addressed in the context of the energy transition and identifies a number of possible alternatives for supporting this. On the other hand, Europe is already competitive in the production of clean hydrogen technologies and is well placed to take advantage of the global development of clean hydrogen as an energy carrier.

6. Capacity building activities of social partners

Training

An 8 hours training for officers and employees of BDSZ and MBSZ to build the capacity and cooperation of the social partners to strengthen social dialogue, through the development of skills for representation and protection of interests.

Cooperation with higher education institutions

The project will involve professional cooperation with the Faculty of Geotechnical Engineering of the University of Miskolc, including professional consultation on the preparation of materials and the delivery of the finished materials to the university.

Joint seminar of social partners

The social partners, the MBSZ as the employers' side and the BDSZ as the employees' side, are organising a joint seminar with the aim of increasing their negotiating capacity and strengthening their collective bargaining ammunition by discussing the results of the research and methodology developed during the project.

Strengthening systemic cooperation between organisations

The systematic cooperation already established between the organisations participating in the project, including in the Sector Social Dialogue Committee, will be further strengthened through joint activities and events.

Establishing an interest representation platform

The capacity building of the social partners will include the creation and operation of an on-line **interest representation** platform on the project's website and on social media (Facebook). The platform will be open after the end of the project to both workers and their representatives (shop stewards, works councils) and employers. The platform can raise and propose for discussion issues of public interest to workers or the company, issues that arise during collective bargaining, thus helping to conclude collective agreements.

7. Activities contributing to increasing representation and coverage by collective agreements

Support for the conclusion of collective agreements

In our analysis to support collective bargaining, we have presented the definition and general regulatory issues of collective bargaining in labour law and the situation of collective bargaining in the mining sector, with a special focus on the Region of Northern Hungary. We have focused on the obstacles to the application of collective agreements in the light of recent developments, which include the transfer of Mátra Power Plant from private to public ownership.

Labour analysis

Analysis on labour relation issues for effective consultation, "Social partners and possible ways to improve their cooperation" in the sector "B" Mining and quarrying, with special reference to labour market transition ". The main arena for effective consultation in Hungary is the company arena. However, workers' demands here must also take into account professional, sectoral issues and national economic developments. The study analyses the data that characterise the labour situation in companies as a condition for effective consultation (balance sheet data and profit and loss account examined with modern economic indicators, correlations between claims based on different indicators, their reinforcing or weakening effect on each other). The analysis assesses the functioning of the sectoral dialogue committee so far and the possibilities for a sectoral bargaining.

8. Summary

In the past decades, many mines have closed in Hungary, and with them many miners' jobs. Experience has shown that mine closures and restructuring can be the smoothest if they are properly prepared and if the widest possible range of stakeholders are involved in the discussions and decisions. The German example, which is the most successful in terms of international experience, is an excellent example of this. That is why it was worthwhile to take a look at international "good practices", and to learn.

During the transition period - the period from the decision to close/restructure to its completion - uncertainty is the most difficult for workers. It is not enough to communicate well the need and reasons for closure, but the most important thing for them is to receive regular and accurate information - as revealed by the responses to the pilot training questionnaire - about employment opportunities, retraining, either in-house - in the case of restructuring - or close to home. The studies and analyses carried out in the framework of the project have shown which companies can be considered for job-seeking, which qualifications may be needed, what kind of retraining should be organised and what resources are available. The mapping of funding

opportunities for transitions, not only for training, also served to identify areas where funding for transitions could be found.

Our main goal was to show that the closure of the lignite power plant and mine can be done in a fair and just way, with as little social tension as possible.