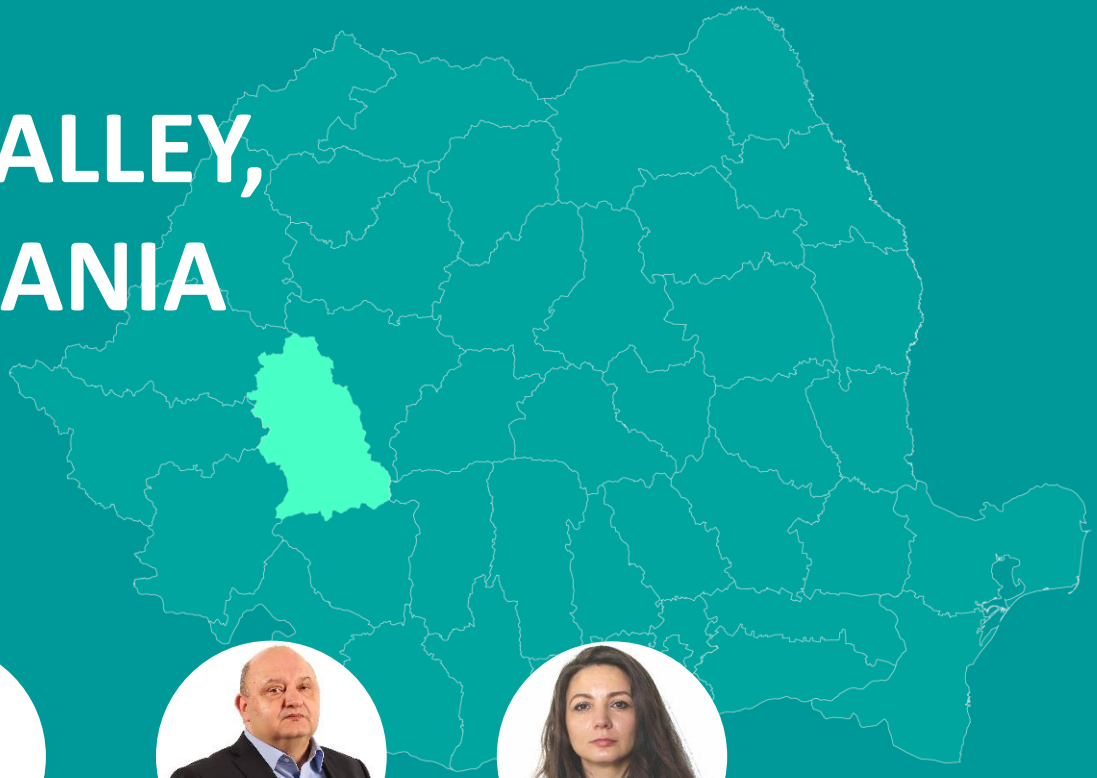
ENTRANCES

ENergy TRANsitions from Coal and carbon: Effects on Societies

POLICY BRIEF

July 2023

JIU VALLEY, ROMANIA



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ENTRANCES PROJECT

ENTRANCES (ENergy TRANsitions from Coal and Carbon: Effects on Societies) is a three-year project funded by the European Union's Horizon 2020 research and innovation program. The project addresses the Social Sciences and Humanities (SSH) aspects of the Clean Energy Transition (CET) through the development of a theoretically based and empirically grounded understanding of cross-cutting issues related to social aspects of the transition in European coal and carbon-intensive regions and the formulation of a set of recommendations able to tackle these issues. To that end, 13 coal and carbon-intensive transition regions in Europe were studied using the same Multidimensional Analytical Framework (MAF), resulting in 13 case studies and an equal set of recommendations that reveal the complexity of the transition process and the impact in the daily life of local communities in its various dimensions.

EXECUTIVE SUMMARY

This policy brief was developed under the Entrances Project and focuses on the results of the Jiu Valley Region case study. Jiu Valley is a micro-region in the Hunedoara County of Romania, comprising seven localities in which coal mining has represented the dominant employment opportunity. At the beginning of 1990, the Jiu Valley could be characterized as a strong urbanized zone, almost exclusively related to coal mining, with more than 60,000 of the inhabitants employed directly or indirectly in this industry and with 17 coal mining perimeters exploited. Since 1997 the Romanian government has implemented programs of labour contract buyouts, which resulted in the closure of several mines. Since then, Jiu Valley has become a region perceived as dramatically affected by social and economic problems generated by decarbonization. There are two coal mines still active (set to close in the near future) and two coal-fueled power stations in the area. Generally, the decarbonization process in the Jiu Valley has been inconsistent, frequently alternating between plans of closing the remaining coal mines in the areas and proposing alternative development pathways, or, alternatively, postponing this decision and procrastinating the phasing out process. The dependence of the region on political interests, the rapid disintegration of the mono-industrial economy, the dissolution of the Jiu Valley administrative cohesiveness, and the reluctancy towards new alternatives and inertia have generated significant challenges that the region has faced, such as economic underdevelopment, out-migration, aging and depopulation. Although various strategies have been developed and implemented in the region to cope with these challenges, most have fallen short of achieving the desired outcome. This Policy Brief reviews these challenges and proposes recommendations to address these gaps.

INTRODUCTION TO THE CASE STUDY

From 2000 to 2018 Jiu Valley had a higher percentage of population loss compared to the other regions, including the country and the EU, representing about 28% of the local population. There is also a significant lag in the socio-economic development of this region, indicated, for instance, by the fact that the share of employed individuals in this region is lower by 10% than the country's level. as well as by the large negative discrepancy in the Gross Value Added of the Jiu Valley compared to the EU28 mean (i.e., placed at one-fifth of the EU28 level during this timeframe). These high socio-economic costs incurred by the local communities during the partial decarbonization process that they have undergone are related to the incertitude and reticence in potential investors, lack of collaboration between administrative units, massive out-migration from the region, a severe scarcity of the workforce specialized in the new technologies, a constant tendency of the national media to convey stereotypical and offensive images of the Jiu Valley, and local nostalgia focused on the "golden age" of mining in the Jiu Valley. With this case study ENTRANCES explores the challenges faced by coal and carbon intensive regions in transition, focusing on various socio-economic, sociotechnical, socio-ecological, socio-cultural, socio-political, sociopsychological, and gender-related factors. It also examines the coping strategies that have emerged in recent years to address these challenges and investigates the variables that have influenced the emergence of deterritorialization and the strategies that determine its success using multidimensional analytical framework (MAF). This policy brief aims to identify policies or policy combinations that would effectively restore territorial and community ties in coal and carbon-intensive regions while promoting their transition to clean energy.

Key questions

Key Question1. What are the challenges faced by coal and carbon transition regions in different dimensions of change?

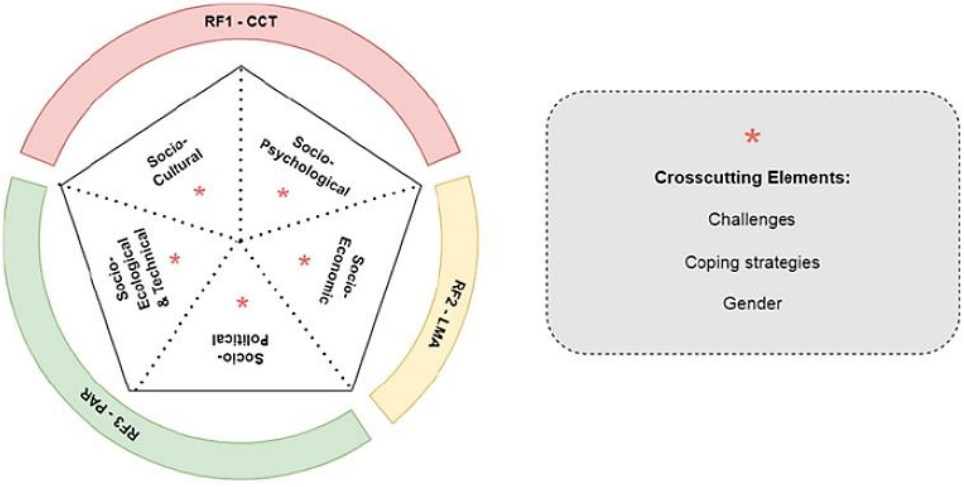
Key Question2. What are the emerging coping strategies and what policies could be more effective to address the identified challenges?

METHODOLOGY:

The ENTRANCES case studies were structured into multiple foci (Territorial Change, Structural Change and Clean Energy Transition) and respective units of analysis (Coal and Carbon Territory, Labour-Market Area and Political Administrative Region) to better address the scope of research. Additionally, a comprehensive Multidimensional Analytical Framework (MAF) consisting of five components: socio-cultural, sociopsychological, socio-economic, socio-ecological, and technical component, was adopted to study the complex and multidimensional dynamics in place.

Each component of analysis is supported by specific concepts and methodologies, as well as three cross-cutting elements: challenges, coping strategies, and gender dimension. The resulting challenges, as well as the gender dimension analysis, provide a very clear picture of the real situation in the region of analysis, accurately highlighting the problems related to the demographic, economic, social, cultural and political configuration. The initial results obtained from the different coping strategies generate new avenues for the discussion and recommendations presented in this policy brief.

Overview of the Multidimensional Analysis Framework: Research foci, components and crosscutting elements



CHALLENGES AND COPING STRATEGIES

CHALLENGE 1

Economic underdevelopment

1 Top-down driven socio-economic development

The reconstruction of the socio-economic fabric of the region has been the major target of several past development strategies proposed and implemented by the national and regional authorities over the last years.

2 Attracting external investment

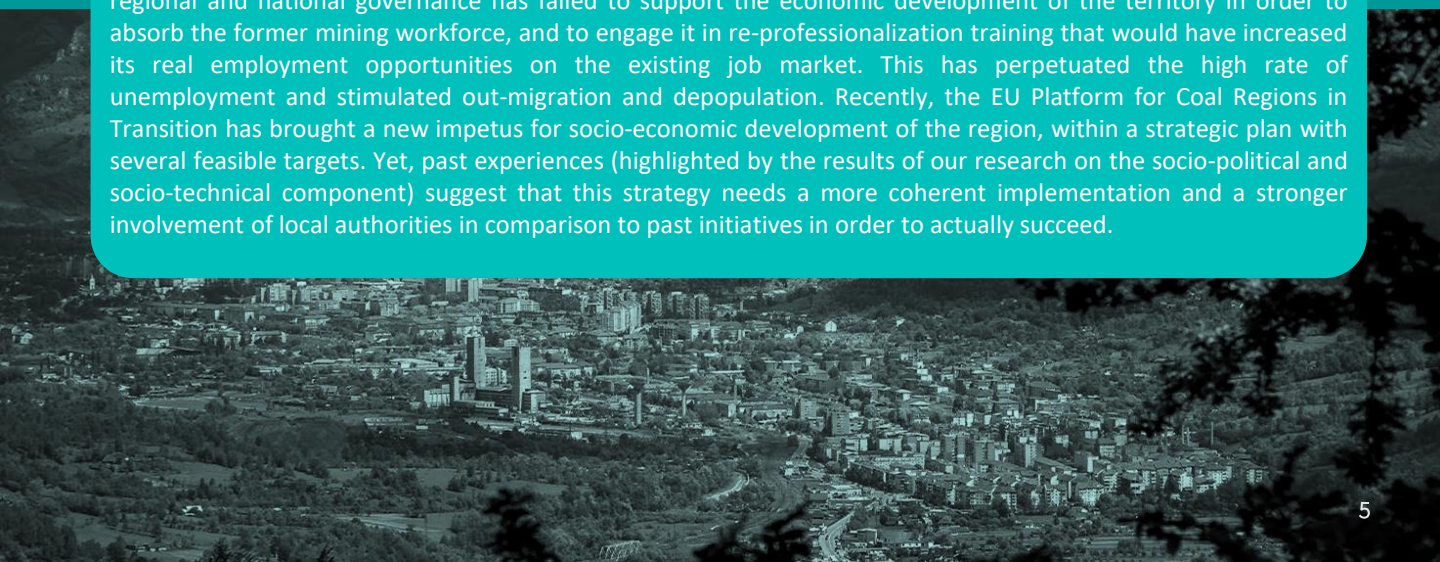
Although several regional strategies have aimed to attract external investments in the Jiu Valley, their success is limited. The deficiencies of the remaining workforce and its lack of specialization in the new technologies contribute to the lack of attractiveness of the territory.

RECOMMENDATIONS

- Merge the fragmented local administrations into an administrative unit that would be eligible to receive EU funding for large-scale development projects
- Implement financial and fiscal incentives for small and medium businesses
- Stimulate collaboration and innovation towards entrepreneurship through community events and business incubators
- Develop the infrastructure needed for these businesses to grow, especially in the tourism sector
- Develop structures that would attract and support large business investments, such as industrial parks and their associated infrastructure (including roads and railway)

DISCUSSION

The ability of the territory to cope with the decay of the mining industry and the consequent unemployment issues have been undermined by the mismanagement of the past transition from coal in the region. In particular, regional and national governance has failed to support the economic development of the territory in order to absorb the former mining workforce, and to engage it in re-professionalization training that would have increased its real employment opportunities on the existing job market. This has perpetuated the high rate of unemployment and stimulated out-migration and depopulation. Recently, the EU Platform for Coal Regions in Transition has brought a new impetus for socio-economic development of the region, within a strategic plan with several feasible targets. Yet, past experiences (highlighted by the results of our research on the socio-political and socio-technical component) suggest that this strategy needs a more coherent implementation and a stronger involvement of local authorities in comparison to past initiatives in order to actually succeed.



CHALLENGES AND COPING STRATEGIES

CHALLENGE 2

Ageing and depopulation

1 Socio-economic development

The socio-economic development of the area, either through successful implementation of a top-down strategy or through external investments, would provide employment opportunities.

2 The development of the local university

The University of Petroșani has attracted students across the country, and its future development may partly compensate for the current ageing and depopulation problems of the territory.

3 Ensuring a reasonable quality of life for the elderly

The University of Petroșani has attracted students across the country, and its future development may partly compensate for the current ageing and depopulation problems of the territory.

RECOMMENDATIONS

- Develop the transport infrastructure connecting Jiu Valley to its neighboring regions in order to allow these businesses to function.
- Provide education and training for the residents in order to ensure the needed workforce for these businesses
- Involve the local university in the planning of the regional energy policies and scenarios of socio-economic development
- Support the development of the local university to cover the new different and various fields of education
- Invest in the development of the infrastructure supporting quality of life in all Jiu Valley communities, in all relevant areas: educational, health system, leisure, cultural, local transport system

DISCUSSION

The chronic ageing and depopulation issues of the territory are closely related to its socio-economic development, which both caused and is currently limited by this challenge, as depopulation creates significant shortages in regards to the workforce available for present and future economic enterprises. Ageing also generates a substantial burden on the regional healthcare and social security systems. There are local resources that may contribute to the future efforts to cope with these issues; nevertheless, they need to be supplemented with consistent efforts to develop the private economic sector within the region in order to render Jiu Valley attractive for the youth.

CHALLENGES AND COPING STRATEGIES

CHALLENGE 3

Inconsistency of the decarbonization policy

1 The generation of such a plan within an EU-driven framework

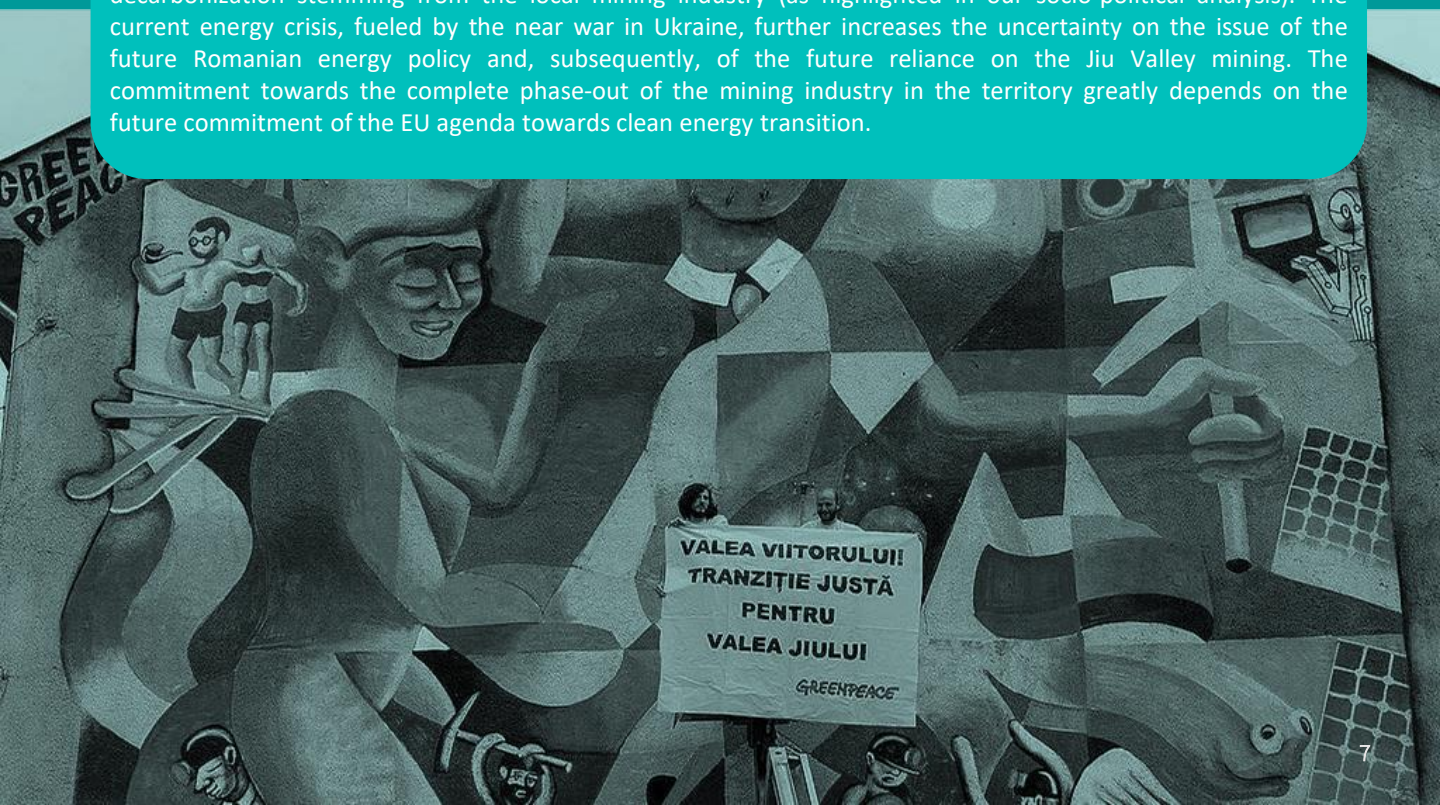
The commitment towards the complete phase-out of the mining industry in the territory greatly depends on the future commitment of the EU agenda towards clean energy transition.

RECOMMENDATIONS

- **Implement the conversion / re-technologization of the Jiu Valley power plants to use other fuels than coal**
- **Evaluate the feasibility of different types of renewable energy production, especially hydropower and biomass, across different potential areas, and plan their exploitation**
- **Promote and foster energy communities**
- **Upgrade the energy grid infrastructure**
- **Adapt regulations in order to allow the exploitation of hydropower**

DISCUSSION

The national governance of the Jiu Valley decarbonization and of the clean energy transition, in general, has been inconsistent, marked by variable political interests, by the chronic inability of the authorities to support alternative developmental and employment pathways for the region, and by the resistance against decarbonization stemming from the local mining industry (as highlighted in our socio-political analysis). The current energy crisis, fueled by the near war in Ukraine, further increases the uncertainty on the issue of the future Romanian energy policy and, subsequently, of the future reliance on the Jiu Valley mining. The commitment towards the complete phase-out of the mining industry in the territory greatly depends on the future commitment of the EU agenda towards clean energy transition.



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