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Report of an ideal-type governance and management structures for transition regions

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Table of Contents

EXECUTIVE SUMMARY	5
1 Introduction	6
2 Methodology	7
2.1 Structured literature review	7
2.2 Data collection protocol	7
2.3 Semi-structured interview	7
2.4 Consolidation scheme	8
3 Theoretical aspects	8
3.1 Data Collection protocol	8
3.1.1 Stakeholder analysis	8
3.1.2 Organigraph method	9
3.2 EU-Toolkits for coal regions in transition	11
3.2.1 Transition strategies toolkit	11
3.2.2 Governance of transition toolkit	12
3.2.3 Environmental rehabilitation and repurposing toolkit	12
3.3 Governance	13
3.3.1 Good Governance	13
3.4 Management	14
3.4.1 Definition	14
3.4.2 Strategic Management	14
3.4.3 Regional Management	15
3.4.4 Excursus: Public-Private-Partnership	15
4 Governance structure	17
4.1 Greece	17
4.1.1 Status Quo	17
4.1.2 Recent History (Politics and Laws)	20
4.1.3 Data Collection Protocol	26
4.2 Germany	28
4.2.1 Status Quo	28
4.2.2 Recent History (Politics and Laws)	29
4.2.3 Data Collection Protocol	30
4.3 Poland	33
4.3.1 Status Quo	33

4.3.2 Recent History	34
4.3.3 Data Collection Protocol	34
5 Analysis of similarities and differences	37
6 Implications towards an ideal-type governance and management structure	41
6.1 Implications in general	41
6.2 Implications for the Webtool	43
7 Conclusion	44
8 Perspective	44
9 REFERENCES	45
Appendix	48
Stakeholder analysis Greece	48
Stakeholder analysis Germany	57
Stakeholder analysis Poland	63
Interviews (Greece)	67
Interviews (Germany)	76
Interviews (Poland)	80

EXECUTIVE SUMMARY

The present report aims to analyse management structures and processes (institutions, roles, governance, collaboration) in selected transition regions (Greece, Poland and Germany). The document provides a general literature review regarding the current state of knowledge. Targeted stakeholder analysis, data collection and expert interviews have been conducted for each of the case study regions. Stakeholders are mostly acting on two transition levels, between the national and regional (Greece) scale or the local and regional scale (Germany and Poland). Recognizing the regional relevance of mining structures, whether social or areal, the hypothesis of a significant regional level is plausible. As already stated in recent literature, participation and constant communication to the citizens can increase acceptance. The focus on informal participation is essential for the success of a project. Informal participation formats are an expression of good governance, as they represent an additional service from the corporate and public side that recognizes the need to take individual interests into account. Other measures of good governance in the institutional or project framework are maximum transparency and, when public funds are used, maximum efficiency. The formation of regional forms of cooperation is able to enforce public interests and at the same time to satisfy economic ones. A popular format of such cooperation can be a public-private partnership. Such an institution has the task to implement a strategic management and to communicate this with regard to the different interests of actors. An exemplary product of a strategy process could be a regional masterplan, which addresses the sustainable development goals of the region.

1 Introduction

In Europe mine closure processes are highly regulated by the government, partly on the basis of general legislation, partly pursuant to licensing procedures specific to the region or location. Details vary from member state to member state, sometimes even from mine to mine. Mine closures offer the opportunity to coordinate the redevelopment and reuse of their locations more closely with public long-term plans and regional development interests. Until now, in many cases the empirical knowledge from local authorities and stakeholders is not taken into account during the planning of post mining management leading to misconceptions and inadequate implementation. On the other hand, many regions have managed this transition process in an effective way. The policies and management practices implemented can serve as guidance for other regions. The WINTER project cross-examines case studies representing both initial (Western Macedonia and Konin region) and mature stage (Ruhr area) of the transition process in order to ensure widespread replicability of the findings and recommendations in other areas.

The aim of Work Package 3 (Socioeconomic and management aspects of coal regions in transition) is to analyse the transition management processes in order to determine best and improper management strategies and implementation practices. Therefore, the actual processes, management strategies and practices that operate within the governance models have to be structurally evaluated. This report focusses on the governance and management structures in the specific regions. The final outcome is a recommendation of ideal type governance and management structures for coal regions in transition.

2 Methodology

The superordinate WINTER methodological approach includes: (i) the environmental and sustainable development dimension, (ii) the socioeconomic dimension and (iii) the integrated management dimension.

The present report has the task of capturing the management dimension. The methodology should allow comparison between the three case studies, Greece-Western Macedonia, Poland-Konin region and Germany-Ruhr area. To support the research approach a number of methods is applied in this study. Beyond the traditional literature review concerning the governance and management of transition in general, the systematic collection of information requires careful selection of the units studied. To understand and compare the management structures and processes (institutions, roles, governance, collaboration) a data collection protocol is developed which includes a stakeholder analysis. Subsequently representatives from the most relevant stakeholders identified are interviewed in a semi-structured way in order to gain an insight view of the management process in particular with regard to the implementation pitfalls.

2.1 Structured literature review

The first tool conducted in this study is the comprehensive, transparent search over multiple databases and grey literature to evaluate the state of knowledge on the topic in general. The literature review is grounded on the following research questions:

- What is the definition of governance?
- What is “Good Governance” in the context of coal transition?
- What is the definition of management?
- What aspects of management need to be considered in the context of coal transition?

The results are discussed in Chapter 3.2-3.4

2.2 Data collection protocol

The analysis include the identification of processes that facilitate specific governance models across the case studies. For this purpose a data collection protocol is developed, which allows the comparison of the different configurations. It is structured in terms of (i) a characterization of institutional structures and stakeholders for each of the case regions, and (ii) an empirically informed typology based on four practices of legitimation – discursive, bureaucratic, technocratic and financial.

The protocol should cover aspects like deliberations, involvement of stakeholders, the exercise of power and bureaucratic exigencies. It is divided into a stakeholder analysis and an organigraph, which visualizes the relationships among actors within the governmental system. The protocol was prepared for each region in collaboration with local experts. The theoretical development of the protocol is presented in Chapter 3.1 and the results are discussed in Chapter 4 (Governance structure).

2.3 Semi-structured interview

Representatives from the most relevant stakeholders identified in the stakeholder analysis will be interviewed in a semi-structured way in order to gain an insight view of the management process. The semi-structured interview combines two methods: the guided interview and the expert interview. Guided interviews are structured by a predefined and systematic sequence of optional pre-formulated questions, keywords or narrative prompts. The guide serves to focus the conversation on research-relevant content and to guide the conversation accordingly. As a result of the systematisation through guidelines, the same questions can be asked in different interviews with different experts in order to provoke comparable answers. At the same time, the use of a guideline limits the maximum achievable openness of the interviewee in favour of a focus on the research interest. The intensity of the structuring of an interview results from the focus of the research interest on concrete and openly collected information. A rule of thumb is "as open as possible, as structured as necessary". The aim is to adapt the interviewee's flow of speech to a certain extent to the research interest underlying the interview and at the same time to maintain

the greatest possible openness in order to meet qualitative demands (Kasperidus 2020). To this end, a questionnaire was prepared, that contains topics and questions that the interviewer can ask in different ways for different participants. Interviews are conducted with a number of selected direct stakeholders in each case study region. The transcribed interviews can be found in the appendix and the contents are discussed in chapters 5 and 6.

2.4 Consolidation scheme

After the documents containing the stakeholder analysis and the data collection protocol have been put together, a guideline has been developed with which comparability can be established. The aim is to analyze similarities and differences between the structures in Germany, Greece and Poland.

3 Theoretical aspects

3.1 Data Collection protocol

In the following subchapter, aspects of the methodology are supplemented by the appropriate form and content within the framework of the report requirements and objectives.

3.1.1 Stakeholder analysis

For the analysis of the involved stakeholders a template is designed which identifies the main participants of the coal transition as well as other interested parties in each case study region (Table 1). The table is divided into six columns: Stakeholder group, Stakeholder name, activities, level of interest, level of influence, and typology. Their activities regarding the transition process is roughly described in a few key words and the level of interest as well as the level of influence are indicated in the following categories: Very Low-Low-Medium-High-Very High. The additional digits from zero to five offer the possibility to later quantify (and visualize) the stakeholder’s role in the whole process. The typology (discursive, bureaucratic, technocratic or financial) yields further information concerning the practices of legitimation. In the first row of the table, the stakeholders are grouped together according to shared and similar characteristics. The same abbreviations are used in the organigraph (3.1.2).

Table 1: Template for the stakeholder analysis

Stakeholder group	Stakeholder	Activities	Level of Interest	Level of Influence	Typology
<i>Abbreviation</i>	<i>Full name and abbreviation</i>	<i>Description of the Activities</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>Discursive, Bureaucratic, Technocratic, Financial</i>
Direct Stakeholders					

Indirect Stakeholders					

Government					

Other Interest Parties					

The experts for each region need to decide who is directly and indirectly affected by the transition process, which governmental institutions are involved and who else may be interested and/or important. For example, beyond mining and power producing companies direct stakeholders may also include businesses which may directly benefit from the transition by e.g. the opening of new investment opportunities in sustainable energy. Other interested parties include civil society organizations, particularly those working in or with affected communities, as well as individuals and groups from sectors that have been identified as particularly dynamic for the process and are

seen as having further growth prospects.

The stakeholder groups are defined as follows (the used abbreviations are printed in bold letters):

1. Mining companies; **MCOMP**
2. Power Producing Companies, **PPC**
3. Labor Unions, **LU**
4. Subcontractors/ Suppliers/ Service companies, **SCOMP**
5. National government, **NGOV**
6. Regional government, **RGOV**
7. Local government, **LGOV**
8. Academia & Research, **ACRES**
9. Local and national media, **media**
10. Environmental **NGOs**
11. Civil Society Organizations, **CSO**
12. Local & national business organizations (e.g. Chamber of Commerce, Chamber of Crafts, Smart Specialization Agencies), **NBUS**
13. Local businesses, **LBUS**
14. Financing institutions (e.g. EBRD, WB, EIB, National Banks), **FIN. INST.**
15. Private investors, **PINV**
16. Neighboring municipalities with no relations to the mining business, **NEIGH MUN**
17. Multinational institutions, **EU/DG (European Commission / Directorate-general)**
18. Public-Private Partnership, **PPP**

3.1.2 Organigraph method

The “Governance of transitions toolkit” published on the Platform for coal regions (Roche 2020) recommends a specific mapping tool for understanding governance models: The organigraph method. It has been developed by the WHO Regional Office for Europe and expert academic partners for mapping governance structures and accountability mechanisms within governance systems (Tiliouine et al. 2018). It visualizes the relationships among actors and stakeholders with shapes and connectors on a single sheet (Figure 1).

Organigraphs represent three elements:

- Implicated actors (shapes representing governmental and other public and nongovernmental actors);
- Relationships among actors (connectors) and;
- Their interactions in a multilevel system (the backdrop of local/national/international levels).

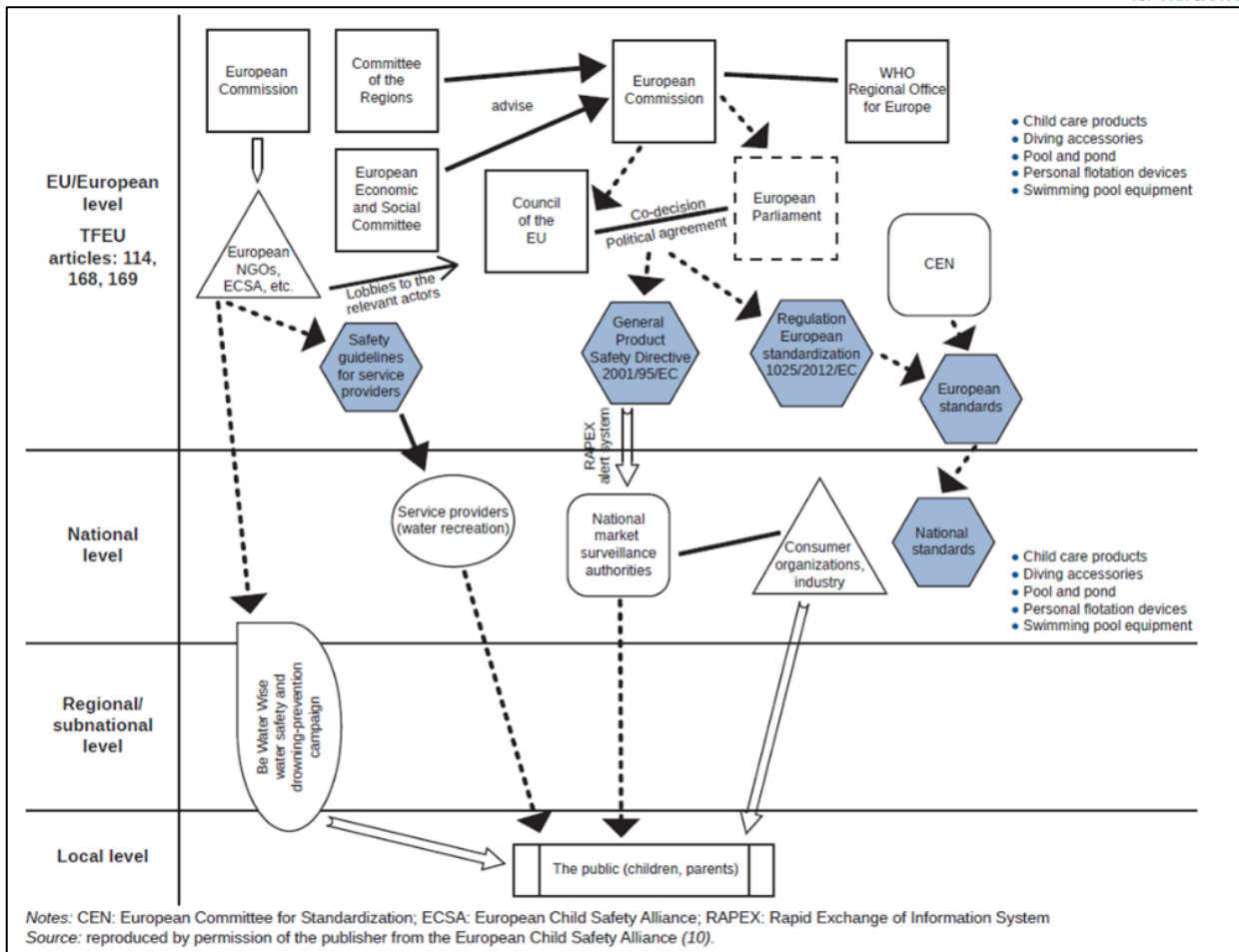


Figure 1: Example of an organigram: Mandated responsibility for water safety at EU/European level (Tiliouine et al. 2018)

The publication from Tiliouine et al. (2018) provides further background information on the organigram method as well as a practical guide to using it. The template has been adopted for the present study as it offers a good overview of the governmental and institutional structures on different levels (international, national, regional and local). Each organigram should depict the mandated responsibilities for the adoption, development, implementation, enforcement and monitoring of the relevant policy-making dimensions in the respective domain. Furthermore it should contain relevant institutions, organizations, central norms (for example, directives and regulations), campaigns, action programmes, etc. and their relationships to each other. The organigrams should be accompanied by a written description to add a chronological dimension. The description should explain the chronological process of implementing the process from adoption to monitoring, describing how each organization was involved and should be written in a step-by-step manner that indicates which steps were taken first and how the problem was approached chronologically.

The key questions for designing the organigram in each case study regions are:

- Who are the key actors? Which institutions are involved in development, implementation, enforcement and monitoring?
- How do these institutions relate to each other and/or work together?
- What are their roles, accountability and political power?

To maintain comparability shapes and connectors are outlined in the template (Figure 2).

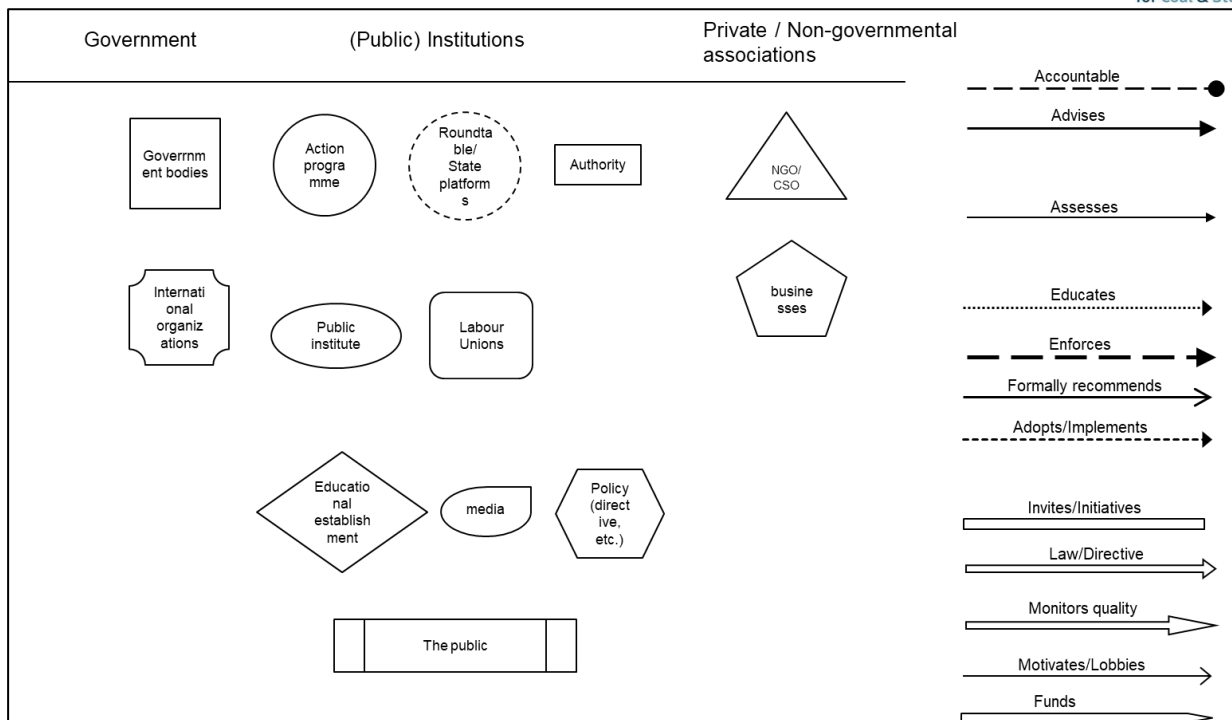


Figure 2: Shapes and connectors used for the organigraph method

3.2 EU-Toolkits for coal regions in transition

Back in December 2017, the previous EU Commission had launched the “Coal Regions in Transition” initiative in Strasbourg (a part of the implementation of its “Clean Energy for All Citizens” package of measures) with the aim of promoting a structural change away from coal mining and use throughout the EU. The initiative promotes knowledge-sharing and exchanges of experiences between EU coal regions, and represents a unique, bottom-up approach to a just transition, enabling regions to identify and respond to their unique contexts and opportunities. All EU coal regions are invited to participate. The Platform published some supporting material to assist practitioners in coal regions across Europe. Thematically, the materials range from strategy development, governance, employment and welfare to rehabilitation and repurposing of coal-related infrastructures. Thus, the collection of structural policy tools cover a broad range of transition topics and tasks. The material is conceived and designed as “toolkits”:

1. Transition strategies toolkit
2. Governance of transition toolkit
3. Sustainable employment and welfare support toolkit
4. Environmental rehabilitation and repurposing toolkit
5. Transition financing toolkit

The information is compiled in different documents featuring the key ideas and concepts behind the elaboration of transition strategies. For more detailed information accompanying material is interlinked. The content of selected toolkits has been reviewed in more detail in the following sections.

3.2.1 Transition strategies toolkit

The Transition strategies toolkit yield guidelines on how to design effective strategies for coal regions in transition. With this, the European Commission is strengthening the importance to guide the various stakeholders and decision makers in transition processes and to align their actions with a coherent and effective approach. Key elements are problem analysis, defining objectives, selecting actions, evaluation and policy adaptation. The guide advises to firstly frame the problem as this strongly influences the next steps. Gathering and keeping information in order to build up a sound knowledge base is required to correctly analyse the context including geographic and economic characteristics, social and demographic factors, and the institutional

setting. If the problem is defined, a long-term vision (with a 30 year time horizon) and development objectives (5 to 10 years time frames) needs to be formulated which is in line with national, EU, and international goals (e.g. European Green Deal and Sustainable Development Goals). The visioning process requests high-level political buy-in from the beginning and the institutions responsible for strategy implementation will need to lead the process. The identification of strategic actions in combination with risks and challenges is accompanied with a tailored funding scheme. Finally a system of monitoring and evaluation must be established from the very beginning of the policy cycle.

3.2.2 Governance of transition toolkit

The toolkit defines “Governance” as a reference to the established channels through which various influential actors and institutions employ formal and informal means to achieve collective (i.e. politically determined) goals. The structure of the toolkit is aimed specifically at finding effective strategic arrangements for a coal transition within the setting of regional governance. It emphasizes that regional governance models should reflect the views of different actors on multiple levels and stakeholder engagement includes an active communication strategy. Further key elements of the governance process are social dialogue and the involvement of civil society. Furthermore, the toolkit recommends suitable governance models on a basis of a step-by-step guide:

1. Understand the existing governance structures
2. Legitimise and make transparent
3. Assign responsibilities for key decisions and build partnerships
4. Identify levers of influence and windows of opportunity
5. Reflect and adjust

van de Loo (2021) postulates that experience with political disputes and conflicts, which play a major role especially in the topic of governance, has hardly been addressed in this toolkit so that practical tools are missing. While substantial importance is attributed to stakeholder participation, there are no explicit suggestions for actions that would secure the best possible involvement of the coal companies and their employees, although they are the primary stakeholders in the coal transition. Civil society groups and organisations, such as environmental activists, are particularly well represented in the coal transition thematic area. In this regard, van de Loo (2021) further notes that the toolkit does not discuss how to solve the fundamental problem of democratic legitimacy of its representatives in comparison to the elected representatives of the people and the office holders they have appointed.

3.2.3 Environmental rehabilitation and repurposing toolkit

The toolkit "Environmental Rehabilitation and Repurposing" provides advice on the closure, renaturation and repurposing of mines, post-mining landscapes and coal-related infrastructure, in relation to financing options, existing knowledge, support tools and policy measures. The main intents include the protection of citizens and the environment from ecological damage and, at the same time, the attraction of new economic activities in combination with the creation of new or alternative jobs at the reclaimed sites. The toolkit also lists typical closure costs – from the costs of planning the closure, demolition of facilities, shaft backfilling, safety measures and mine water management to site rehabilitation and long-term aftercare. In his publication van de Loo (2021) states that the toolkit primarily creates sensitivity in the relevant topics for actors with little experience and prior knowledge and provides an introduction to the contexts, however but for experts and for the concerns of the coal regions the explanations are relatively superficial in comparison.

In summary, assessing the toolkits from a primarily economic perspective, they contain a number of valuable aids for dealing with the ongoing and still pending structural transformation away from coal. However, practical tools and the focus on actual experience are missing. Success stories, problems and difficulties should be examined and accompanied more objectively by experts instead of concentrating on the unconditional fulfilment of the “Coal Phase-Out Mission” (van de Loo, 2021).

3.3 Governance

After the Cambridge Dictionary the term governance is defined as: “The Way that organizations or countries are managed at the highest level, and the system for doing this”. The European Parliament on the Commission White Paper on European governance (2001 | Principles 10 a) | German translation) equals “Governance” to the “Execution of Authority”.

In context with the coal transition, the European Commission terms a governance model as “the arrangement put in place by a national or regional authority to deliver its coal transition strategy in a way that is effective within the broader governance context prevailing in the region”. According to Roche (2020) the term governance summarizes the different ways in which actors and factors can interact in the pursuit of a collective goal, and the formal and informal means by which they can be influenced. In this context the Regional Governance describes a steering approach for complex, self-organising networks under political leadership. At its core, this approach is based on the interest-driven cooperation of individual actors.

3.3.1 Good Governance

The term Good Governance refers to the way in which decisions are made and implemented in a state. Good governance is not limited to the government, but applies to all those affected and involved. The German Federal Ministry for Economic Cooperation and Development expresses Good Governance as transparent, effective and accountable. It involves the whole population and considers the needs of minorities and the weak.

Recent international studies agree that politics must support the regional transformation strategically via good governance for the long term (i.e. Klusáček et al. (2018); Syahrir et al. (2021)). In this context, effective planning, programming and the engagement of local stakeholders and the local economy are preconditions for attracting long-lasting sustainable private investment. Getting governance right has proved to be one of the key determinants of successful transition (Kustova et al. 2021). In their paper about decarbonization pathways Hamid et al. (2022) reveal that good governance (achieved by controlling corruption) and strong democracy (achieved by ensuring greater freedom for journalists) additionally help to reduce carbon dioxide emissions in the long term.

Designing a good governance system is necessary for the successful implementation of a Just Transition, which captures the opportunities of the conversion to sustainable, climate neutral systems, whilst minimizing the social hardships and costs (Wehnert 2020). Thus, Just Transition refers to political approaches to include social justice in the energy transition in connection with climate change. Just transition approaches aim to support workers and regions that would be particularly affected by a transition from fossil fuels to renewable energy and to achieve climate justice for present and future generations (Newell and Mulvaney 2013). In recent years it has attracted a lot of attention due to climate crisis and the awareness of people about health and environment. That is why there is an extensive number of reports and publications dealing with this topic. A comprehensive literature review regarding Just Transition is to be inferred from the Comprehensive Overview of the Project (Deliverable 1.1).

Krawchenko and Gordon (2021) had a comparative review of national and regional Just Transition initiatives in particular. They summarize that managing a just transition is a multi-level government challenge and requires integration across policy areas. Therefore, proactive initiatives are needed. Furthermore, they argue that jobs- and environment-focused initiatives are the most common but several policy levers are missing particularly with regard to spatial planning, land use, and the use of social security systems as well as direct funding to communities facing transitions.

3.4 Management

3.4.1 Definition

The term management is mostly used in the business sense, i.e. as the management of a company. In general, however, management basically refers to the administration of organizations. In this context, the type of organization can be very different, be it profit-oriented, non-profit-oriented or an authority. Regardless of the organizational form, generally valid statements can be made for further definition. Dieter Koreimann (2015: 12) explains the term leadership as the authoritative framework of management, where "leadership [is] the exercise of power." Accordingly, this results in a directive relationship between delegating persons or "managers" and a performance-oriented group of persons. In this context, the right of command of managers can include real, financial, but also human capital. Management activities are carried out within a system of objectives that results from the form of organization. For example, a business enterprise may pursue profit maximization and expansion, whereas a municipality may aim to provide consistent and comprehensive services of general interest. Nevertheless, it should be noted that managers are not only obligated to fulfil objectives, but they often also influence the objectives or strategic decisions themselves (decision-making authority). Hierarchies can develop within management. These management levels are divided on the basis of competencies, but also with regard to different areas of expertise. As an example, a vertical distinction can be made between a director and an authorized officer. The possibility of influencing the behaviour of subordinate persons within the organization is decisive in this respect. However, a horizontal distinction can also be made between different department heads, such as "personnel" and "production". The acceptance of underlying hierarchies is decisive for a functioning and constructive management. This is predominantly contractually secured, yet people in management are qualified by appropriate social competencies to deal with conflicts and bring about viable solutions. Insofar as informal relationships are not involved, organizational structures establish the basis for the exercise of power by means of contractual agreements, among other things. These can be immaterial or material in nature. Thus, the power to decide on incentives or punishments can signify power. However, power can also be expressed through property, such as land ownership or means of production. Furthermore, ownership or access to information can solidify power structures. In addition to tacit and tolerated agreements, identification with particular individuals or groups can informally lead to expanded powers within an organisation or networks. (cf. Koreimann 2015: p. 11-24)

With the preceding input on the understanding of management, its criteria, and its basis of legitimacy, the following chapters will address various facets of management relevant to the project.

3.4.2 Strategic Management

Climate, society, innovation, the factors that dynamically shape our environment are manifold. Nowadays, changes take place much more regularly and frequently, both on a small and large scale, than was the case in pre-industrial or industrial times. And not only the individual is mostly forced to react to transformed circumstances, but also companies and organizations have to become active in order to ensure their continued existence. With the entry into the post-industrial time after the turn of the millennium and the transformation to service societies, a state of constant change prevails, which makes rational and foresighted ways of acting necessary. This is the reason for the existence of strategic management. (cf. Bea 2019: pp. 7)

Jürgen Brüggemann (cf. 2021: 39) does not exhaustively list the tasks of strategic management in the organizational context. For example, it can serve to minimize the risk of calculable wrong decisions and at the same time show room for maneuver. „Early identification of strategic opportunities and risks as well as rationalization of information gathering“ in alignment with organisations structures, property and holdings can serve as a foundation for developing an internal strategy (ibid.).

The landscape of strategic approaches is diverse and extends in two directions in particular - strategic fit and strategic stretch. The former orients the strategic alignment of an organization

based on externalities. Accordingly, own capital is deployed to exploit opportunities as they arise. A precise positioning within influencing factors and the environment is mandatory. Strategic expansion, on the other hand, focuses on an organization's own strengths in order to generate competitive advantages through innovation. The approaches are not exclusive to each other; rather, a weighting within the organization determines the allocation of capital. (cf. Hamel & Prahalad 1993: p. 75-84)

With regard to the development of brownfields in particular and urban planning in general, Philipp Feldmann (cf. 2009: pp. 55), explains the elementary interconnectedness of strategic management and urban planning. The combination of linear or rational and adaptive strategy models results in an integrated perspective that goes beyond the profile of many planning processes but generates resilient and goal-oriented land development (cf. Wiechmann 2018: pp. 2612). “[A] strategic plan [is] de facto [a] tool for broad understanding of possible futures for the city (Feldmann 2009: 57)”.

In order to shape planning activities, it is necessary to collect data on the area to be planned, its environment and existing relationships. The SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) or the PESTEL analysis (Political, Economic, Social, Technological, Ecological, Legal) are proven instruments for determining the position and developing a strategy (Brüggemann 2021: pp. 40). A subsequent evaluation and derivation of planning alternatives takes place under consideration of coordinated targets. The latter are to be coordinated with relevant stakeholders and can be based on an existing long-term vision or mission statement. Strategy selection is followed by strategy implementation with the addition of measures and resources in an implementation plan. The implementation planning can be checked by management by establishing an implementation control in order to be able to intervene in a controlling manner if necessary. (cf. Feldmann 2009: p. 55 – 57)

3.4.3 Regional Management

Like strategic management, increased regional cooperation is an expression of a current, dynamic, and multifaceted set of challenges. After all, the climate does not stop at administrative boundaries, as well as the dynamics of a globalized market. Also, the extraction of raw materials from the soil is also mostly a supra-municipal concern, not least when it comes to the development of an interconnected post-mining landscape.

In dealing with such tasks, regional management forms a form of cooperation that has an impact beyond municipal boundaries, but at the same time is too small for a nationwide / statewide view. „Central is the realization that alone no success, or at least not the desired success, can be achieved (Plamper & Will 2015: 61) “. The form of cooperation does not have to be formalized, institutionalized, or framed by administrative boundaries, but it can be. Often, regional cooperations emerge from functional synergies of different interest groups in a spatial context in order to represent common concerns to the outside, i.e. beyond regional borders or vis-à-vis influential alliances. Momentum can come from several directions: business, research or from the public sector. Plamper and Will (cf. 2015: pp 61; 84-86) link the concept of regional management with transition management and thus describe the institutionalization or consolidation of regional cooperation through the joint collaboration of different stakeholders on one or more objects or projects with relevance for regional transition. Consequently, the consideration and questioning of regional competitiveness and development capability in particular is crucial for establishing a quality regional management. Besides, a regional constellation of actors always acts in an animated space, which is why not only the supposedly relevant actors need to be involved, but also the regional community in general. The sense of community can be one of the driving forces behind successful regional management. This needs to be emphasized when speaking about managing a mining region on the brink of transition, as significant parts of the local population will be impacted by pending changes in the economic and ecological environment.

3.4.4 Excursus: Public-Private-Partnership

One form of municipal or regional cooperation is the so-called public-private partnership (PPP) [abbreviation not to be confused with “Plant Protection Products”], in which the private sector

usually performs public-sector tasks on behalf of authorities or within a special-purpose entity to be established. In this case, the public sector acts as a demander of services in return for compensation. It should be noted that PPPs are subject to economic efficiency considerations of the respective public authority. If the required service could be procured more cost-efficiently or in significantly higher quality through in-house structures, a PPP would not be in the public interest. Efficient provision of services of general interest must not be aligned with the profit interests of private investors. Accordingly, a PPP requires transparency in line with good governance as principle in order to reveal, among other criteria, the type, scope, quality, space, and costs. A performance profile must therefore be compulsory in order to prevent the suspicion of state aid. The European Commission's Green Paper creates framework conditions for corporate social responsibility. Principles such as "design for all" (accessibility to services provided), which are set out in the paper, create additional requirements in the sense of the public interest and atop of economic efficiency standards (cf. EC COM/2001/0366: No. 51). In addition to the usually long-term and secured compensation, further incentives for the private sector can be created within a PPP. One major advantage for both parties include the sharing of possible and manifold risk costs: Prominent risks include regulatory and legal risks, financial risks, force majeure, planning and construction risks, commissioning and operating risks, market risks or technology risks (including obsolescence). (cf. Trost 2010: pp. 45-61)

Notwithstanding the multiple applications of PPP, there is no conclusive definition. Nevertheless, the German Institute of Urban Affairs (difu) has established generally applicable model designations with assigned characteristics on the basis of an inventory of PPP projects at that time. These can be seen in the following table (Table 2):

Table 2: PPP Contract Models (Source: difu 2005: p.5 (attachment))

Denomination	Characteristics
Acquirer model / BOT-model (Build-Operate-Transfer)	<ul style="list-style-type: none"> • Private investor is owner and takes over development and operation of a property. • Public sector uses property in return for regular payment. • Ownership is transferred to public authorities at the end of the contract.
Holder model / BTO-model (Build-Transfer-Operate)	<ul style="list-style-type: none"> • Similar to acquirer model, but public authorities have ownership of the property, in need of development.
Leasing model / BOO-model (Build-Operate-Own)	<ul style="list-style-type: none"> • Similar to acquirer model, but private investor has no obligation to transfer ownership at the end of the contract term. • Optional purchase right in favour of the public investor can be granted instead based on a calculated residual value.
Rental model	<ul style="list-style-type: none"> • Similar to leasing model, but without optional purchase right. • If a sale should take place, then at the subsequently calculated market value.
Contracting model	<ul style="list-style-type: none"> • Includes services such as technical installations in public sector buildings. • Public sector claims services in return for regular payment.
Concession model	<ul style="list-style-type: none"> • Private party agrees to provide services at its own economic risk. • Remuneration is provided by users of the service. • Individual case regulations for transfer of ownership.

The areas of application for PPPs can be very different. A frequent scenario for the implementation of a PPP is the land recycling of industrially pre-used brownfield sites. This can also include former mining sites that have been revitalized up to a certain point within the framework of legal requirements. In order to establish any subsequent uses, further cost-intensive measures are often required, such as additional remediation of contaminated sites. From the public sector's point of view, their implementation depends on the one hand on ownership conditions and on the other hand on the fundamental affordability. In addition to the site municipalities and contracted companies, other, additional contractual partners can also be part of the PPP and optionally contribute a share of financing to support it. This includes economic development institutions, other governmental agencies, or public funds with earmarking. In most cases, PPP projects for land recycling are aimed at marketing to the private sector. This does not necessarily preclude the subsequent public use of part or all of the site. Ultimately, the determination of subsequent uses is the responsibility of the local planning authority, subject to the decision-making powers of the relevant parliaments. (cf. Trost 2010: pp. 62)

Joint - private and public - strategic management to ensure subsequent use can be ensured within the framework of a PPP. It simplifies communication and serves to activate stakeholders throughout the process.

4 Governance structure

4.1 Greece

4.1.1 Status Quo

The Governance of lignite phase-out

The de-lignification program of the domestic electricity generation foresees the parallel adoption of integrated programs to support the Greek lignite regions for the transition. In particular, the commitment of the Greek Government is the withdrawal of lignite power plants by the year 2028 in a coordinated and responsible manner. The goal of complete decarbonization of the country, by 2028, is reflected in the forecasts of the National Energy and Climate Plan (ESEK, Government Gazette B' 4893/31-12-2019), which ensures the stability of the electrical system and the energy security of the country.

The governance model for the transition of the lignite regions includes (Figure 3):

1. The Governmental Committee
2. The Steering Committee
3. The Technical Secretariat
4. The Special Coordination Service
5. The Observatory Committee
6. The Technical Committee and the Task Force Enterprise Greece
7. The Programme Monitoring Committee and regional sub-committees
8. "Metavasis SA"

According to Act 52 of the Council of Ministers of 23-12-2019, a **Governmental Committee** was established for the Just Development Transition to the post-lignite era of the Region of Western Macedonia and the Municipality of Megalopolis in the Peloponnese Region is formed. The Government Committee consists of: a) the Minister of Environment and Energy, as Chairman, the Ministers b) Finance, c) Development and Investments, d) Interior, e) Rural Development and Food and the Deputy Ministers, f) Environment and Energy, responsible for Energy and Mineral Raw Materials and g) Development and Investments, responsible for Public Investments and the NSRF, as members. At the invitation of its President, co-competent Ministers, as well as the President of the SEP, may participate in the meetings. The responsibilities of the Government Committee include: a) the approval and monitoring of the implementation of the Just Development Transition Plan (JDTP), b) the coordination of the public consultation with the competent local bodies and local societies, collective bodies of private bodies, chambers and the provision of directions to these bodies during the preparation and implementation of the JDTP, c) the

management of the utilization of available funding sources, national, European and private.

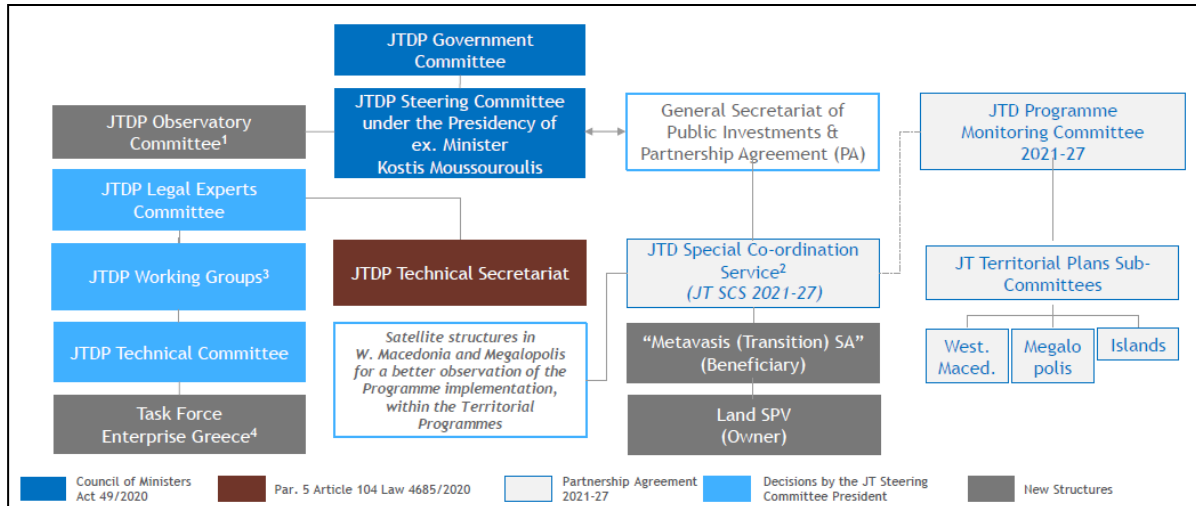


Figure 3: Governance model of the transition process in Greece. (Source: <https://www.sdam.gr/index.php/node/252>)

At a lower level is the **Steering Committee (CCC)** which consists of a) its President and the Coordinator of SDAM, b) the General Secretary of Economic Policy, c) the General Secretary of Public Investments and NSRF, d) the General Secretary of Energy and Mineral Raw Materials, e) the Regional Governor of Western Macedonia, f) the Regional Governor of Peloponnese, g) the Managing Director of PPC S.A. and h) the Governor of the Labour Force Employment Organization (O.A.E.D.).

The Steering Committee is responsible for the preparation and implementation of the JDTP as well as the coordination of the related activities, under the supervision of the Governmental Committee. The Steering Committee gradually handles the issues of the regions with the participation of all the involved bodies and together with the local communities and bodies. The JDTP draft was presented in September 2020 and it underwent to public consultation in October-November 2020. The revised JDTP was discussed at a government level and in the Parliament and was presented to the public, on 9 December 2020.

The **Technical Secretariat** has been established on May 2020, with main task the support of the Steering Committee in the preparation and implementation of the JDTP and its underlying "Territorial DAM Plans". Specific sub-tasks include the:

- Support of the institutional committees
- Support of the preliminary evaluation of investment proposals
- Scientific consulting for the main development sectors.
- Contribution to the legal framework for the transition process
- Planning of SDAM, coordination and monitoring of other funds
- Development of the JDTP Programme and the of JT Territorial Plans
- Administration and organization

The **Special Coordination Service** is responsible for the planning and coordination of programs and policies of the actions in the context of the implementation of the JDTP, the preparation and monitoring of the implementation of the operational plans that are part of the JDTP and the management of the utilization of the funding sources (national or European) available for this purpose.

The **Observatory Committee** consists of seven members and with main responsibilities a) the communication and dissemination activities during the development of the JDTP implementation programs in the lignite regions and b) the evaluation of the economic and social impacts of the actions and projects of the DAM Programs in the areas.

The **Technical Committee and the Task Force Enterprise Greece** has the following

responsibilities:

- Elaboration of pre-screening criteria and methodology for proposals and plans in the transition regions/areas
- Development of a manual for the preliminary evaluation of proposals and plans
- Preliminary evaluation of proposals and plans brought to discussion of the Steering Committee
- Preliminary impact analysis on the economy, employment, energy and the environment of the above proposals and development plans
- Evaluation of proposals for the utilization of Technical Assistance tools of the European institutions of the EU and International Organizations, with the aim of developing mature and sustainable investment projects in the Regions/areas in transition

The Task Force created by Enterprise Greece, has the responsibility to attract, welcome and support potential investors at all stages of the investment process.

The **Programme Monitoring Committee and regional sub-committees** is the highest monitoring body of the Operational Program and monitors its implementation, taking all relevant decisions in cooperation with the Steering Committee. The Monitoring Committee (Ep. Par.) of the 2021-27 PES will be established when the 2021-27 PES has been approved, in the context of the NSRF of the corresponding period. The Monitoring Committee will have an extensive role and will undertake both the coordination of the actions financed by the NSRF 2021-27, as well as those financed from other sources (national resources, other European programs, private funds, coke). For practical reasons and if it is ultimately deemed appropriate, it is possible for the 2021-27 Regional Planning Commission to include three Sub-Committees where each of them will monitor the implementation of the Program in terms of actions and projects that fall under the Territorial Plans (Macedonia Municipality, Megalopolis Municipality, non-connected islands). The staffing of the Committee and the Subcommittees is expected to be determined with the approval of the new NSRF 2021-27.

METAVASI S.A. was established by Law 4872/2021 and operates for the sake of the public interest and is supervised by the Ministry of Development & Investments. The main responsibilities of METAVASI S.A. includes the:

- Implementation of projects that will be included in the 5 development pillars of JTDP, including land restoration
- Implementation of the necessary infrastructure for the implementation of the JTDP (e.g. business parks where existing and new businesses will be established, their connection with road axes and networks, coke)
- Completion of transport networks (e.g. vertical axis Florina-Egnatia road)
- Support of administrative structures and bodies (local authorities, development companies, etc.) for the implementation of projects and plans of their competence. This support can be done either by providing expertise, or by undertaking the implementation on behalf of the agencies.

Funding

The Government Committee approved a Special Interim Fair Transition Program (2020-2023) and is being prepared for the lignite areas, which will be financed mainly by the NSRF 2014-2020, the Green Fund and the Recovery Fund. In September 2020, an invitation has been published to Public Sector bodies that are based/active in the lignite areas, for the submission of proposals concerning the financing of projects and actions, within the framework of the interim program.

The required investment in Western Macedonia will be funded from European funds mainly from the EU Just Transition Fund (JTF) and national sources, low-interest public loans from European sources and other financial instruments, commercial loans and private investment. The total amount of funding including the necessary leveraging of private resources, is estimated to exceed 5 billion Euros, from community and national resources.

Master Plan

The Master Plan of the energy transition of Western Macedonia Region is governed based on five basic principles: (i) development of employment opportunities in local communities, (ii) utilization of the inherent advantages of the affected areas, (iii) priority to quick-wins projects, (iv) promotion of sustainable development projects, and (v) integration of modern technology and promotion of innovation. Based on the above principles, the vision for the "next day" regarding energy transition in Western Macedonia will be based on the following five pillars of development:

- Clean energy
- Industry, small industry and trade
- Smart agricultural production
- Sustainable tourism
- Technology and education

In order to initiate the transition process locally, the following indicative measures within the Just Transition Development Plan are in the start-up or implementation phase:

- Installation of photovoltaic parks
- Re-construction of district heating systems based on alternative fuels after the shut-down of lignite-fired units
- Spatial planning of lignite areas, including the development of fast permitting processes
- The total amount of €130 million stemming from the special levy on electricity consumers for the support of lignite regions
- €60 million of financing towards lignite areas from auctioning of CO₂ allowances (Green Fund)
- Further development of solid waste management facilities
- Promotion of the role of the University of Western Macedonia for the regional development
- Request to the European Commission to declare lignite areas as special tax zones.

4.1.2 Recent History (Politics and Laws)

Since 1997, two legislative reforms have been implemented concerning Greece's Administrative Structure, called Kapodistrias and Kallikratis, respectively. Specifically, these two modifications had significant changes to issues related to administrative structures, economic activities and administrative bodies. The Kallikratis Programme is in force from 2010 until today, and during this time period, more than 40 laws related to spatial and urban planning processes were enacted, and at least 15 laws have reviewed and revised the legal framework that affecting the urban and spatial planning process (Perperidou & Dionysia-Georgia 2021). In particular, the historic administrative structure and planing framework of Greece are presented in the following sections.

Administrative Structure of Greece

The administrative structure of Greece, known as the Kallikratis Programme, was established by Law 3852/2010 as the second major reform of the country's administrative divisions after the 1997 Kapodistrias reform. Particularly, these reforms aimed to minimise the number of government employees and abolish small municipalities that had been underfunded and were unable to perform their duties. Under this light, the Kallikratis programme focused on creating a smaller state and cutting public spendings in order to follow the same line with the ongoing proposals from the European Union and the International Monetary Fund. Specifically, the first and lowest level of power has been delegated to the municipalities, whose number has decreased from 914 to 325. In particular, the municipalities are further divided into local and municipal communities, administrated by a mayor, a deputy mayor, a municipal council, an economic affairs committee, a quality-of-life committee, and an executive committee. Moreover, the 54 prefectures, which were the second level of local self-government, have been abolished and replaced by the 13 regions. In addition, the self-governing regions are administered by an elected regional general secretary, a regional council, a deputy general secretary, an executive committee and an economic and social affairs committee. Furthermore, the regional governor is in charge of

supporting the public interest, monitoring the execution of regional development plans, and carrying out other regional responsibilities in a transparent and effective manner. All regional issues that are not delegated by law to other regional bodies are handled by the regional council. Lastly, 7 decentralized administrations, which are the third level of administrative divisions, have also been created. In particular, these administrations are operating as deconcentrated state powers with a state-appointed general secretary and an unelected advisory council and are responsible to supervise the first and second levels of local government to guarantee the transparency and legality of their operations (Kalimeri 2018).

Planning Framework in Greece

➤ 2010: Law 3894

Law 3894/2010 introduced exclusions from current planning legislation for private investments master plans on “Speed up and transparency of strategic investments implementation”. The Special Plan for Strategic Investments Spatial Development (ESXASE in Greek) is the planning tool for strategic private investments. Specifically, ESXASE is approved by Presidential Decree following a Decision of the General Secretariat of Strategic and Private Investments and includes the relevant spatial, urban, and environmental laws and regulations (Perperidou & Dionysia-Georgia 2021).

➤ 2011: Law 3986

In 2011 the Hellenic Republic Asset Development Fund was established by Law 3986/20211 “to leverage the State private property assigned to it by Hellenic Republic, according to the country's international obligations and the Medium-Term Fiscal Strategy”. on “emergency measures on the implementation of medium term Fiscal Framework 2012-2015”. Regarding to the general planning regulations and procedures in matters concerning the exploitation of public real estate, special derogations are foreseen. Particularly, each public property that is under exploitation has a unique “investment identity” that is specified in the “Special Plan for Public Real Estate Spatial Development” (ESXADA in Greek), which was approved by Presidential Decree after Joint Ministerial Decision (Perperidou & Dionysia-Georgia 2021).

➤ 2012: Law 4062

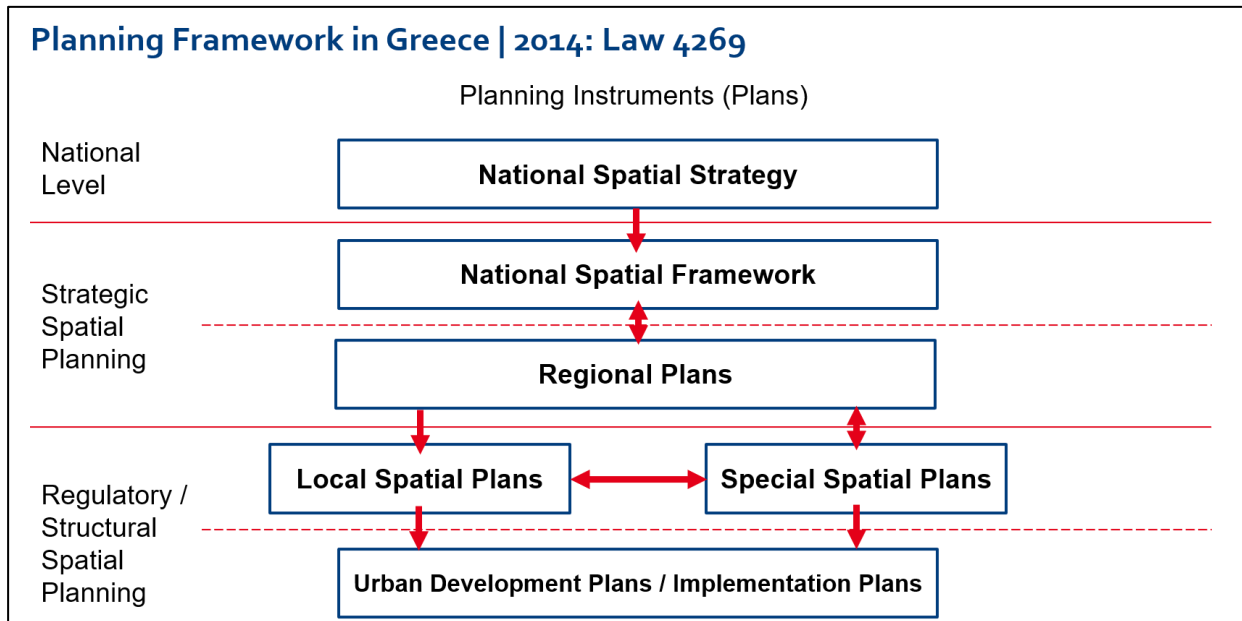
In 2012, the Law 4062/2012 foreseen the exploitation of the former Hellinikon Airport, which is the most representative and extensive exploitation plan for public real estate. Former Hellinikon Airport, which is located in the south suburbs of Athens, was downgraded to an abandoned 600-hectare public piece of land after it was shut down in 2001. The investment's comprehensive Integrated Development Plan has been approved by Presidential Decree, it departs from the existing legal framework for spatial and urban planning and consists of: urban zones, development zones, recreational and public gathering areas, urban green areas, water courses zones, specific building regulations (per zone), environmental monitoring system, and Strategic Environmental Impact Study (Perperidou & Dionysia-Georgia 2021).

➤ 2014: Law 4269

The legal framework for Spatial and Urban Planning was reformed by Law 4269/2014, which took place in July of 2014 [1, 3]. Particularly, the planning was divided into 2 levels: Strategic Spatial Planning and Regulatory Spatial Planning. Therefore, the categories of Land Uses were reviewed and redefined in accordance with current international and European trends and definitions (Perperidou & Dionysia-Georgia, 2021). The main aims of this Law were to streamline and accelerate the planning process, reduce the amount of time needed to approve National or Regional Spatial Plans, and ensure that urban and spatial planning were actually integrated in the interest of sustainable development. Furthermore, the considerations of the State Council regarding the legalization of arbitrary constructions and informal settlements were included in the case of Local plans. According to the Constitution, the State is responsible for Strategic Spatial Plans, which are developed and approved by the Ministry of the Environment and the Structural Spatial Planning is the regional and local authorities’ responsibility, respectively. Moreover, the

Spatial Planning National Council supervises the coordination of structural and Strategic Spatial Planning (Perperidou & Dionysia-Georgia, 2021). The main changes introduced with this reform were (Table X): (a) the delimitation of the number of Plans per level excluding the Master Plans at the metropolitan level and by combining plans of the lowest levels, (b) the reform of land-use categories (for both rural and urban space) to be used specifically in plans at the local levels, and (c) the powers' delimitation of consultation and governance bodies. Therefore, the time spending for participatory mechanisms reduced and the whole planning process is accelerated (Papageorgiou 2017).

Table 3: Planning Framework in Greece, Law 4296/2014 (modified from Papageorgiou 2017).



➤ **2016: Law 4447**

Law 4447/ 2016 came into force in December of 2016 in order to overcome and handle the inefficiencies of Law 4269. Specifically, the new reform changed the planning process by maintaining the 2 main planning levels while making major modifications to the implementation of planning tools and planning sublevels in comparison to Law 4269 [1]. In order to propose modifications and/or new ideas for an integrated planning system that would take into account the current situation, formal and informal Committees were established under the authority of the Ministry for the Environment or at the initiative of stakeholders. Particularly, the issues that triggered the reformation were the: a) acceleration of public property exploitation, b) speeding up of private large scale investments (e.g. industry, tourism, local development plans) and c) actual implementation of integrated spatial and urban planning (Perperidou & Dionysia-Georgia 2021). Furthermore, Local Spatial Plans, Special Spatial Plans, and Implementation Urban Plans were under the control of Regional or Local Authorities and could even be proposed by private investors (via ESXASE), in consultation with the Ministry of the Environment. On the other hand, National and Regional Spatial Plans remained strictly under the strict control of the State. In addition, National Council for Spatial Planning has reclaimed its significant role, particularly at the structural planning level (Papageorgiou 2017), in contrast with the interactions between Frameworks and Plans, binding issues, and jurisdictions that have remained the same.

According to article 3 of law 4447/2016, there is a National Spatial Strategy, (NSP). It includes main principles and major directions for the areal organization and objectives of geographical development. It contains also the Regional Spatial Frameworks which draws the framework at the regional level. The RSFs contain all approved organized receptors of activities and plans of public and private investments on a large scale. RSF is followed by Regulatory Spatial Planning at a local level which is called Local Spatial Plans. They refer to one municipality and are approved by a presidential decree. (Politis 2020)

According to art. 8 of law 4447/2016, Special Spatial Plans (SSPs) are created for the organization and development of areas, independent of administrative boundaries, that can serve as "receptors" for plans, projects, and works of a larger scale or strategic importance, or that require a special regulation of land uses and other conditions for their development. Also, SSPs are equipped to handle the aftermath of natural disasters and participate in urban renewal, environmental preservation, and other activities. A SSP is approved via a presidential decree. (Politis 2020)

Table 4: Planning Framework according to Law 4447 (2016)

Level	Plan	Elaboration	Consultation	Approval
National	National spatial strategy	Ministry for the Environment	National Council	Ministerial Committee
Strategic Spatial Planning	National spatial frameworks	Ministry for the Environment	National Council	Ministerial Committee
Strategic Spatial Planning	Regional Plans	Ministry for the Environment	National Council	Minister for the Environment
Regulatory/ Structural Spatial Planning	Local Spatial Plans	Municipality or Ministry Env.	Central Council	Presidential Decree
Regulatory/ Structural Spatial Planning	Special Spatial Plans	Municipality or Region or Ministry or Private	Central Council	Presidential Decree
Regulatory/ Structural Spatial Planning	Urban Development Plans	Municipality or Decentralized Admin.	Central Council Regional Auth.	Head of the Region

Furthermore, it is clear that cooperation between environmental and spatial planning bodies in Greece was typically sporadic. The unavoidable result was that the measures chosen were ineffectual, that there was a disconnect between legal obligations and their execution, and that there were frequently loopholes and oversight and control issues with the execution.

It is important to note that the so-called Special Spatial Plans that came before the Greek law that ratified the ELC (Law 3827/2010) explicitly stated the need to establish a landscape policy because the lack of landscape protection was widely acknowledged before the establishment of the ELC and the need to proceed to relevant regulation, through a variety of policies, was evident. More particularly:

- The Special Industrial Spatial Plan strives, among other things, to promote the integration of the environmental component into the spatial structure of activity, particularly by encouraging organized forms of industrial siting.
- A specific strategy for integrating wind farms into the landscape is provided by the Special Framework for Renewable Energy Sources (RES).

- According to the Special Framework for Tourism, protecting and showcasing natural and cultural landscapes and resources, as well as addressing the effects of climate change, are essential conditions for achieving sustainable tourism, which benefits a region's natural, cultural, economic, and social specificities.

Additionally, the Special Spatial Planning Framework for Renewable Energy Sources (SSPF-RES), which was passed into law in 2008 and contains a precise and comprehensive methodology for integrating renewable energies (wind turbines) into the landscape, has explicitly and explicitly incorporated the concept of landscape. Incorporating landscape policy into the new Regional Spatial Planning Frameworks (RSPFs), which are overseen by the Directorate of Spatial Planning of the Ministry of Environment and Energy, marked the culmination of an integrated strategy. The renamed Regional Spatial Plans (RSPFs), which are currently the subject of legislation (RSP). (Kyvelou & Gourgiotis 2019)

The Ministry of Environment's Spatial Planning Department has been designated as the competent body for the creation and implementation of the national policy on landscape, and this role only became associated with spatial planning as of 2014. The spatial planning legislation, however, only sparingly covers landscape management and landscape policy, despite the political will.

The stated goal of spatial planning, "to protect and restore the environment, conserve the ecological and cultural reserves, and promote the comparative geographic, natural, productive, and cultural assets of the country," implied, indirectly, a definition of the landscape, even though law 2742/1999 "Spatial planning and sustainable development," issued to harmonize national spatial planning policy with the European Spatial Development Perspective (ESDP) framework, did not explicitly define the landscape. The most recent law 4447/2016 has only a simple reference to "...the protection of the cultural and natural landscape" is addressed in the regulations relating to the Local Spatial Plans, Regional Spatial Planning Frameworks, and Special Spatial Plans.

Similar to this, no guidelines are provided for the management of the marine (seascapes) or coastal landscapes in law 4546/2018, which implements the Maritime Spatial Planning Directive (2014/89 /EU) into Greek law.

The term "Integrated Coastal Zone Management" (ICZM), which is defined as "... a dynamic process for the sustainable management and use of coastal zones, while taking into account the fragile nature of coastal ecosystems and landscapes," nevertheless makes an indirect reference. (Kyvelou & Gourgiotis 2019)



Figure 4: Hierarchy and Dependencies in the Greek Planning Framework

➤ Regional Framework of Spatial Planning and Sustainable Development of Western Macedonia

1. The existing Regional Framework of Spatial Planning and Sustainable Development (RFSPSD, Regional Plan) of Western Macedonia was approved via the decision 26295/2003.

According to the plan, thermal energy is pumped into the cities of Kozani and Ptolemaida from the respective power stations in Agios Dimitrios and Ptolemaida. The PPC's actions have had a significant influence on the ecosystem in the region that stretches from Florina to Amyntaio, Ptolemaida, and Kozani. This location might be designated as a "Area of Special Spatial Interventions". (Kyvelou & Gourgiotis, 2019)

2. The provisions of the proposed new regional framework (2019)

The PPC's infrastructure (lignite mines and thermal power plants) and the advancement of renewable energy sources are prioritized, directed, and recommended in the proposed new regional plan (2019) in the following ways: 14 of the 17 Special Planning Studies for Areas of Specified Territorial Interventions have been completed. A strategic plan for rehabilitating and using abandoned lignite mines has been developed. Promoting and protecting the region's natural and cultural legacy; Growing its industrial heritage; Tele-heating system management; Special studies for landscape restoration programs and suggestions for alternative land uses for mined-out regions; "Integrated strategy for promoting RES and improving energy efficiency of buildings" (Kyvelou & Gourgiotis 2019).

4.1.3 Data Collection Protocol

The European Union (**EU/DG**), through the European Commission and the European Commission/Directorate General, is responsible for defining the overall direction of the energy transition, sets the legal framework and enforces the Government (**NGOV**) and the Region (**RGOV**) to follow it. The European Union is also a source of funding for the Greek Government (**NGOV**), educational institutions - research centres (**ACRES**), as well as for businesses/investors (**LBUS/PINV**).

The Greek state (**NGOV**) creates the legal framework for the local government (**RGOV & LGOV**). The Greek Government is also responsible for the implementation of EU requirements by the Public Power Corporation (**PPC**).

Regional and Local Government (**RGOV & LGOV**) adopts and implements the legislation and directives of the national government, and by extension the European Union, and through interaction with the local community (businesses, investors, unions, companies, educational - research institutions) submits proposals to the central administration (**NGOV**).

Public Power Corporation (**PPC**) is supervised by the Greek state and follows and implements the guidelines of the energy production model set by the European Union for the Greek state. It also controls and indicates how lignite is extracted by the mining companies (**MCOMP**).

Educational institutions and research centres (**ACRES**) participate in research projects, train staff and provide networking tools. Based on their experience and the results of the projects, they then advise the state and local authorities.

Local and National Business organizations (**NBUS**) are mainly concerned with the planning and maturation of proposals to prepare the local government to absorb financial resources for the development of the region. They also inform local businesses, investors, associations, companies, educational and research institutions about funding and support opportunities.

Environmental Non-Governmental Organizations (**NGOs**) are informed about developments mainly on environmental issues, train local actors and are in communication with all the relevant bodies at regional/local level.

Civil Society (**CSO**), which is represented through associations, clubs, unions etc. tries to be informed and educated on energy transition issues. It is invited by the municipalities (**LGOV**) and submits its proposals accordingly.

Local businesses (**LBUS**), private investors (**PINV**) and companies (**SCOMP**) are trying to retain their businesses' sustainability by adapting to new production models. They follow and implement the legislation and they are financed either directly by the European Union, by banks or they invest their own capital. They are in constant communication with local government (**RGOV & LGOV**), educational - research institutions (**ACRES**) and Local and National Business organisations (**NBUS**).

Public-Private Partnership (**PPP**) in the region of Western Macedonia deals with waste management (in the area of the lignite mine of Ptolemaida), applying innovative methods with emphasis on environmental protection.

All the groups involved mentioned above are in contact with the Local and national **media** in order to communicate their actions and keep the general public informed.

Figure 5 shows all the above described relationships between the various stakeholders.

Example - Greece

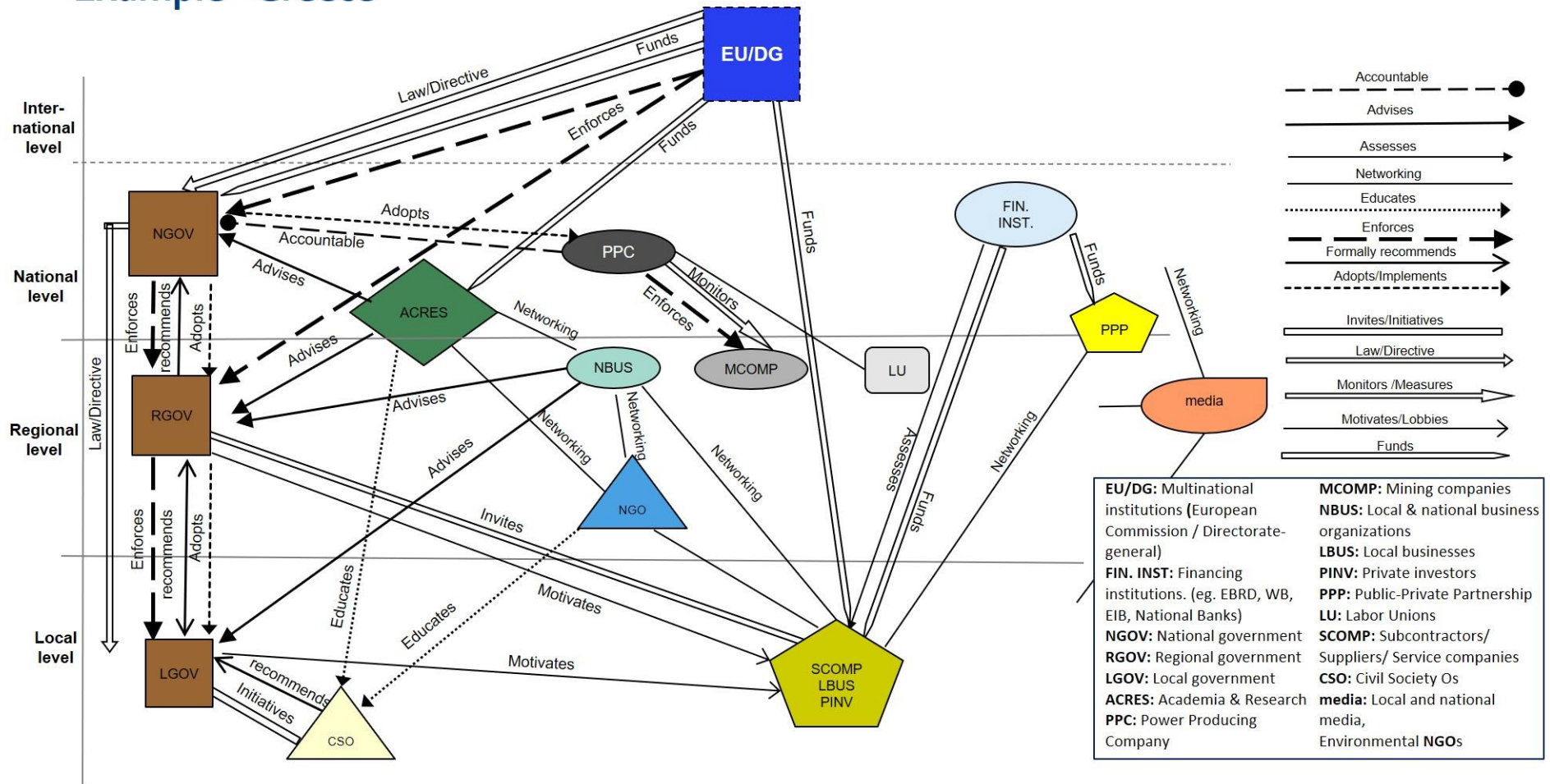


Figure 5: Relationships between all the different stakeholders in Greece.

4.2 Germany

4.2.1 Status Quo

The formal structure of the planning framework in Germany is derived not least from the history of the past century. Like the political and administrative systems, the structure is both hierarchical and dispersed. Hierarchical levels can be identified, but the distribution of competencies is significantly dispersed throughout the levels. This reflects Germany's fascist past and serves to prevent the accumulation of power in central positions. To share power within the nation, Germany is a federal republic with sixteen states, each with its own powers and duties. The state's own duties include, among other things, the construction and maintenance of state roads, as well as educational issues, in order to prevent *Gleichschaltung*.

With regard to spatial planning, the federal government represents the highest level, yet it has no direct planning authority. The federal government has a coordinating framework competence, for example in large-scale grid expansion planning (Grid Development Plan for Electricity) or supraregional transport infrastructure planning (Federal Transport Infrastructure Plan). On the lowest level is located with the municipality. At the lowest level, the municipality is the supposedly lowest-ranking link in the planning framework, but in contrast to the federal level, it has the most spatial planning powers. In Germany, municipal planning sovereignty is a constitutionally protected asset (Article 28 of the Basic Law). In fundamental terms, this follows the principle of subsidiarity, which, beside German jurisdiction, is also part of the Treaty on European Union. In accordance with the principle of subsidiarity, higher-level sovereign structures intervene in processes only when the forces of the subordinate structure or unit are insufficient to perform an assigned function or task. This ensures the municipalities relative independence within their own territorial boundaries.

Between the federal level and the municipal level, federal states advance their own spatial planning in the form of state development plans. Depending on their own territorial size, these can be concretized by further regional plans. The latter are developed by district or regional governments. Such structures are usually regulated by state laws. Accordingly, the exercise of regional planning competence is a directive task by the state government. The state development plan and the regional plan specify the so-called goals and principles of spatial planning for their area of responsibility. These goals and principles also affect the comparatively independent municipal planning jurisdiction, which must take them into account in its local planning. Whereby goals of spatial planning are obligatory to be followed and principles must be followed in a general way. In case of deviation from goals, a goal deviation procedure can be carried out.

The principle of countervailing influence structures this interdependence and provides a framework for a state's spatial order, where the differently scaled areas and regions form distinctive interdependencies. In general, subordinate planning must adapt to superordinate levels, whereas superordinate levels must take the subordinate ones into account in their orientation. (cf. Scholl, Elgendy & Nollert 2007: pp. 18-22; Pahl-Weber & Henkel 2008: pp. 33-40)

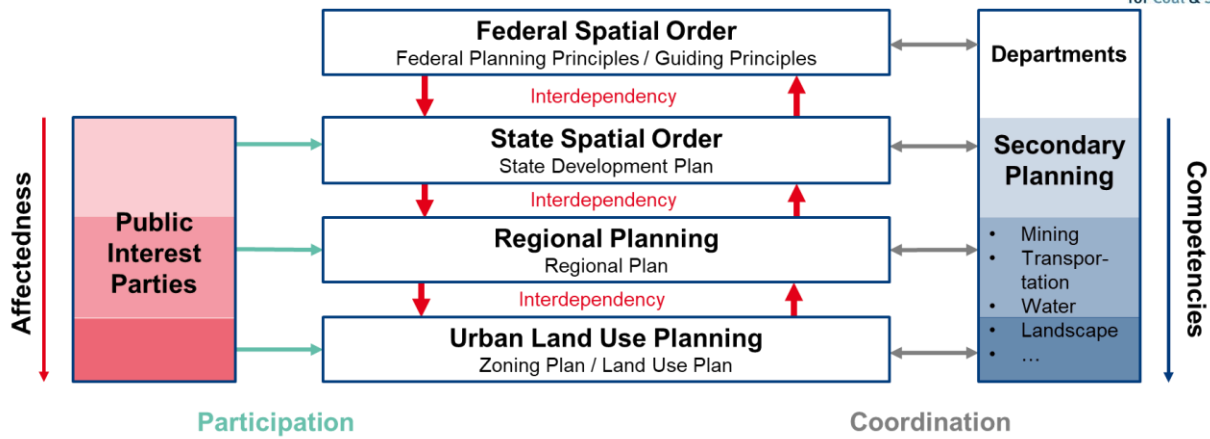


Figure 6: Principle of countervailing influence (Source 1: own Illustration)

The planning framework in Germany is always backed by an elected parliament for each level - whether directly or indirectly elected - for legitimacy. This not only ensures the influence of the public interest in administrative processes, but also creates a structure of responsibility.

The development and subsequent use of former mining sites requires release from mining law through termination of the final operating plan. As long as the final operating plan is being executed and is the responsibility of the mining contractor, the approving mining authority is responsible for supervision. The final operating plan regulates the handling of pre-exploited soil, erected structures and shows the scope of revitalization measures to be done in accordance with the Federal Mining Act and in coordination with affected environmental law. Planning authorities may be involved as part of the final operating plan. Nevertheless, the application of the Building Code by the authorities and the corresponding further determination of post-mining land uses only takes place after completion of the final operating plan procedure. With the withdrawal from mining supervision, the revitalized area will initially go into industrial use. In partial areas, there may be a preliminary forest designation due to the growth of industrial forest.

Thus, in Germany, areas previously used for hard coal mining are treated in the same way as other land uses in terms of planning law, when they open up again for follow up land uses. The further handling of the area now depends on the future land use. For example, an industrial after-use develops different requirements for further soil remediation work, development, and marketing than, for example, the settlement of housing or recreational uses. The settlement of a post-mining land use is made in the urban land use plan (legally binding land use plan) in coordination with higher-level plans such as the regional plan and the state development plan. Some projects can be approved without a development plan. In most cases of these cases, environmental law applies in combination with other technical frameworks as the basis for approval.

4.2.2 Recent History (Politics and Laws)

German spatial planning law has not been fundamentally changed in recent history when we talk about basic governance structures. Parts of the relevant federal legislation have indeed been amended in recent years. Accordingly, an amendment to the Spatial Planning Act was passed in March 2023, which is intended in particular to accelerate the implementation of infrastructure measures such as transportation or renewable energies.

With regard to the Ruhr Area case region, however, one of the most significant restructurings of governance can be recorded. Going back to reform efforts within the federal state of North Rhine-Westphalia in the 1990s, sustained efforts were made to adapt the middle administrative level, i.e., the district governments and nominally the predecessor of the Ruhr Regional Association (RVR / Regionalverband Ruhr), the Ruhr Area Municipal Association (KVR / Kommunalverband Ruhr), in line with the times. As the regional bracket of the Ruhr Area, the KVR should mediate between vision and tradition and thus set the course for success in international competition as a metropolitan region. For this purpose, the regional planning competence for the Ruhr Area, which

had been distributed among the regional governments of Düsseldorf, Münster and Arnsberg in 1976, should once again be in one hand. The prevailing planning situation split the region, which had grown historically and belonged together on the basis of its mining past, into several regional plans. The preparation of those plans took place outside the Ruhr Area. At the end of the 1990s, a reform attempt to dissolve the KVR and re-establish it as the Ruhr Agency failed. After changes of power in the federal and state governments, a compromise solution was finally found in 2004 and the "Law for Strengthening Regional and Intermunicipal Cooperation of Cities, Municipalities and Districts in North Rhine-Westphalia" was passed, as a result of which the RVR became the legal successor to the KVR. Article 5 of this law contained the "**Law on the Ruhr Regional Association (RVRG)**", which regulated the future task and organizational structure of the allocation association, the financing of which was guaranteed by the member municipalities. In 2007, the state parliament strengthened the new RVR by passing a decree on the "**Law on the Transfer of Regional Planning for the Ruhr Metropolis to the Ruhr Regional Association**". The North Rhine-Westphalia State Planning Act was amended accordingly, making the RVR association assembly the regional planning body and the regional director the personified planning authority in the face of the law. In addition, the "**Act to Strengthen the Ruhr Regional Association**" passed in 2015 made it possible to directly elect the RVR's association assembly. Previously, the association assembly was indirectly composed by the relative result of the municipal election. The direct election, which was held for the first time in 2020 in a region with more than 5.1 million people, strengthens the RVR and the political legitimacy of the bodies that decide on regional development and the planning. Contrary to other planning approaches in Germany, the new Ruhr Regional Plan was drawn on white paper, so to speak. For this reason, and because of an extensive and forward-looking participation process, including ideas competitions, expert dialogs and intensive, informal discussions with stakeholders, the Ruhr Regional Plan is in its final development phase. Adoption is planned for the last quarter of 2023. Until it is replaced, the updated regional plans of the Düsseldorf, Münster and Arnsberg regional governments and an extraordinary regional land use plan of a community of cities are legally binding. (cf. Ruff 2020: pp. 96-99)

4.2.3 Data Collection Protocol

As mentioned above government and administration in Germany are federally organized and consist of the federal level, the states and the municipalities (Figure 7).

As it is the case in the other studied regions, the European Commission/Directorate General (**EU/DG**) defines the overall direction of the energy transition. Going from top to bottom the EU/DG sets laws and directives which have to be assessed by the national government (**NGOV**) of Germany. This enforces the regional government (**RGOV**) to implement the given structures on the regional level, which in turn imposes laws and directives to the local government (**LGOV**). The local government engages the neighbouring municipalities (**NEIGH MUN**) over initiatives. As there are no clear-cut borders in the densely settled Ruhr area and reclaimable sites sometimes cross boundaries this is maybe more important than in other regions.

The regional government monitors the quality of mining companies (**MCOMP**) and Power Producing Companies (**PPC**). In Germany the mining operator is also operating the power plants, thus PPC and MCOMP closely act on the same local and regional level. They closely work together with subcontractors / suppliers and service companies (**SCOMP**), as these provide necessary technology, logistics and other services for the operating and post-operating phase. Companies which developed mining or drive technology for the operating mines formerly, use their knowhow today, for instance, to install modern technologies on the reclaimed areas. Thus, the connection between MCOMP and SCOMP remains when mining has ceased. Especially during the transition phase, the MCOMP/ PPC and the (different) labour unions (**LU**) have a strong interaction. In the hard coal mining industry in Germany, the dominant labour union is the IG BCE (Mining, Chemicals and Energy Interest Group) which has a discursive legitimization. Labour unions are educated (further) by local/regional Academia & Research (**ACRES**). Not uncommonly, employees of ACRES and MCOMP or PPC belong to the same LU. 17 colleges and 5 universities as well as renowned research institutes make the Ruhr area a science region.

Thus, their influence is likely to rise. In the context of coal transition the ACRES formulate pieces of advice for national and local businesses (**NBUS** and **LBUS**) on the basis of their research and (further) educate non-governmental organizations (**NGO**). These organisations (NABU, WWF, etc.) motivate/ lobby local businesses (**LBUS**), which in turn do the same with private investors (**PINV**) and local or national **media**. Private investors play an important role in the setting of the Ruhr region as the most important investor is the RAG Stiftung. It was established in 2007 as a foundation under civil law with legal capacity and an endowment capital of €2.0 million to deal with the winding-up of the subsidized German hard coal mining industry. Today it finances the perpetual obligations resulting from hard coal mining in Germany through capital investments and is highly interested in sustainable solutions regarding post-mining land use. Another important stakeholder group are the financial institutions (**FIN.INST.**) which are accountable to the local government, fund the mining companies and assess local and national business organisations (**NBUS**).

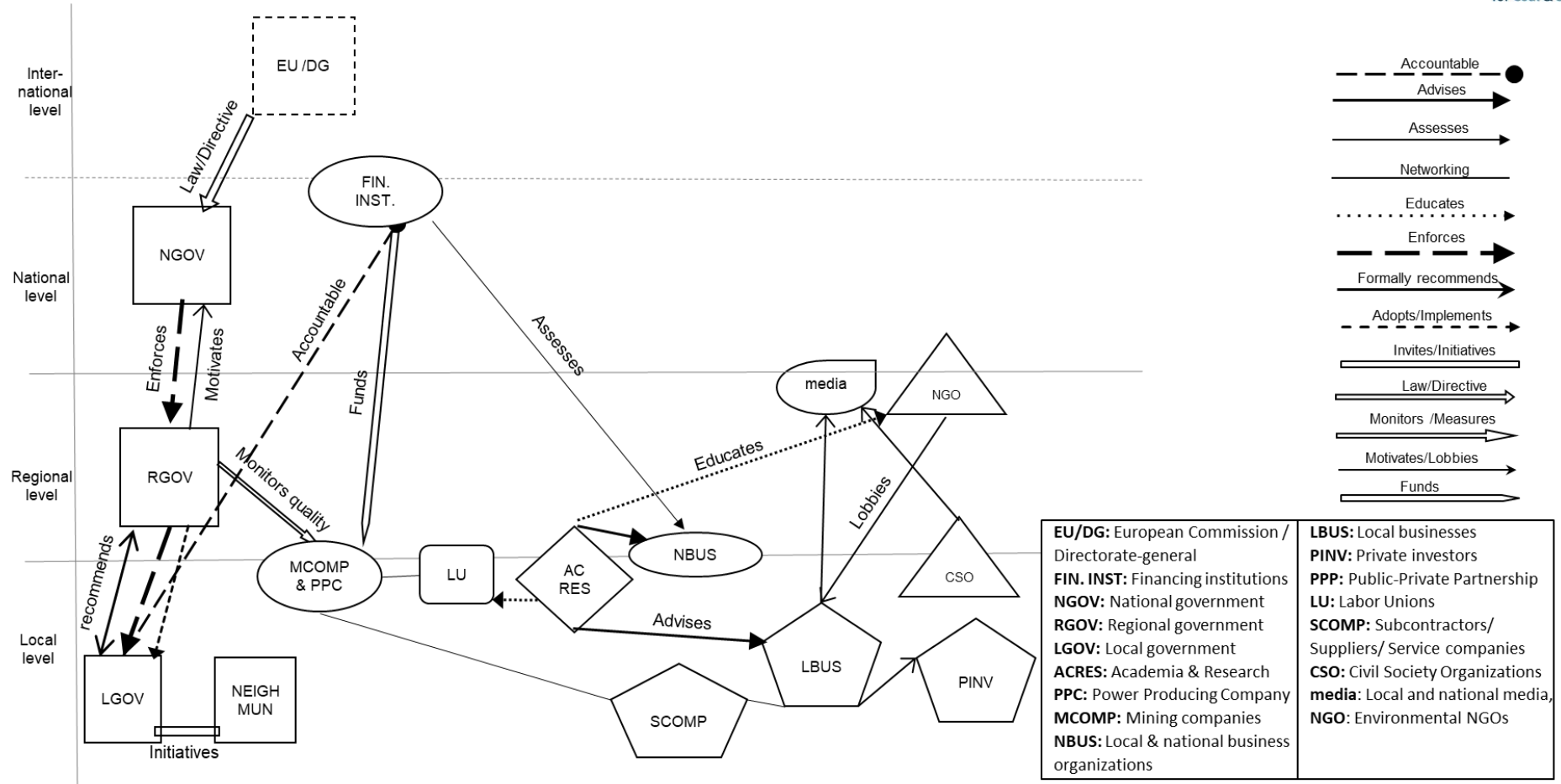


Figure 7: Organigraph Germany

4.3 Poland

4.3.1 Status Quo

In Poland, spatial planning follows a hierarchical system that corresponds to the administrative hierarchy. This system is critical to maintaining spatial order and achieving the objectives of spatial policy. Decisions made at each level must align with and support those made at higher levels, which take precedence in implementation. This creates a vertical decision-making process that moves "from general to detail." However, horizontal cooperation between units at the same level of authority and planning competence is also crucial. Without cooperation, the result could be apparent spatial order or chaos. Legal provisions prevent arbitrary decision-making, and planning decisions should always involve consultation with relevant authorities from neighbouring communes and provinces. It's essential to recognize the significance of both vertical and horizontal cooperation to ensure spatial planning is effective and promotes spatial order. The scheme of spatial planning in Poland is presented below.

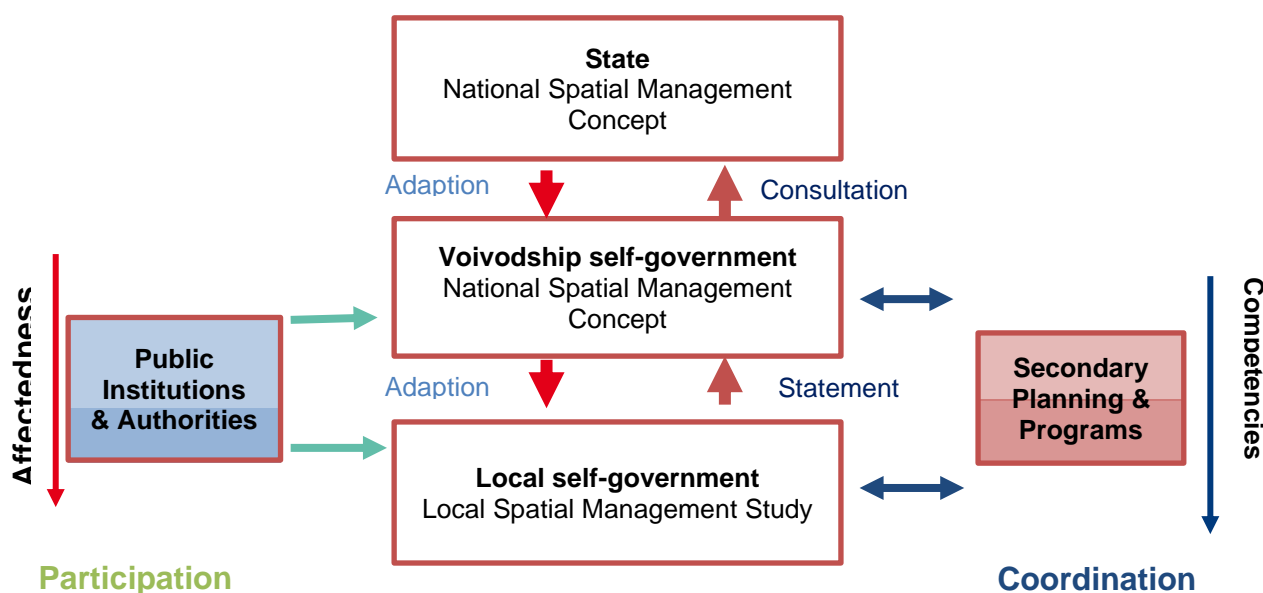


Figure 8 Planning Framework in Poland

At the national level, public administration has several important tasks. These include developing strategic documents to define the country's socio-economic development goals, creating the National Spatial Development Concept, conducting analytical and study work on selected problems, implementing state spatial policy, maintaining a central register of government programs, and preparing periodic reports on spatial development. The concept of spatial development is based on the national development strategy and defines elements such as the national settlement network, environmental protection and monuments, social infrastructure, technical and transport infrastructure facilities, strategic water resources, and objects of national importance. These provisions also define areas of public investment of national significance. The current National Spatial Development Concept, created in 2011 and in effect until 2030, aims to promote social, economic, and spatial cohesion. This will be achieved through the expansion of technical infrastructure, particularly in transport and telecommunications, and improving the quality of public services.

At the regional level, public administration is responsible for various tasks related to spatial development. These tasks include conducting analyses, developing concepts and programs, and carrying out periodic reviews of changes in spatial development in the voivodeship. Additionally, public administration is responsible for implementing the voivodeship's spatial policy and preparing the voivodeship development strategy.

The voivodship development strategy is based on the concept of spatial development of the country and includes various objectives such as stimulating economic activity, preserving the value of cultural and natural environments, and shaping and maintaining spatial order. In order to achieve these objectives, voivodship self-government bodies are required to prepare a voivodship spatial development plan. This plan is binding for administration authorities and is assessed at least once during a term of office.

At the local level, spatial planning involves the development and implementation of documents such as the study of conditions and directions of spatial development of a municipality and the local spatial development plan. The study serves as the foundation for creating the local spatial development plan.

4.3.2 Recent History

Administrative reform of Poland took place on the 1st of January 1999. Based on the Act of 1 January, 1999 three stage structure of territorial division of Poland was introduced. As part of the implementation of the reform the number of voivodships were reduced from 49 to 16. As a result of the reform the role of the voivode was reduced in favour of the marshal and the voivodship self-government. Some of the facilities belonging to the voivode were transferred to the management of individual levels of local government. Along with their support, tools for their financing were also provided in the form of: inclusion of income tax, inclusion of corporate tax, grants and subventions. Currently Poland's administrative system is divided into two main components: government administration and local government administration. Government administration is led by the Council of Ministers, while self-government administration is responsible for local and regional governance.

At the local level, the commune is Poland's basic unit of administrative division. Communes have legal personality and are responsible for all public matters of local importance. Each commune is headed by an executive body consisting of the commune council and the commune head, and there are currently 2,489 communes in Poland. Communes are responsible for meeting the basic needs of residents, such as municipal services like water supply and sewage systems, as well as public roads and local transport. They also manage kindergartens, primary and lower secondary schools, and health care. Poviats are local self-government communities that serve as the basic unit of territorial division. Poviats cover entire areas of neighbouring communes, and they perform tasks that the commune would not be able to cope with due to the small number of inhabitants or the area. Examples include managing and running upper secondary schools and hospitals, and counteracting unemployment.

Voivodships are the largest unit of the basic territorial division of Poland and serve as a unit of government administration. Each of the 16 voivodships is headed by a voivode who acts as the representative of the Council of Ministers in the voivodship and supervises local government units. The voivodship marshal is the most important representative of the regional government administration and is responsible for organizing the work and managing the current affairs of the voivodship, as well as representing it externally. The voivodships are responsible for regional development policy.

4.3.3 Data Collection Protocol

The European Union (EU/DG) is responsible for setting the direction of the energy transition and establishing the legal framework for the Polish government (NGOV) to follow. The Polish government creates the legal framework for the regional and local government (RGOV & LGOV). The regional and local government adopts and implements national and EU legislation, interacts with the local community (LU), and submits proposals to the central administration.

Public Power Corporations (PPC) is supervised by the Polish state (RGOV) which monitors and assess the mining companies (MCOMP). Educational institutions (AC) participate in research projects, train staff, and interacts with the state (NGOV) and local authorities (LGOV) and advises the administration (NGOV, RGOV & LGOV) and the Local businesses (LBUS), private investors (PINV) and companies (SCOMP). Local and national business organizations (NBUS) plan and prepare proposals for the development of the region supported with funding by financial

WINTER: Report of an ideal-type governance and management structures for transition regions

institutions (FIN INST). Non-governmental organizations (NGO) are informed about environmental issues and are in communication with all relevant bodies at the regional and local level. (NBUS & CSO). Civil society is represented through associations, clubs and unions affected the local media. Neighbouring municipalities (NEIGH MUN) interact with the local authorities affecting the administration. All groups are in contact with the local and national media to communicate their actions and keep the public informed.

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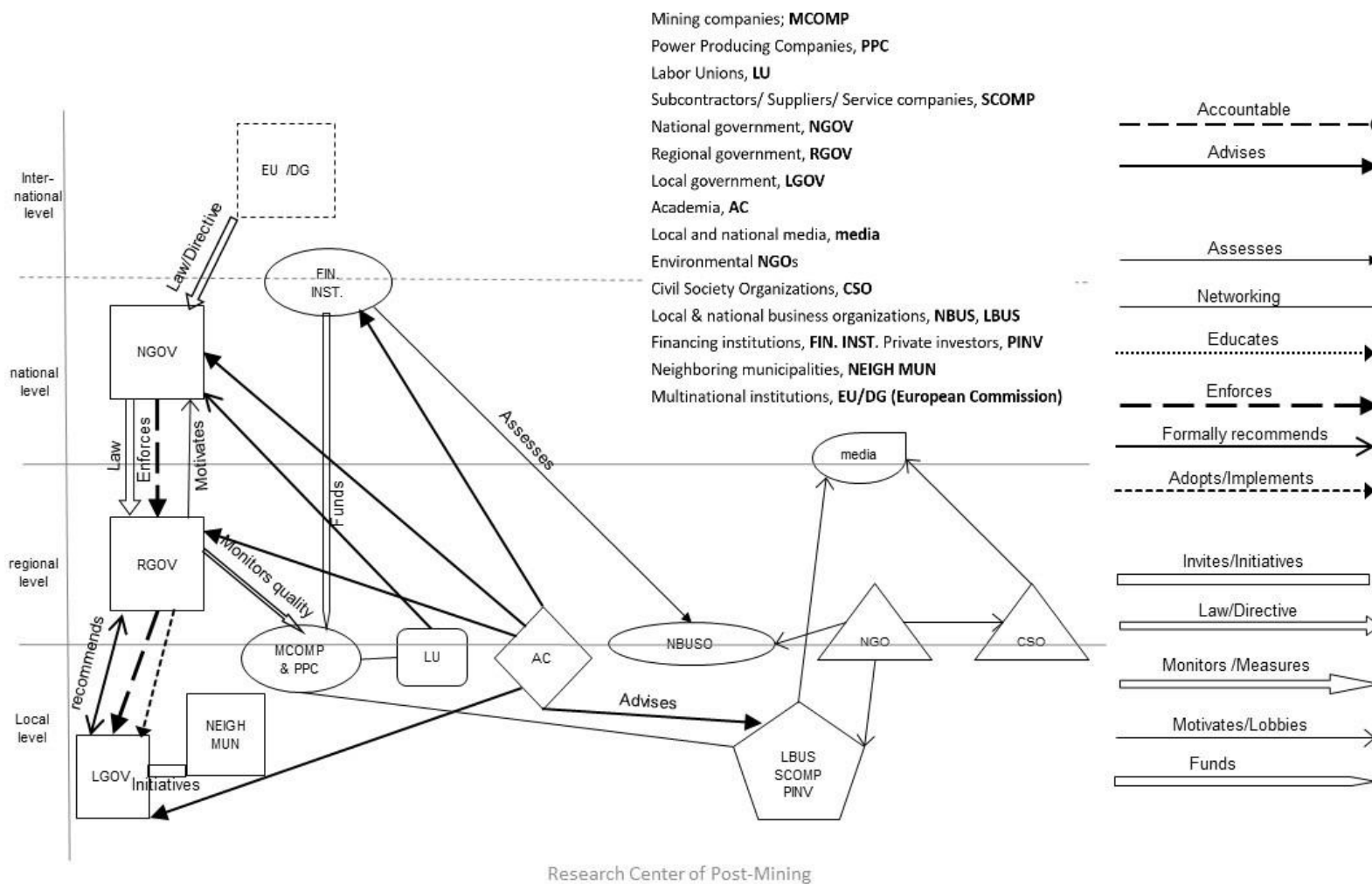


Figure 9 Organigraph Poland

5 Analysis of similarities and differences

The stakeholder analysis and the creation of the data collection protocol were based on the experience of institutes and universities of applied sciences that conduct research in the field of mining and post-mining. The evaluation of the collected data was accordingly approximated to experience. An assignment of stakeholder groups to a four-field matrix on the basis of Level of Interest (Y) and Level of Influence (X) was generated by taking the average of each stakeholder groups values. Some groups shown in the data collection protocol are missing in the illustration, as the data needed was lacking in the stakeholder analysis tables. The reasons for this can be different. For example, data may not have been collected or may be incorrect. The causes will be addressed in the further research work of the project in order to identify any existing data collection gaps and to derive recommendations on various levels.

Nevertheless, it can be stated that the illustration shows a heterogeneous picture between the three case regions.

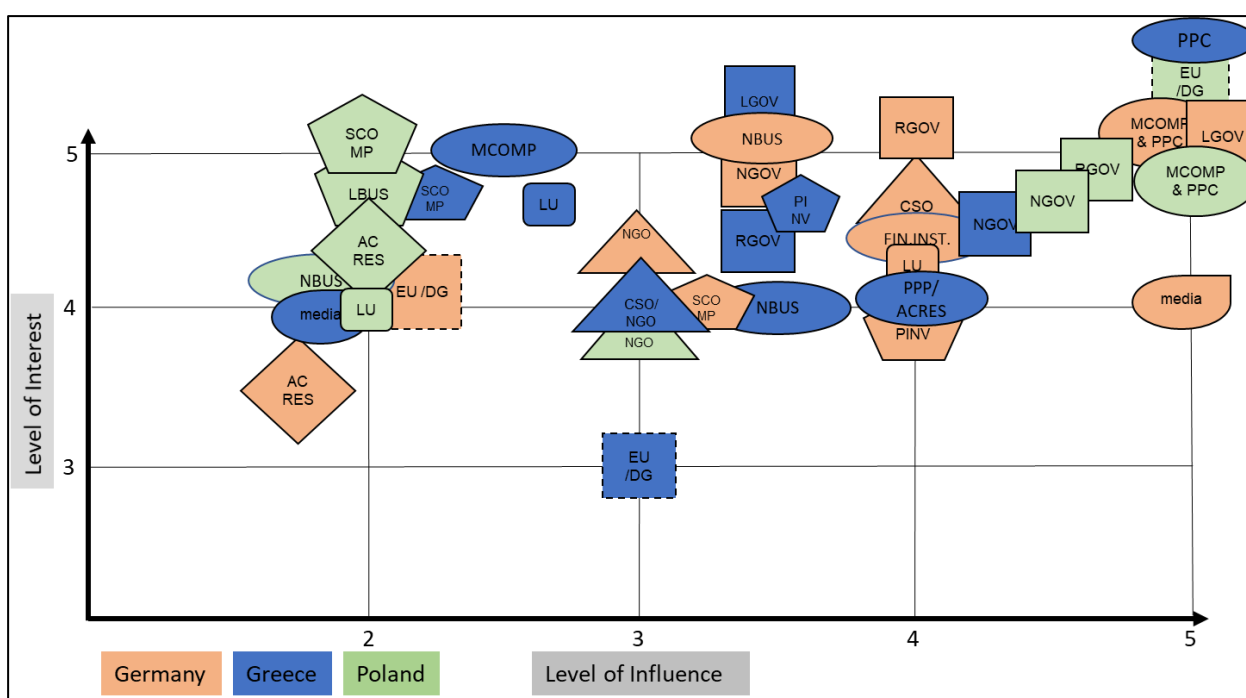


Figure 10: Compiled Organigraph for the three case study regions

Accordingly, stakeholder groups polarize based on their level of interest. Germany and Greece show a broader spectrum for the area of influence. The common assessment that the power producing companies (PPC) are the most influential and interested party in all case regions is striking. It should be noted that in Greece, in contrast to Germany and Poland, PPC and the Mining Company (MCOMP) were addressed separately. This is due to the separation there between private mine operators (in this case MCOMP) and the state-owned energy company PPC. In Germany and Poland, on the other hand, both are in the hands of private companies. Private MCOMP in Greece score significantly lower in their influence assessment than the state-owned PPC. The mayor of Eordaia Mr. Plakentias Panagiotis explains that all the land used for mining lignite belongs either to the municipalities or to PPC.

The different perceptions of the EU are also noticeable. Poland, as the largest net recipient within the EU (+ €13.2 billion), rates the EU as highly interested and very influential, whereas Germany, as the largest net contributor (- €15.5 billion), rates interest as high but influence as less (cf. bpb 2022). Surprising, however, is the ranking of the EU in the West Macedonian context. After all, Greece is not only the second largest net recipient (+ €5.7 billion), but the region is also vital part of the just transition fund – as is eastern Greater Poland (ibid.).

Another notable aspect is the greater involvement of research institutions (ACRES) in Greece. These are just moderately interested in Germany and Poland due to their scientific ambition and develop only minor influence on transition regions. Reasons for the strong performance of ACRES in Greece may be the involvement through the Just Transition Plan or strategic agreements, as mentioned by Mr. Plakentas Panagiotis.

One observation is the high influence of labour unions (LU) in Germany compared to Poland and Greece. The reasons for this can be manifold. Trappmann (cf. 2012: pp. 11) mentions, for example, deficits in democratic structures, inefficiency in government structures, or the interest-driven impact of other influential groups such as the church in the case of Poland.

The different governance structures with implications for the planning framework also become visible. Accordingly, Greece, which is more centrally oriented, has the highest influence on the national government (NGOV), although interest is moderate. This is not only due to the state ownership of PPC, but also to the high influence of the Ministry of the Environment down to the local planning level and with regards to renewable energies. Poland, on the other hand, makes it clear that while much power emanates from the national level, the voivodeships also exert significant influence in their territory of influence. The constitutional principle of subsidiarity in the form of municipal planning sovereignty is applied with regard to local government (LGOV) in Germany. Superordinate planning levels have a certain influence through their framework competences of spatial planning, but the main right to develop their own territories remains with the municipalities.

Less surprising is the fact that, on average, all stakeholders show a medium to high level of interest. The reason for this lies in the core of the term stakeholder, i.e., someone whose interests or concerns are affected by definition.

Nevertheless, one aim of the stakeholder analysis is to show the difference between ordinary stakeholders and actual actors. For this reason, less influential or interested groups are excluded from further consideration within the data collection protocols. Inside the symmetrical four-field matrix, a reduction to the upper right quadrant ($X \geq 3$; $Y \geq 3$) is appropriate.

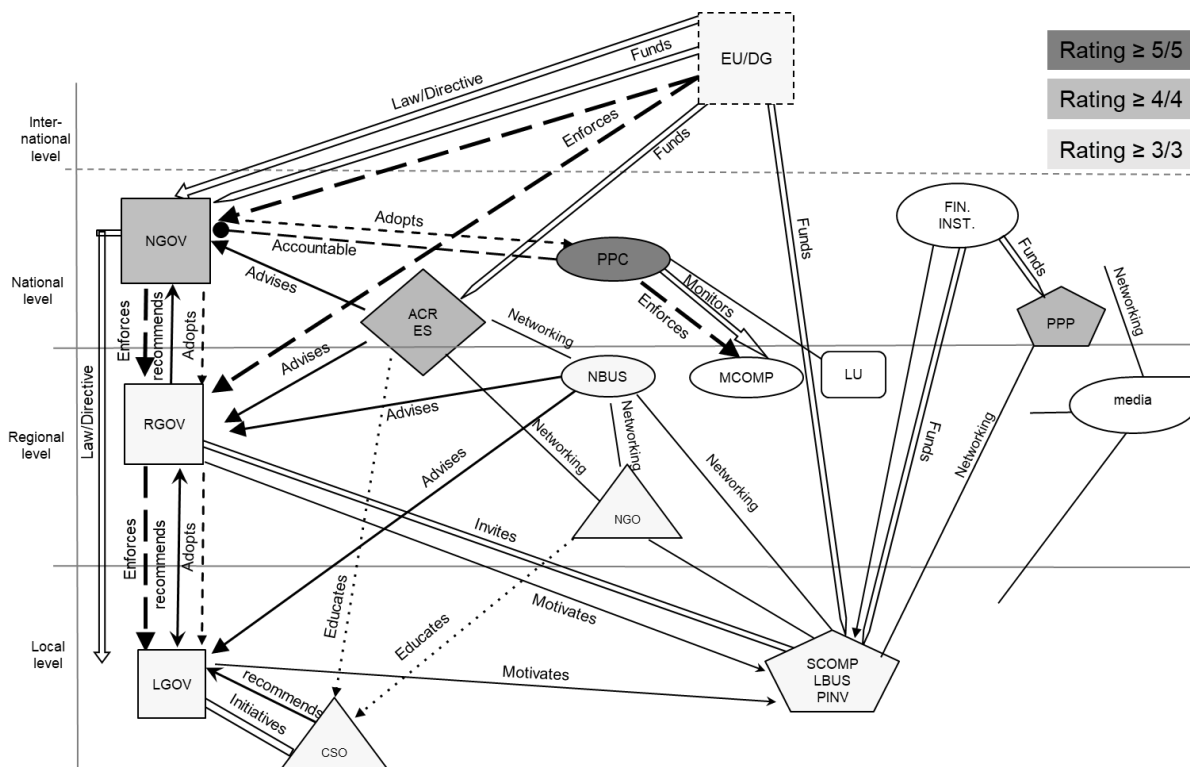


Figure 11: Adapted Data Collection Protocol Greece

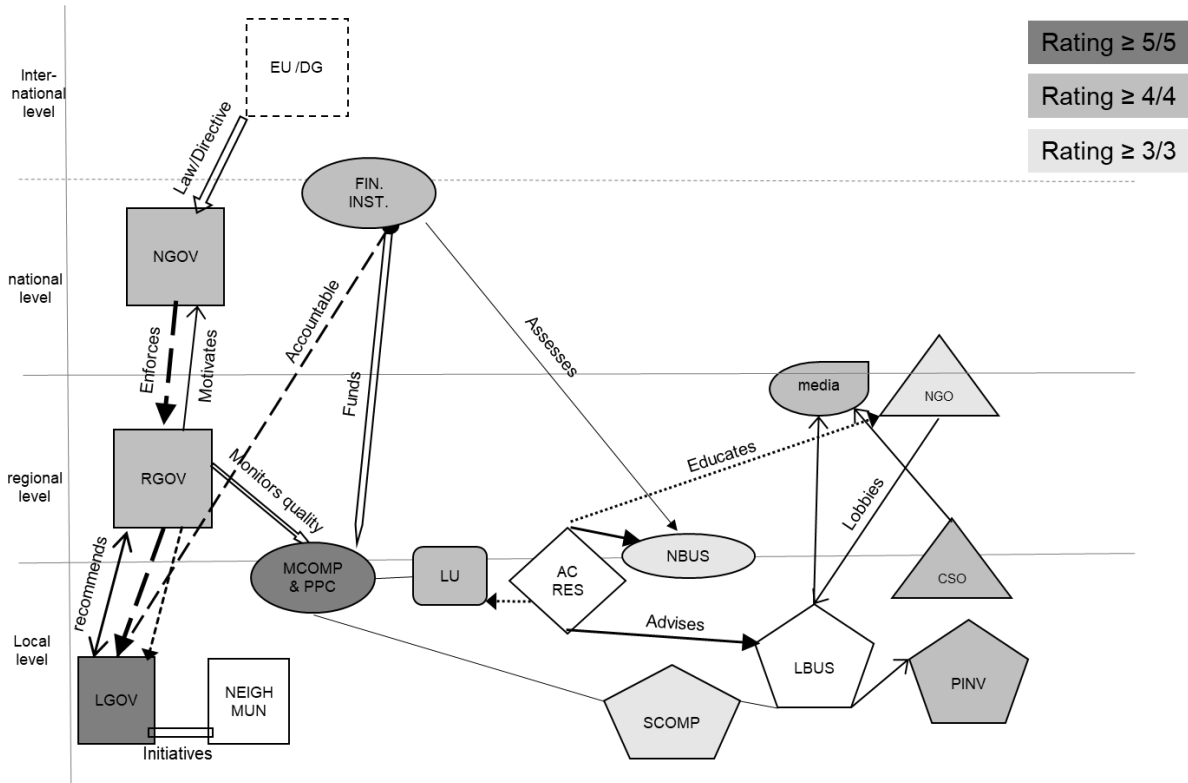


Figure 12: Adapted Data Collection Protocol Germany

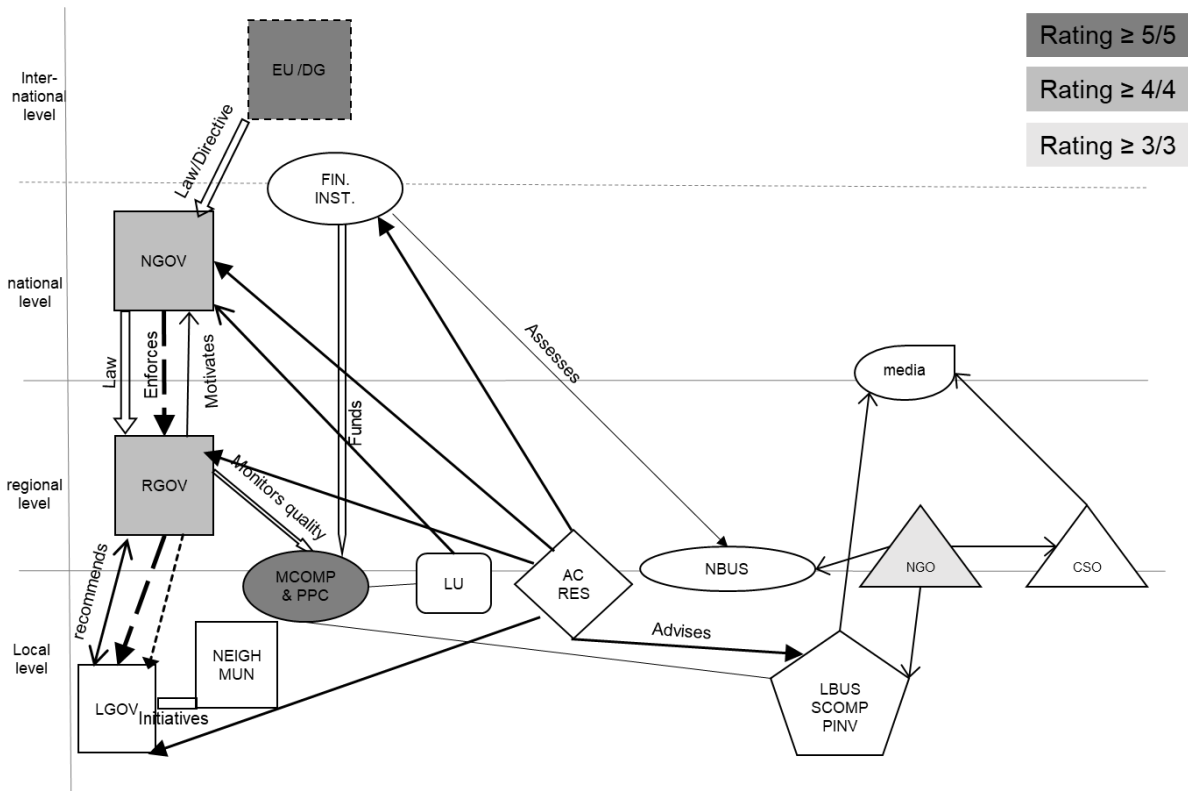


Figure 13: Adapted Data Collection Protocol Poland

Looking at the data collection protocol and the stakeholder tables side by side, it can be generalized that the bodies of multi-level governance of the three case study countries remain among the most important actors. This can be seen from the adapted data collection protocols.

The role of the local government (LGOV) in Poland must be interpreted, as the data here are not entirely complete or significant. On the basis of the planning sovereignty of Polish municipalities and the derived competence over the determination of the use of land in the municipal area a comparable classification of LGOV can be assumed compared to Germany (cf. GIH 2023).

The European level is omitted from the following implications. Nevertheless, the importance of the "Just Transition Fund" (JTF) should be mentioned here, which supports regional structural change as a special tool with regard to the envisaged goal of climate neutrality in 2050.

6 Implications towards an ideal-type governance and management structure

6.1 Implications in general

The analysis of the stakeholders or stakeholder groups within the data collection protocols of the respective case regions shows the complexity of the systems. This is already a thematically delimited space that has dictated the consideration. Moreover, the data collection protocols represent only a fraction of existing relationships within systems. The focus was on the consideration of particular relationships for the design of transition processes within the case regions and towards post-mining landscapes.

When looking at the respective stakeholder systems in an abstract way, it becomes clear that the stakeholders are mostly distributed on two transition levels, between the national and regional (Greece) scale or the local and regional scale (Germany and Poland).

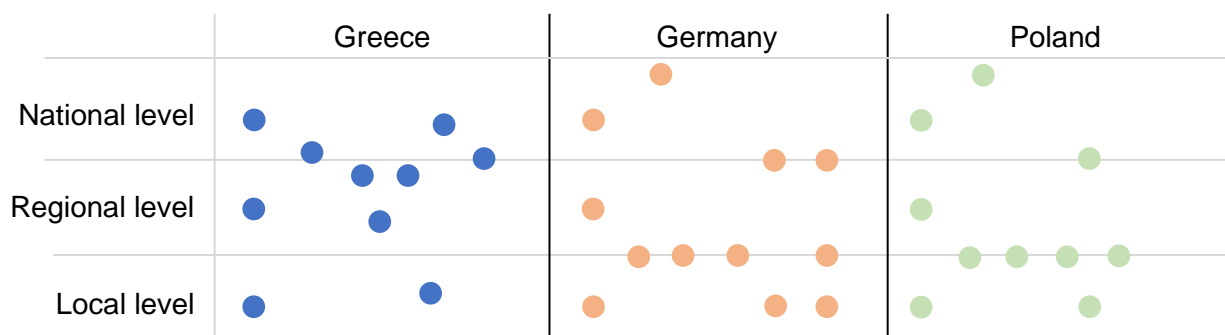


Figure 14: Distribution Abstraction (Data Collection Protocols)

With regard to the elaboration of an ideal-typical governance and management structure, which should have a relative generality for the case regions and beyond, it can be concluded that the regional level is suitable to establish such a structure. Recognizing the regional relevance of mining structures, whether social or areal, the hypothesis of a significant regional level is plausible. Measured against the scale of opencast lignite mines, this becomes all the more tangible.

The development of large-scale sites - as in the case of a post-mining landscapes - always results in conflicts and tensions between sovereign government institutions, relevant companies, and the citizens. All three parties form different interests and try to integrate them within planning and development. The public sector must act in the public interest and is bound in its tasks to formal governance in the form of framework laws. Informal governance can develop in the form of networks to support tasks in the public interest.

Companies such as mining companies, on the other hand, pursue economic interests that are not always in line with the public interest or that of the citizens. This interest can be of different degrees and pursues correspondingly long-term strategic goals, goals concerning the operating portfolio, or simply profit. Citizens, on the other hand, have individual interests that are expressed either individually or collectively. Civic associations or citizens' initiatives are just two forms of bundled citizen interests. Citizens can also represent companies. At this point, however, a distinction is made with regard to relevance for transition processes.

As Mr. Schmoll and Mr. Lohse of the development company "Neue Zeche Westerholt" Ltd. point out, the group of citizens is an important (information) source that has to be considered when it comes to the success or failure of a project. Citizens are often affected by the development of area projects on their property. Participation and constant communication to the citizens can increase acceptance. And even if not, all interests can be satisfied, transparency must be created. For the German context, Mr. Schmoll explains that the focus on informal participation is essential for the success of a project. Formalized procedures are processed in a much more clocked

manner by authorities and companies, whereas resistance from the project environment is more difficult to overcome.

When talking about an "ideal-typical" governance structure, the concept of "good governance" comes to mind. Informal participation formats are an expression of good governance, as they represent an additional service from the corporate and public side that recognizes the need to take individual interests into account. Other measures of good governance in the institutional or project framework are maximum transparency and, when public funds are used, maximum efficiency.

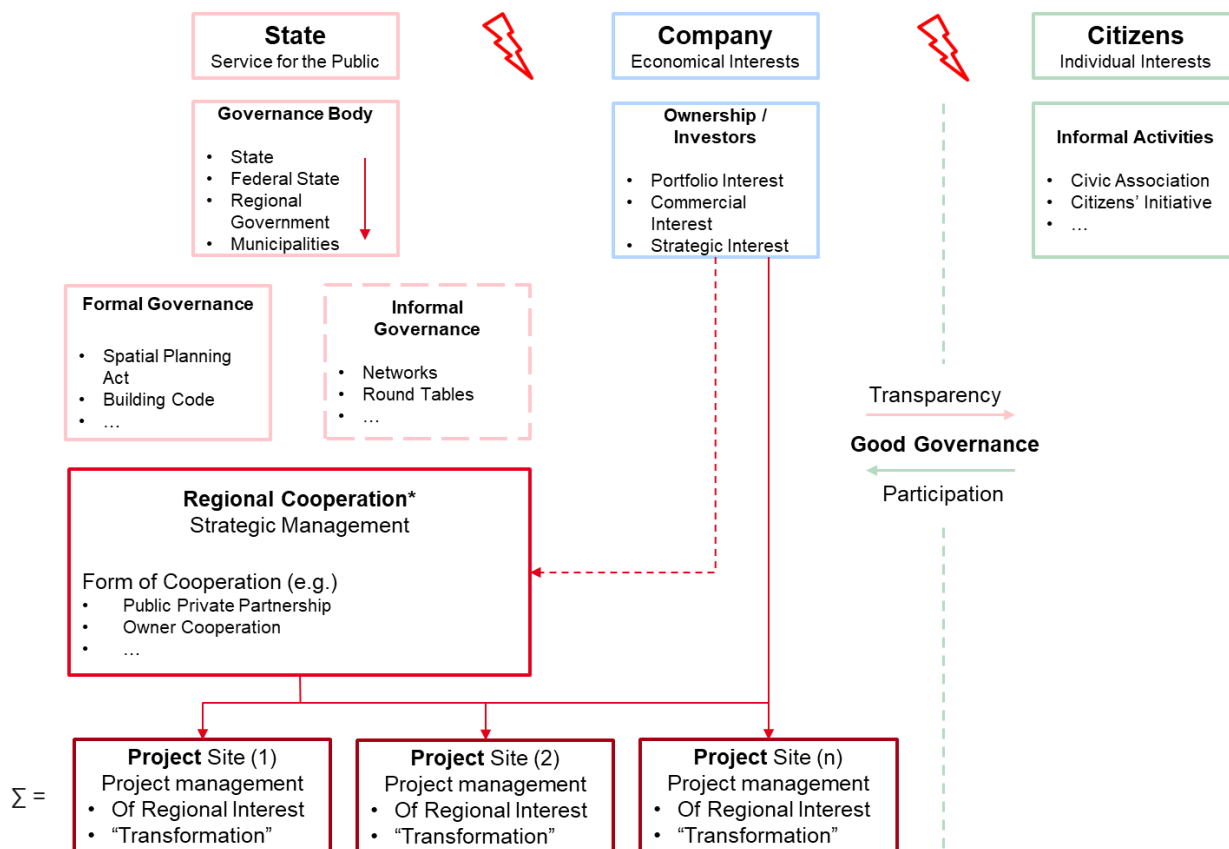


Figure 15: "Ideal-type" Governance Structure

If one applies the "ideal-typical" requirement to governance structures, it is not only a matter of fulfilling the requirements of good governance; the development of regionally significant areas is much more a matter of pursuing the public interest. In the development of post-mining landscapes, however, special attention must be paid to the ownership status of areas previously used for mining. The protection of property serves to maintain financial and in rem security and is thus a fundamental pillar of relative prosperity in the EU and many member states. In many scenarios, ownership of transition-related areas rests with private mining companies. Experience has shown that the right to dispose of these areas is rarely in public hands, as is the case in Greece.

Ownership is usually accompanied by economic interests of the owning companies. These may prevent the pursuit of the public interest in the development of such sites. The formation of regional forms of cooperation is able to enforce public interests and at the same time to satisfy economic ones. A popular format of such cooperation can be a public-private partnership (cf. Excursus Chapter 3.4.4). In its flexible design, it is first important to clarify the status of land ownership, as Mr. Kianas Stergios, Vice Governor of Digital Transition, Green Transformation, e-Government and Innovation in Western Macedonia, as well as Mr. Lohse and Mr. Schmoll put it. Even when ownership is in public hands, as in the Greek case, a PPP can be an ideal-typical solution for transition regions. Even when ownership is in public hands, as in the Greek case, a PPP can be an ideal-typical solution for transition regions, as often the execution of necessary

development activities exceeds the financial and human capital of the public sector.

The expediency and design of the contractual partners within the regional cooperation can vary from case region to case region. West Macedonian, for example, has created METAVASI S.A., a legal, public institution that operates regionally and manages, for example, property relations. In Germany, on the other hand, RAG and its affiliate RAG MI, an experienced mining company, are available as partners for the RVR and affected municipalities for the development of a post-mining landscape.

Ideally, the regional cooperation form is able to establish a strategic management, as described in theoretical aspects of this report. Transition regions face the challenge of sustainable change within a globalized competitive environment and an increasingly complex and dynamic society. The strategic orientation of regional development within an appropriate form of cooperation such as PPP is indispensable in order to shape upcoming processes in a resilient, viable and innovative manner. Assuming that in a regional context several sites are involved in a holistic regional development, the respective project management of the sites has to adapt to the regional vision or strategy.

The strategic management has the task to adapt consciously chosen strategies for areas and regions to externalities and to communicate this with regard to the different interests of actors (cf. Brüggemann 2021: 45). To this end, strategic management uses an open range of analytical methods in order to rationally identify and assess opportunities and risks for a region. At the same time, strategic management activates actors, such as authorities and relevant companies, to stringently implement visions and strategies through appropriate tools and plans (cf. Figure 16).

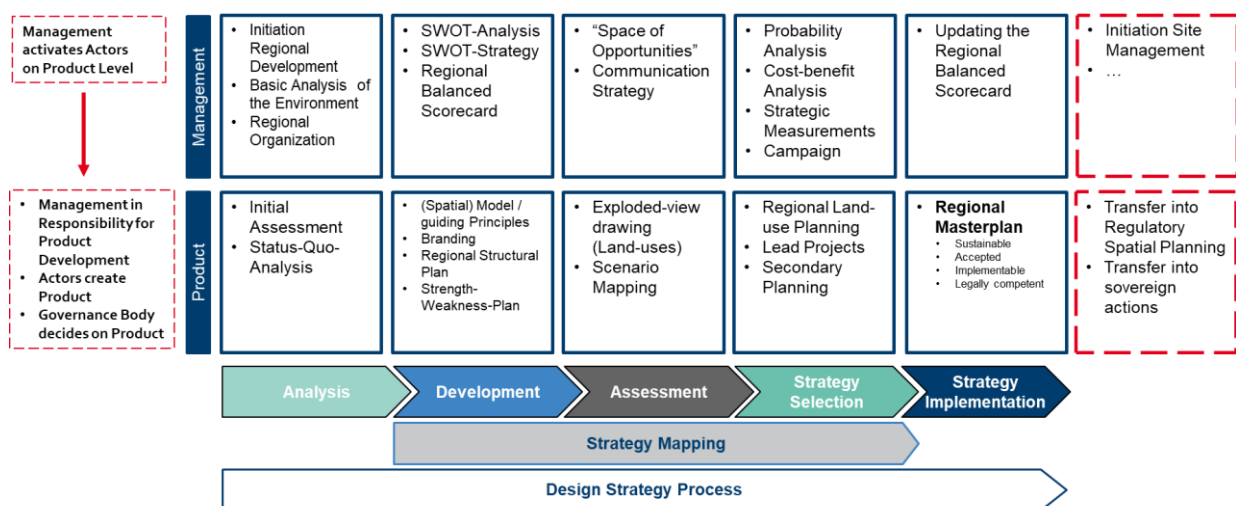


Figure 16: "ideal-type" governance and management structure in a transition region (modified from Brüggemann 2021: 40 & Feldmann 2009: 57)

An exemplary product of a strategy process could be a regional masterplan, which spatializes the sustainable development goals of the region. Such a product would provide a long-term orientation framework for the development of the region's sites and its project management. Certain actors are represented by public institutions. The development and the product itself, such as a regional master plan, is decided by a politically legitimized governance body.

6.2 Implications for the Webtool

As can be seen from the analysis and the implications, stakeholders in general must be considered and actors actively involved in their respective functions. The governance bodies and the landowning groups (PPC or MCORP) are the most important actors in the case studies. They form the core area of potential regional cooperation, such as a PPP. The further development of the web tool within the WINTER project should be oriented towards these actors. However, this also implies the need for communication with other stakeholders respectively the group of

citizens. The web tool can and should therefore also be designed as a communication and participation tool in the sense of good governance. The accessibility to certain information of the platform may therefore be purposefully arranged. While it is important to reduce the asymmetry of information availability and thus create transparency, other information can interfere with individual rights such as property. The latter are often of high relevance for actors but cannot be made available to the public without barriers. However, due to the time frame of the project, it is not expected that sensitive data could be implemented during the project period. This would be the subject of subsequent project work.

7 Conclusion

The development of an "ideal type" governance and management structure for transition regions requires a certain degree of abstraction. By comparing the three case regions, important insights were gained that enabled general statements to be made. The first item to mention here is the creation of regional forms of cooperation, which was also confirmed by all the interviewees. This is conditional on the clarification of ownership relationships and the inclusion of land ownership in the form of cooperation, such as PPP. Beyond this, the regional cooperation form needs for its establishment, for the communication and for the further task fulfilment a clear picture of the stakeholder environment. This means in particular the differentiation between stakeholder and actor within the transition region and, depending on the context, beyond. The implementation of a strategic management, supported by legitimizing parliaments, is suitable to set and guide the strategic course that a transition region needs, because the challenges on the way to a successful and sustainable post-mining landscape are opaque and not always anticipatable.

8 Perspective

One of the final outcomes of the WINTER project is the elaboration of a transition management handbook. This report on an ideal-type governance and management structure is a first component, along with other subsequent analyses, reports, interviews and workshops. The results provide an initial direction, but the report will be used as more than just a reference during the course of the project. In fact, new impressions may arise in the course of the research work, making it necessary to adapt the results that have already been written in this report. The process towards the transition management handbook is consistently documented and made available alongside other research content. The current project status can be viewed at any time at the following link: <https://winter-project.eu/>

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APPENDIX

Stakeholder analysis Greece

Stakeholder	Group	Activities	Level of Interest	Level of Influence	Typology
<i>Full name and abbreviation</i>	<i>abbreviations</i>	<i>Description of the Activities</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>Discursive, Bureaucratic, Technocratic, Financial</i>
Direct Stakeholders					
Public Power Corporation S.A. (PPC)	PPC	Assets in lignite mines, power generation, transmission and distribution.	5	5	Technocratic
Mining-Technical-Trade S.A. (METE)	MCOMP	Lignite production in privately owned mines.	5	2	Technocratic
Lignite Mines of Achlada S.A.	MCOMP	Lignite production in privately owned mines	5	3	Technocratic
GENOP-DEH 2nd tier union of 27 member unions nationally, of which 6 from Western Macedonia	LU	GENOP-DEK is the PPC’s main labor union at national level	5	5	Discursive
General Confederation of Greek Workers (GSEE). The highest, tertiary trade union body in Greece made up of 83 worker unions and 74 departmental secondary confederations	LU	GSEE is. Its prime purpose is defending the interests of all workers in the private sector. It negotiates the with the employer unions at national level, and can call all workers of the private sector on strike in case the need arises.	4	5	Discursive
Spartakos (a workers union) – member of GENOP	LU	Labor union for workers (PPC) at a regional level (Western Macedonia) – 1/3 in power sector and 2/3 in mining	5	3	Discursive

Labor Union Working Solidarity (a workers' union) – member of GENOP	LU	Small labor union	5	2	Discursive
Labor Union of Technical Engineers (a sectoral union) – member of GENOP	LU	Small labor union	5	2	Discursive
Labor Union Lygkistis (a workers' union) – member of GENOP	LU	Small labor union	5	2	Discursive
The Union (a workers' union)– member of GENOP	LU	Members in mining, power and adm – but majority miners	5	2	Discursive
Local Committee Number 12/PPC-West Macd (a sectoral union) – member of GENOP	LU	Small labor union	5	2	Discursive
SEN Union of Temporary Workers (a workers' union)	LU	Small labor union for temp. workers which work on 8 months' contract each year.	4	1	Discursive
Indirect Stakeholders					
TENA S.A., Ptolemais (group of companies)	SCOMP	Construction company, excavation and transport in 4 mines	5	2	Technocratic
GAIA Technical S.A., Ptolemaida	SCOMP	Mineral extraction works constructions	5	2	Technocratic
KAPA Dynamiki S:A., Florina &Ptolemais	SCOMP	Construction company, mineral works, roads, buildings, mechanical works	5	2	Technocratic
ELIKA A.T.E.E.S.A., Kozani	SCOMP	Construction of infrastructure	5	2	Technocratic
ERGONSAS S.A., Kozani	SCOMP	Mineral extraction works - constructions	5	2	Technocratic

KYBOS S.A., Kozani	SCOMP	Industrial services - constructions	5	2	Technocratic
MPETOKAT S.A., Ptolemais	SCOMP	Mine exposure - constructions	5	2	Technocratic
SOTTRUCKS, Ptolemais	SCOMP	Truck repair, maintenance	5	2	Technocratic
VIER, S:A., Kozani	SCOMP	Construction company/industrial services, maintenance	5	2	Technocratic
Polytechniki, S.A., Ptolemais	SCOMP	Metal works	5	2	Technocratic
Vita S.A., Ptolemais	SCOMP	Electrical and industrial installations	5	2	Technocratic
Mete , Mining-technical- trade S.A S.A., Florina	SCOMP	Sub-contracting trucks and excavators	5	2	Technocratic
Greece 2028 Observatory	SCOMP	Association of 23 sub-contractors (technical and construction) to PPC.	5	2	Technocratic
Numerous small sub- contractors	SCOMP	Provision of different services to PPC SA (e.g. catering, cleaning, waste disposal)	5	2	Technocratic
Numerous suppliers to PPC SA	SCOMP	Supply of various material inputs to PPC S.A.	3	1	Technocratic
Ekkentro Ltd	SCOMP	Mechanological and Electrological constructions (DEI Blue EV CHARGING POINTS, SUPPORT PROJECTS – MAINTENANCE IN MINES AND PPC SUBSTATIONS etc)	5	2	Technocratic
Advent Technologies (ADVENT) S.A.	PINV	Manufacture hydrogen fuel cells, energy storage systems, hydrogen production	5	4	Technocratic
Enel Green Power Hellas	PINV	They operate throughout the world with their renewable energy plants. They're facilitating the move towards electrification and sustainable energy by putting people and the environment first, and they're also constantly pushing technological boundaries and increasing stakeholder awareness.	5	3	Technocratic

HELLENIC PETROLEUM (HELPE)	PINV	HELLENIC PETROLEUM Group's strategy is focused on creating a balanced portfolio across its core business and growth in New Energy, enabling it to capitalize on opportunities offered by the accelerated Energy Transition.	4	4	Technocratic
Government					
The European Union	EU/DG		3	3	Financial / Bureaucratic
Ministry of Finance	NGOV	Overall financial policy.	4	4	Bureaucratic / Financial
Ministry of Environment and Energy	NGOV	Protection of the natural environment and resources; Mitigation and adjustment to the implications of climate change	5	5	Bureaucratic
Ministry of Development and Investments	NGOV	Responsible, i.a. for the Multi-annual Financial Framework for the years 2021-27, currently under negotiations with EC	5	5	Bureaucratic
Ministry of Labor and Social Affairs	NGOV	Labor and social legislation and policy.	3	3	Bureaucratic
Decentralized Administration of Epirus and Western Macedonia	NGOV	The Decentralized Administrations are administration units with activities particularly in state audit and executive tasks within the area of their responsibilities.	5	4	Bureaucratic
Region of Western Macedonia	RGOV	Administratively a secondary governmental organization. Geographically covers the whole of Western Macedonia	5	4	Bureaucratic / Discursive
Union of Municipalities of Western Macedonia	LGOV	Plays a political, coordinating and developmental role for municipalities	5	3	Bureaucratic / Discursive
Regional Operational Program of Western Macedonia Managing Authority	RGOV	Responsible for the Regional Operational Program (ROP)	4	3	Bureaucratic

Network of Energy Production Municipalities	CSO	Kozani Florina Amyntaio Eordaia	4	3	Discursive
Centre for Renewable Sources and Saving (CRES)	NBUS	CRES is the national entity for the promotion of renewable energy sources, rational use of energy and energy conservation. CRES is a public entity supervised by the Ministry of Environment and Energy.	4	3	Technocratic
Hellenic Transmission System Operator (HTSO) & Regulatory Authority for Energy (RAE) The Operator of Electricity Market (OEM)	SCOMP	The liberalized electricity market is operated by the Hellenic Transmission System Operator (HTSO) and is supervised by the Regulatory Authority for Energy (RAE), which also supervises the OEM. OEM operates the process of the exchange between electricity producers and electricity consumers	4	3	Bureaucratic / Technocratic
Hellenic Company of Just Developmental Transition S.A. (METAVASI S.A.)	LGOV	The company METAVASI S.A. is established by Law 4872/2021 , operates in the public interest, is supervised by the Minister responsible for Just Development Transition issues, in this case the Deputy Minister of Development & Investments.	5	5	Bureaucratic / Discursive
National Natural Gas System Operator (DESFA) S.A.	SCOMP	The National Natural Gas System Operator (DESFA) S.A. is responsible for the operation, management, exploitation and development of the National Natural Gas System and its interconnections, in a technically sound and economically efficient way, in order to best serve its Users with	5	5	Technocratic

		safety, reliability and adequacy.			
Municipality of Eordaia	LGOV	Administratively a local governmental organization	5	4	Bureaucratic / Discursive
Municipality of Amyntaio	LGOV	Administratively a local governmental organization	5	4	Bureaucratic / Discursive
Municipality of Kozani	LGOV	Administratively a local governmental organization	5	4	Bureaucratic / Discursive
District Heating Company of Ptolemais (DHCP)	LGOV	DHCP is intended to Administrate the District Heating System of Ptolemais to construct all the necessary DH infrastructure, to Operate the DH system and to commission DH Heat to consumers.	5	3	Technocratic
District Heating Company of Amyntaio (DHCA)	LGOV	The company is municipal enterprise, it constitutes is a Legal Person governed by Private Law, with a social utility character, oowned 100% by mucipality of Amindeo. DHCA is a non profitable and non governmental entity and is intended to Administrate the District Heating System of Amindeo, to construct all the necessary DH infrastructure, to Operate the DH system and to commission DH Heat to consumers.	5	3	Technocratic

District Heating Company of Kozani (DHCK)	LGOV	DHCK is intended to Administrate the District Heating System of Kozani to construct all the necessary DH infrastructure, to Operate the DH system and to commission DH Heat to consumers.	5	3	Technocratic
Other Interest Parties					
West Macedonia Development Company (ANKO) SA	NBUS	Established by the local authorities, the State, the agricultural cooperatives and Chambers of Commerce, in order to act as a pioneering scientific organization for the regional development approach	4	4	Bureaucratic / Discursive
Chamber of Commerce and Business, Florina	NBUS	Organization of local businesses and companies with a focus on development of the interests of local companies and businesses	4	3	Discursive
Technical Chamber of Greece/ Dept. of WM	NBUS	Active members (engineers) employed in industry, construction, consulting, public services. Interest from a technological, economic and political perspective.	4	3	Discursive
Geotechnical Chamber of Greece / Department of West Macedonia	NBUS		4	3	Discursive
Hellenic Association of Photovoltaic Companies (HELAPCO) Hellenic Wind Energy Association (ELETAEN)	SCOMP	Interested in de-carbonisation and subsequent investment opportunities for RES	5	4	Discursive

DIADIMA / EPADYM Waste Treatment Plant	PPP	Interested in establishment of a Circular Economy Park, focusing on waste materials recovery, utilization and management and based on the co-operation of research forces with local businesses to produce innovative products.	4	4	Technocratic
University of Western Macedonia	ACRES	Interest based on a research and technological and political/economic perspective	4	4	Bureaucratic / Discursive
Centre for Research and Technology-Hellas (CERTH)	ACRES	It is a legal entity governed by private law with non-profit status, supervised by the General Secretariat for Research and Innovation (GSRI) of the Greek Ministry of Development & Investments.	4	4	Technocratic
Cluster of Bioenergy & Environment of Western Macedonia (CluBE)	NGOs	Interest from a research and technological and political/economic perspective	4	3	Technocratic
WWF, Western Macedonia Greenpeace Greece Green Tank Kozani Ecological Movement	NGOs	Active in campaign to have PPC's environmental permit (2016) annulled for failure to comply with EU laws. Interest in mine closure and promotion of RES solutions.	4	3	Discursive
Active Youth Club of Florina (OENEF)	CSO	Is the hosting organization of the Europe Direct Information Centre of Western Macedonia, informs all citizens with a focus on young people, about the European Union, its policies, and its educational programmes, that take place all over Europe and all the advantages and opportunities that people can gain through these programmes	4	3	Discursive

Local and national media (print and electronic media)	media	Interested based on the significant socio-economic and political impact of the transition.	4	2	Discursive
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Stakeholder analysis Germany

Stakeholder	Group	Activities	Level of Interest	Level of Influence	Typology
<i>Full name and abbreviation</i>	<i>abbreviation</i>	<i>Description of the Activities</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>Discursive, Bureaucratic, Technocratic, Financial</i>
Direct Stakeholders					
RAG	MCOMP	Hard coal mine operator	5	5	Technocratic
STEAG	PPC	Power Producing Company	5	5	Technocratic
RWE Power AG	MCOMP / PPC	Lignite mine operator and PPC	5	5	Technocratic
Local utility companies (Stadtwerke) Duisburg, Oberhausen, Essen, Bochum, Dortmund	SCOMP	Public utilities for electricity, gas, water, district heating or e-mobility	5	5	Technocratic
DGB German Federation of Trade Unions	LU	organize around six million members from eight trade unions	5	5	Discursive
IG Metall	LU	represents employees in several branches of the metal and electrical industry	4	3	Discursive
Ver.di	LU	organizes a broad spectrum of occupational groups, especially in the health care sector, but also in the energy supply	3	3	Discursive
IGBCE	LU	Mining, Chemicals and Energy Interest Group, Labour Union	5	5	Discursive
Real Estate Agencies (Vonovia, Vivawest, LEG,...)	PINV	Housing companies, landlords and service providers	3	3	Technocratic
RAG-Stiftung	PINV	finances the perpetual obligations resulting from hard coal mining in Germany through capital investments	5	5	Financial
E.On Innogy	SCOMP	operates distribution grids and generates and sells electric power	4	3	Technocratic
Thyssen-Krupp	SCOMP	Germany's largest steel producer	4	3	Technocratic

Amprion GmbH	SCOMP	is a transmission system operator and operates the second largest extra-high voltage power grid in Germany	4	4	Technocratic
Indirect Stakeholders					
Eickhoff, Bochum	SCOMP	sells mining technology, produces machines and gearboxes a.o. for wind turbines, example for having adapted the transition successfully	4	2	Technocratic
DMT GmbH & Co. KG; TÜV-Nord Group	SCOMP	provides independent services in Exploration, Engineering, Consulting and Geotechnics. TÜV-Nord Group also offers services in testing, inspection, certification, engineering and training	3	2	Technocratic
Wuppertal Institute	ACRES	unites climate, environment and resource related aspects in its research and links ecological issues with those of an economic and social transformation	5	4	Discursive
THGA / FZN	ACRES	Educates experts in post-mining industry; researches around post-mining	5	1	Discursive
Fraunhofer Research Institution for Energy Infrastructures and Geothermal Systems (IEG)	ACRES	carries out research in the fields of integrated energy infrastructures, geothermal energy and sector coupling for a successful energy transition	4	4	Discursive
RWTH Aachen University	ACRES	Educates experts in post-mining industry; researches around post-mining	3	1	Discursive
TU Clausthal	ACRES	Educates experts in post-mining industry; researches around post-mining	1	0	Discursive
TU Freiberg	ACRES	Educates experts in post-mining industry; researches around post-mining	1	0	Discursive
Jülich Research Center	ACRES	investigates future-oriented research projects, especially in	4	3	Discursive

		the in the high-tech sector			
Uni Duisburg-Essen	ACRES	RWI Leibniz Institute of economic research	4	2	Discursive
TU Dortmund	ACRES	Research Institute for urban and regional development	4	2	Discursive
Westfälische Hochschule Gelsenkirchen	ACRES	Institute of Labour and Technology	4	1	Discursive
WDR media group	media	Reports on local issues and topics of the day; Produces its own documentaries about the end of the coal industry	4	5	Discursive
FUNKE media group (WAZ, NRZ, ...)	media	Several local and regional newspaper reporting to topics of the day	4	5	Discursive
Chamber of Industry and Commerce – middle Ruhr area (Industrie u- und Handelskammer, IHK mittleres Ruhrgebiet)	NBUS	legal representation of all companies in a region. Its tasks are interest representation, location policy, innovation and environment, education and training as well as business start-ups and business promotion. It evaluates and commissions studies and analyses and organizes events and forums.	5	4	Bureaucratic
Chamber of Crafts Ruhr (Kreishandwerkerschaft Ruhr)	NBUS	Corporation under public law. As the regional business organization of the skilled trades, it is the mouthpiece and representative of the interests of its guilds and member companies.	5	4	Bureaucratic
NRW Bank	FIN.INS T.	Development bank for NRW (loans, equity, consulting, seminars, networks, etc.)	4	4	Financial
KfW Bank	FIN.INS T.	As one of the world's leading promotional banks it promotes global development	4	4	Financial
Sparkassen/Volksbanks	FIN.INS T.	Local savings and loan associations	5	4	Financial
Government					
Federal Ministry of Economics and Climate Protection (Bundwirtschafts	NGOV	N/A	5	5	Bureaucratic

ministerium, BMWK)					
Federal Ministry of Labour and Social Affairs	NGOV	(skilled) labour promotion and strategy, social insurance, ...	5	4	Bureaucratic
Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz, BMUV)	NGOV	Federal structural aid	5	5	Bureaucratic
Federal Ministry for Economic Cooperation and Development (Bundesentwicklungsministerium, BMZ)	NGOV	N/A	4	3	Bureaucratic
Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection of NRW (Ministerium für Umwelt, Landwirtschaft, Natur- und Verbraucherschutz, MKULNV-NRW)	RGOV	Rural development, nature and landscape conservation, waste management, emission control, water management	5	5	Bureaucratic
Ministry of Economic Affairs, Industry, Climate Action and Energy of NRW (Ministerium für Wirtschaft, Industrie, Klimaschutz und Energie, MWIKE-NRW)	RGOV	N/A	5	5	Bureaucratic
Ruhr Regional Association (Regionalverband Ruhr - RVR)	LGOV	is the regional hub of 11 cities and four districts of the Ruhr area; responsible for formal and informal regional planning, develops the Ruhr Regional Plan	5	5	Bureaucratic

<p>15 municipalities and districts of the RVR (Bochum, Dortmund, Essen,...)</p>	<p>LGOV</p>	<p>are responsible for all tasks of the local community (self-administration, registration law, civil defense, regulatory law, building supervision, monument protection, etc.; are important planning authorities</p>	<p>5</p>	<p>4</p>	<p>Bureaucratic</p>
<p>District governments of Düsseldorf, Arnsberg and Münster (Bezirksregierung)</p>	<p>LGOV</p>	<p>classical and technical environmental protection, governance</p>	<p>4</p>	<p>4</p>	<p>Bureaucratic</p>
<p>Other Interest Parties</p>					
<p>FIB – Forschungsinstitut für Bergbaufolgelandschaften e.V.</p>	<p>NGO</p>	<p>deals with landscapes damaged by raw material extraction, especially in the Lusatian lignite mining area. To this end, they develop remediation solutions with a thematic focus on: agricultural and forestry recultivation, water ecology as well as landscape development and nature conservation.</p>	<p>3</p>	<p>1</p>	<p>Technocratic</p>
<p>GVSt-Gesamtverband Steinkohle e.V. (BSNEV-Branchenverband Steinkohle und Nachbergbau) The German Coal Association (today: Coal and post-mining industry association)</p>	<p>NGO</p>	<p>As general association of the German coal industry it has the statutory task of looking after and promoting the general interests of its members, especially in the fields of economic policy and social policy, and represents its ordinary members as an employers' association and collective bargaining party; acts on national and international level</p>	<p>5</p>	<p>3</p>	<p>Discursive</p>
<p>VBHG e.V. Association of mining-damaged house and property owners</p>	<p>NGO</p>	<p>Representation of the interests of private property in the event of mining damage</p>	<p>5</p>	<p>2</p>	<p>Discursive</p>
<p>German Federation for the Environment and Nature Conservation (Bund für Umwelt und Naturschutz)</p>	<p>NGO</p>	<p>federal NGO that has been dedicated to protecting nature and the environment</p>	<p>4</p>	<p>4</p>	<p>Discursive</p>

Deutschland, BUND)					
NABU	NGO	Environmental NGO	4	4	Discursive
WWF	NGO	Environmental NGO	4	4	Discursive
LEE NRW State Association for Renewable Energies NRW	CSO	Interest group of companies, associations and individuals for the promotion of the expansion of renewable energies	4	4	Discursive
VGBE energy	CSO	European Association of the power producing companies	4	4	Discursive
Business metropole Ruhr (bmr)	NBUS	Regionals smart specialisation agency	5	3	Discursive

Stakeholder analysis Poland

Stakeholder	Group	Activities	Level of Interest	Level of Influence	Typology
<i>Full name and abbreviation</i>	<i>Abbreviations</i>	<i>Description of the Activities</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>0 – 5 (Very Low, Low, Medium, High, Very High)</i>	<i>Discursive, Bureaucratic, Technocratic, Financial</i>
Direct Stakeholders					
KWB PAK Konin	MCOMP	Mine operator	5	5	Technocratic
ZEPAK	PPC	Coal, Wind, PV, Biomass power plant facilities	5	5	Technocratic
Inter-Union of PAK Miners of the Adamów Mine	LU	Labour Union of miners Adamów Mine	4	2	N/A
KADRA Inter-Union of Adamów Mine	LU	Labour Union of Adamów Mine	4	2	N/A
Sub-Union Organisation of the Independent Self-Governing Union "Solidarity" PAK Lignite Mine Adamów	LU	Solidarność Labour Union of miners Adamów Mine	4	2	N/A
Inter-Union of Miners of KWB "Konin" S.A.	LU	Labour Union of miners Konin Mine	4	2	N/A
Independent Union of Continuous Movement Workers "Ruch" at KWB Konin	LU	Labour Union of miners Konin Mine	4	2	N/A
Inter-Union of Engineering and Technical Employees "Kadra" of KWB Konin	LU	Labour Union of miners Konin Mine	4	2	N/A
<i>Local community organisations</i>	N/A	N/A	N/A	N/A	N/A
<i>Environmental organisations</i>	N/A	N/A	N/A	N/A	N/A

<i>Industrial and Technology Parks</i>	N/A	N/A	N/A	N/A	N/A
Indirect Stakeholders					
Aluminium Smelter Konin (Aluminium Konin IMPEXMETAL S.A.)	LBUS	N/A	4	2	Technocratic
ADM Poland	SCOMP	Renewable Energy consulting company	5	2	Technocratic
ARSANIT sp. z o.o	LBUS	Insulation / construction company	5	2	Technocratic
Kon-Bet sp. z o.o	LBUS	Prefabrication production plant	5	2	Technocratic
Neo Energy Sp. z o.o	SCOMP	Renewable Energy project development company	5	2	Technocratic
Munda Energy OZE	SCOMP	Renewable Energy project development company	5	2	Technocratic
Biomasa Partner Group Sp. z o. o	SCOMP	Biomass production	5	2	Technocratic
Biogas Technology	SCOMP	Biogas service provider	5	2	Technocratic
DSM	LBUS	Metal plate production plant	5	2	Technocratic
Suntherm	LBUS	Infrared heating company	5	2	Technocratic
SunErgo Poznań	SCOMP	PV company	5	2	Technocratic
Cluster "Green Energy Konin" (Klaster „Zielona Energia Konin”)	NBUS	Local energy market development	5	N/A	Bureaucratic
Government					
Discript Office of Konin (Starostwo Powiatowe w Koninie)	RGOV	Regional government office	5	5	Bureaucratic
Discript Office of Koło (Starostwo Powiatowe w Kole)	RGOV	Regional government office	5	5	Bureaucratic
Discript Office of Słupca (Starostwo Powiatowe w Słupcy)	RGOV	Regional government office	5	5	Bureaucratic

Discript Office of Turek (Starostwo Powiatowe w Turku)	RGOV	Regional government office	5	5	Bureaucratic
Ministry of Energy	NGOV	N/A	5	5	Bureaucratic
Ministry of Climate and Environment	NGOV	N/A	5	5	Bureaucratic
Ministry of Development, Labour and Technology	NGOV	N/A	5	5	Bureaucratic
Ministry of National Assets	NGOV	N/A	5	5	Bureaucratic
Polish Agency for Enterprise Development, (Polska Agencja Rozwoju Przedsiębiorczości)	NGOV	N/A	3	4	Bureaucratic
Higher Mining Authority, District Mining Authority in Poznań	RGOV	Mining operations offices	4	3	Bureaucratic
Energy Regulatory Office (Urząd Regulacji Energetyki)	NGOV	N/A	4	4	Bureaucratic
Marshal's Office of the Wielkopolska Voivodeship	RGOV	Regional government office	5	5	N/A
Steering Committee for Transformation of Eastern Wielkopolska at the Marshal of the Wielkopolska Voivodeship and the Subregional Forum of Eastern Wielkopolska	RGOV	N/A	5	5	N/A
The EU	EU/DG	N/A	5	5	N/A

Other Interest Parties					
Construction and Vocational School Complex in Konin	AC	N/A	4	2	N/A
Central Mining Institute	AC	N/A	4	2	N/A
Energy Forum Foundation	NGOs	N/A	4	3	N/A
Energy Conversion and Renewable Sources Research Centre of PAN (Polish Academy of Sciences)	AC	N/A	5	2	NA
Łukasiewicz Research Network	AC	N/A	5	2	N/A
Association of Mining Engineers and Technicians	NBUS	N/A	5	2	N/A
Institute of Mineral Raw Materials and Energy of the Polish Academy of Sciences	AC	N/A	4	2	N/A
Institute of Mining Technology - KOMAG	AC	N/A	3	2	N/A
Council of the Federation of Scientific and Technical Associations in Konin - NOT	NBUS	N/A	3	2	N/A
Tauron Polska Energia S.A	NBUS	N/A	4	2	N/A
Industrial Development Agency S.A.	N/A	N/A	4	2	N/A

Interviews (Greece)

Interview #1

Date & Time	Friday, 3/3/2023 12:00
Location	Kozani, Region of Western Mecedonia
Participants	Mr. Kianas Stergios Vice Governor of Digital Transition, Green Transformation, e-Government and Innovation

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

The role of the Region of Western Macedonia is very important and started in 2019 when the Prime Minister announced from the UN platform the closure of lignite units in 2028 and the shift to a different production model. That is when the cooperation of the Region of Western Macedonia with the central government started, along with our participation in the bodies that were being created. Thus, the initial Coordinating Committee of the Just Transition Development Plan (“SDAM”), coordinated by Mr. Mousouroulis, included the Regional Governor of Western Macedonia, Mr. Kasapidis, and the then responsible Deputy Regional Governor for Development Transition Planning, which was me.

Through this steering committee and the assignments that had been made to develop the Master Plan at the central level, we were involved in the discussions and the development of this plan.

At a regional level we had organised some work groups on different themes related to the change of the production model which we developed and that was the way to interact with the central structure that was created.

Therefore, the role of the Region was quite crucial, because it had to deal with the initial reaction of the local community after the announcement of the Prime Minister's decision and create the right conditions for a better future.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

In general, as a project it is not easy. To manage the change of the production model of a region in such a short time is difficult and often not possible. Also, if we consider that we are in 2023, in the time that has passed we have seen very few things develop and we would expect to see tangible examples faster.

Since we mentioned challenges in managing the whole project, what is definitely negative for us is that it is not managed at a regional lever, but managed centrally (Athens). There may be some representatives of the region involved in the relevant institutions, but they do not represent the majority of the region and thus the full picture of what is happening in the region is not conveyed properly. In short, there is no directness between the central and regional level of management, which is an important tool to ensure that information is not lost or delayed.

In addition, since we are talking about areas of the mines whose land use needs to be changed and redefined and the procedures are very time-consuming, in my opinion it is wrong to focus the whole project only on the core of the lignite mines (the De-lignification Zones, as they have been designated). The planning should have been extended to other areas that do not have these characteristics, without the need for the time-consuming rehabilitation works required to make the

new investments. In this way there might have been more immediate results in changing the production model and the new, variable investments would have started earlier in the wider region of Western Macedonia.

For example, the region has no operational business receptors for industrial areas. Although there appear to be some formal ones, it takes some time for them to become properly operational and organised. Unfortunately, we are also behind in this issue, let alone the business receptors that are reported to be created within the De-lignification Zones in the near future.

3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment, ...)? If possible, please give examples for obstacles identified.

First of all, **ownership** is very important and complex. The land uses may have been defined years ago during the preparation of the Master Plan, but to date it has not been possible to transfer the land to the entity that will manage it (METAVASI S.A.). Therefore, ownership status is one of the obstacles to this day, but the solution is well underway.

Land **rehabilitation** is not a simple process. It takes many, many years before land can be put to a different use. Also, we should not forget that according to the Environmental Impact Assessment studies (EIA) submitted by PPC S.A. and are in force, attention must be paid to the obligations of PPC S.A. regarding the rehabilitation of soils within the mines.

Finally, another important part is the Special Urban Plans that are required to be carried out within the Delignification Zones and while it is a process that begun early on, I think there has not been any commissioning by PPC S.A. to determine the new uses of the land and implement them.

4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.

There is no form of governance. What we try to do as a regional authority is to listen to the stakeholders of the region. We pay a lot of attention to the views of the local stakeholders, such as research centres, educational institutions or Chambers of Science, which of course also set the direction that the region should take. This is our concern, to listen to these bodies and then, based on their suggestions, to follow our own policy and direction as a Region.

5. Do you see further potential partners in the field not yet involved in the transition process? How and when should they be involved?

From a practical point of view, the available tools at the moment are METAVASI S.A. and some financial instruments such as the Just Transition Fund (the resources allocated by the European Union, which exceed 1 billion for our region). So, we have are the priorities that guide the projects. Through the NSRF programme(National Strategic Reference Framework), there is a monitoring committee which coordinates where the resources of the programme will be allocated.

In this committee, there is again a centralised approach to staffing. For example, the representatives of the committee are not from the local bodies (e.g. the Technical Chamber of Western Macedonia), but from the central ones (Central Representation of the Technical Chamber of Western Macedonia). This approach does not help in targeting the issues properly. I believe that it also makes it difficult for the same resource management team to understand the issues/problems of the region.

Efforts were definitely being made to create a committee that will evaluate the proposals to be submitted for approval in the Just Transition Fund, and this required the participation of local stakeholders. I believe that this approach has been accepted and in the near future, we will see which bodies will participate in the 9-member committee at the local level, which will be headed by the regional governor.

6. How does the EU influence the just transition process in your region?

It all started at the European level, with targets set for both climate change and the European

Green Deal. These were the primary objectives that led to our current discussions on the closure of the lignite plants and the change of the production model, i.e. the energy transition.

EU also affects the projects with the allocation of financial resources. The funds available from the European Union for the transition are large and I believe that we will not have enough time to absorb them in one programming period.

I believe that the EU is the key tool of the energy transition. On the one hand are the political directions that are set and on the other hand the resources available to implement the objectives.

7. In which form is “good governance” (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as “good governed”? Please explain your opinion.

I'm not sure if there is good or bad governance, but there is governance. What is negative for us is that it is centralised. It would be more effective for us if local stakeholders participated in the governing bodies.

This concept does not seem to exist as a political concept, save for the representation of the actors in committees as I mentioned before.

There was a possibility to set up a body to control & monitor the project, within the governance framework. To check whether the plan is being implemented, the targets are being met, the indicators are reached and the resources are being allocated where they were originally planned to be. This role could be assumed by the regional government of the region, which is directly affected, with all the stakeholders and especially the University (of Western Macedonia), which has a very important role.

Also, CERTH has proved over the years its active interest in the problems of the regions in transition and is usually ahead of the developments by researching and studying these issues.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperations between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

The issue of the public-private partnership is something that has been raised and presented in specific proposals by the Municipality of Kozani in this particular phase of the transition. However, it can be developed even further. This partnership essentially creates new resources in the region, new funds and the obligation of the state/entity participating in the public-private partnership to be moved to a later date. So I think it is a good idea to create public & private sector partnerships.

On the ownership issue, expropriation of the lands by PPC S.A prevailed until now. Currently, these lands are under the jurisdiction of PPC S.A. and are going to be transferred to METAVASI S.A., in order to facilitate their management. Of course, since there are areas of agricultural use, it will have to be taken into account how certain lands will be allocated for use by professionals or farmers in the area.

The cooperation between the public and private sector has been implemented in the region for years through DIADYMA S.A. and the waste management in the region of Western Macedonia. It operates successfully within the Ptolemaida lignite mine, setting a good example for the whole of Greece.

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

I am not against it, although I understand the fear that may exist at the central government level regarding the management of certain situations by the Region or regional authorities, because we should not complain that there is an understaffing of services/structures and yet ask for them to be managed by ourselves.

On the other hand, however, the characteristics and anthropogeography of the region cannot be described better by any other than ourselves, and I believe that it is important for the stakeholders of the region to participate in the bodies that create and evolve the production model of our region.

In my opinion, we are not covered by the existing model. I do not believe that any management unit can operate only centrally, it should operate at a local level as well.

For example, METAVASI S.A. will manage a large part of the energy transition, whether it has to do with land management, or at the planning stage (maturation of projects for the region), should have its basis at the local level.

And of course we, as a Regional government, will manage and direct the transition in a way, by selecting the actions/interventions/projects that are to take place in our region. In this way, we also acknowledge our responsibilities.

Interview #2

Date & Time	Monday, 6/3/2023 14:00
Location	Athens, Greece (24 Stadiou St., METAVASI S.A.)
Participants	Mr. Mpoukis Ioannis CEO of METAVASI S.A.

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

METAVASI S.A. is one of the key institutions that implement the just transition in the lignite mining areas in Greece. One of the most important issues is the transfer to METAVASI S.A. of large areas owned by PPC and formerly used for surface lignite mining. Large part of such lands will be rehabilitated and used for new land uses. In this context, Special Urban Plans are being implemented in order to define certain activities that will reformulate the production model of the transferred lands. Such activities include settlement of industrial parks, agricultural uses, reforestation, recreational parks and lakes. So this is a medium- to long-term plan and at the moment we are METAVASI co-operates with PPC in order to gradually transfer the lands to METAVASI S.A., redefine land uses and further repurpose the lands for the uses described above.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

The transition and definition of proper land use requires establishment of a governance structure in collaboration with the local authorities, In this context, a permanent committee, where local authorities participate operates within the Special Urban Plans, which will further reflect the views of the local stakeholders in what regards land uses. Moreover, the committee will convene in the peripheries and will hold an open venue, where the view of local authorities will also be taken into account. However, one should keep in mind that uses are in many cases dictated by the quality of these lands: industrial parks will most likely be deployed in undisturbed lands, whereas agricultural use and forestry applications are expected for already rehabilitated or degraded lands. In this context, preliminary indication for land uses exist from recent studies performed by the World Bank and the Just Transition Mechanism. The implementation of the SUPs will further define final land uses which will be further ratified by Presidential Decrees.

3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment,...)? If possible, please give examples for obstacles identified.

The most important obstacle right now is time because the transition needs to be implemented in the next five years and tedious urban planning procedures need to be shortened. In addition to Special Urban Plans implementation the industrial parks, where we intend to have industrial activities and other relevant uses, need further environmental licensing. therein parallel, consultation with local stakeholders is required to achieve general consensus for the industrial activities foreseen.

4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.

In the new institutional framework, ESPA 2021-2027, we intend to establish permanent entities in the former lignite areas, Western Macedonia and Megalopolis, and we expect that these entities will further cooperate with the local communities and other stakeholders. Actually, we have two similar activities at the moment, a centre to promote Entrepreneurship and a centre to further undertake various reskilling and upskilling activities, both to start operations in the second half of 2023.

5. Do you see further potential partners in the field not yet involved in the transition process? How and when should they be involved?

We anticipate a number of different partners, both local and external. We have preliminary discussions with important industries that would like to start activities in these areas and we have also a discussions with the local communities through seminars and other events, where we provide information them about the opportunities for Western Macedonia and Megalopolis. It should be kept in mind that this is a dynamic process and we believe and hope that in the near future we will have higher involvement and participation.

6. How does the EU influence the just transition process in your region?

There is an increased involvement of the EU, first of all through monitoring of the co-financed ESPA program, which amounts to 1.4 billion € for these two regions, focusing in five distinct activities. There is also an additional financing for the land rehabilitation process through the RRF (Recovery and Resilience Facility), which amounts to 200 million euro. Therefore, we expect that a lot of resources will be mobilised towards the implementation of a variety of activities in the above areas.

7. In which form is “good governance” (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as “good governed”? Please explain your opinion.

As I mentioned we are trying to establish firm governance activities in these areas through committees and the active participation of key officials of the key local authorities. With the setup of the centres I mentioned earlier, for entrepreneurship and skilling, further collaboration with local stakeholders will be secured, the presence of which will further ensure co-operation and “ownership” of the programme. Furthermore, accountability will be secured through permanent monitoring of the activities of the two centres and constant evaluation of their operation and impacts.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperations between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

I think there is not any essential conflict because according to the design of the just transition, land is transferred from PPC to a newly established public company, which is METAVASI S.A.

This was the intention from the initial planning of the programme, and it is expected that with the right intervention in the future public land (definition of land uses and repurposing) will mobilise both public and selected private activities which will have an overall positive impact on local employment and sustainable development of the regions.

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

Regional cooperation is quite important and as I mentioned earlier, we have established firm relationships with the Prefectures and the major municipalities of the region. Furthermore, we have an open discussion and interaction with stakeholders that are expected to be employed in actual employment of the local population such as the chambers of commerce and industry. The opinion of the latter is taken very seriously on future planning of the interventions. We have established such cooperation analysing potential programmes for tourism, agricultural and industrial sectors, as well with the universities and the research centres, in order to have a balanced opinion of the views of the key players in the regions and further incorporate such opinions when designing and planning any activities and utilisation of the transferred lands.

Interview #3

Date & Time	Friday, 17/3/2023 14:00
Location	Ptolemaida, Region of Western Macedonia
Participants	Mr. Plakentas Panagiotis Mayor of Municipality of Eordaia

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

The main role of the Municipality of Eordaia, after the sudden announcement of the decision by the Prime Minister for the delignification after 2028 and not 2050, as it had been originally decided by the European Union, is to redefine the objectives, programs and guidelines so that the Municipality of Eordaia is ready for the next day.

Of course, regarding the timing of the delignification, it cannot possibly be fair because without a documented plan and experience in such situations, the given time is too short.

The role of the Municipality of Eordaia is crucial, as it was the first and largest municipality in terms of the activity of PPC S.A. and it had a direct relation to the Gross Domestic Product (GDP) of the regions, either through permanent and temporary employees, or indirect jobs. In this context, proposals were created to help the region replace PPC S.A. activity in the region's GDP.

Therefore, we tried to serve the public interest by highlighting the wrong choices that were being made, since for over 1.5 years there was not even a plan for what was going to be done during the transition period.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

I think that they can be divided into categories and they relate to:

- Economic consistency. PPC S.A. was a key contributor to the GDP of the region, resulting in a significant loss of income to the local community, a change of activities in the region and generally

what was described in the previous question.

- The rehabilitation of the specific lands that will become inactive. According to the PPC S.A. Environmental Impact Study, rehabilitation should have been carried out already. However, only 7% of the soils of PPC S.A. activities have been rehabilitated so far.

The Greek government, being aware of this impasse, tried to solve it by transferring the lands that should have already been rehabilitated, having completed their purpose, to METAVASI S.A. to manage them.

- Staff facing difficulties towards reskilling. In the area there is an abundance of qualified personnel who until now has acquired certain technical skills or preferred certain specialties even at university level. This situation suddenly has to change.

- Technical expertise is being lost from the region. There were occupations that were passed down from generation to generation, learning the secrets of the trade through application. With the cessation of PPC S.A. activities, the advantages in know-how that the region had acquired from the experience passed on from older generations to younger ones are being lost.

- The disruption caused by the announced relocations. How will they be completed? Until now, PPC S.A. has had the obligation to expropriate some settlements in order to exploit the lignite. For example, relocations of settlements have been initiated but have not been completed for 10 and even 20 years. How can the relocations be completed if there is no support, funding, infrastructure support from the state, even with funds from the Just Transition Fund or even the Recovery and Resilience Facility. One action should not cancel out the other.

All of the above supports the argument that the delignification should be moved at a later time, as close to 2050 as possible, for us to be able to support the fairness and smoothness of the transition.

Finally, a critical point will be the "dead period" as I call it. By the time the Government's specific plan, which is proceeding very slowly, is implemented, the region will be in decline, and this has already begun. Young people are leaving the area or emigrating abroad and this must stop.

3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment, ...)? If possible, please give examples for obstacles identified.

Greece has a labyrinthine legislative system, where decisions or laws repeal other laws and other procedures, so that bureaucracy dominates the whole process. The legal opinion of those in charge of the delignification on behalf of the Government, the Ministry (of Environment and Energy) and the public companies that have been set up (SDAM and METAVASI S.A.), claim that such issues will be resolved. I, for one, am aware of no such thing.

The only thing that has been solved so far is the transfer of the expropriated lands to METABASI S.A. for development. But it is not clear how, or who the investor in the areas will be or what incentives have been given to them.

The only thing we have seen so far, and I am very sorry to say this, is that hundreds of wind and photovoltaic park companies have come to the region, with interests unrelated to Eordaia and Western Macedonia or even abroad, offering zero jobs to the local workforce. I am not against renewable energy sources, but I am against the uncontrollable construction works that has prevailed recently. There is no specific land-use plan in the region of Western Macedonia. In conclusion, this labyrinthine and conflicting legislation creates a distorted situation, which does not help the Just Transition Development.

4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.

The Municipality of Eordaia participates in the Energy Municipalities network, a structure that concerns the municipalities affected by mining activities. The Municipalities of Eordaia, Florina, Kozani, Amynteon and Megalopolis are participants.

At the same time, the Municipality of Eordaia participates in DIADYMA as a partner with a share in the anonymous company DIADYMA, in which I am also the Chairman of the Board of Directors. The Waste Management Agency (FOSDA) has been operating for almost 25 years with very positive results in the management of waste in the region.

We also participate through representation in the committee that exists for the Just Transition Development, after a very long negotiation period because there was only representation from the Region and not from the municipalities. It is through this representation that our proposals are submitted to the transition effort.

In addition, we have a strategic agreement with the development agency of the region, the University of Western Macedonia, as well as with CERTH, which as a Research and Technology Centre supports the region through research projects related to the next phase of energy transition, good practices related to hydrogen, etc.

Finally, we have not abandoned our cooperation with PPC S.A., as we collaborate with PPC Blue, which is the electricity production company of PPC S.A. We have signed agreements to promote this as a productive model for the development and transition of our region.

5. Do you see further potential partners in the field not yet involved in the transition process? How and when should they be involved?

I believe that the Transition could be achieved with a more productive dialogue of the Chambers of the region (Geotechnical, Technical, Economic, Commercial and Industrial), because from there we will have a clearer picture of the reaction of the general public. Also, the representatives of the region's agricultural bodies, associations and cooperatives is a crucial part of society that could be involved.

Finally, I consider as a partner any citizen who could contribute with actions, proposals and new good practices available in other countries, so that we can move forward.

Most importantly, I think that we should take into account the good practices that are applied abroad, which is the subject of the specific project you are working on, adapt them to the Greek context and exchange experiences, so that we can implement the Transition in a better way.

6. How does the EU influence the just transition process in your region?

The European Union could play a more decisive role, as is the one that is funding this whole effort, but I am sceptical about whether the funds will be distributed properly and fairly when they reach the region and whether this whole project will be supported effectively.

So the European Union is a key player involved in the transition process, as it is also the body that we can turn to in order to voice our concerns across and have them taken into consideration.

7. In which form is “good governance” (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as “good governed”? Please explain your opinion.

The time we have, like I said, is very short. The year 2028 is very close. Of course local communities should have been more prepared and more aware of what was to come. For example Germany, which is a more organised country, has time until 2038 and Greece, which is far behind the rest of Europe in terms of organisation, has ten years less to complete its transition. Will be able to do it in such a short time?

For example, at the moment the new Ptolemaida V power plant, has not yet started to operate but we when it will stop, which is a world record, for an investment that the Greek people have spent at least EUR 1.5 billion on.

The district heating of local communities depend on its operation. We have succeeded in having excellent environmental footprint because for 20 years now, oil has stopped being used and we use district heating, which is a cost-effective and environmentally friendly form of energy, while taking advantage of the activity of the power plants. We cannot just cease the operation of the district heating.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperations between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

At the moment nothing belongs to private companies. There are municipal or private lands that have been expropriated and are under to the jurisdiction of PPC S.A., which currently has two categories of lands, rehabilitated lands that were to METAVASI S.A. for management and the lands owned by PPC S.A. which have not yet been exploited. Therefore, the major owner of the area is PPC S.A.

We are not against the creation of public-private partnerships. The Municipality of Eordaia, as I mentioned earlier, is participating in DIADYMA, which is an example of this type of cooperation in relation to waste management.

Also, we are preparing to establish a public-private partnership through the University of Western Macedonia (the campus in Ptolemaida). However, issues such as the ownership status and the course of implementation should be clarified from the beginning. It is not yet known who will make decisions, or who will be responsible in managing the whole process. Therefore, the safeguards of the state should be put in place in any activities of such partnerships so that it has benefits for the citizens.

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

Despite the particularities of the municipalities of the Region of Western Macedonia, there should indeed be a consistent approach to the issue at a regional level, taking into account, however, that the priorities of each municipality regarding the energy transition are differently prioritised.

Also, actions determined by the state could take place at the level of the Region and even the Municipality's. For example, we have proposed that METAVASI S.A. offices should be established and operate in the region. It is not possible to carry out planning from Athens, nor can we follow processes that way. In fact, I have proposed that these offices be hosted in the offices of the building of CERTH, which is based in Ptolemaida, so that there is a clear view of what is happening in the area. There has been a positive reaction in general.

There is also a need for this effort to be coordinated by a structure established in the region, which can listen to local stakeholders and local communities more effectively.

Interviews (Germany)

Interview #1 & 2

Date & Time	Tuesday, 21/3/2023 13:00 - 14:50
Location	Zoom meeting
Participants	<p>Mr. Bernd Lohse</p> <ul style="list-style-type: none"> • Managing director development company “Neue Zeche Westeholt” ltd. • Seconded by RAG Montan Immobilien (RAG MI) • Project developer at RAG Montan immobilien <p>Mr. Benedikt Schmoll</p> <ul style="list-style-type: none"> • Authorized signatory development company “Neue Zeche Westeholt” ltd. • Seconded by the municipal administration of the city of Herten • Head of staff unit “mining land revitalisation” of the city of Herten

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

- Mr. Lohse and Mr. Schmoll combine in their functions private and public interests within the development company "Neue Zeche Westerholt" Ltd. ("New Colliery Westerholt")
- Mr. Lohse is seconded by RAG MI, an affiliate of RAG responsible for real estate, preparing and developing post-mining land uses. RAG is a national company, founded as an aggregation of hard coal production related enterprises. Throughout his career at RAG , Mr. Lohse gained experience in managing multiple large scale development projects related to post-mining land use.
- Mr. Schmoll brings his experience as head of the staff unit “mining land revitalisation” of the city of Herten to the development company. He’s also seconded by the municipal administration.
- The development company “Neue Zeche Westerholt” ltd. manages the development, revitalization, and marketing of the sites of the former colliery Westerholt, as well as bordering areas and linked existing buildings.
- The former colliery site extends over two municipal areas, Herten and Gelsenkirchen. Therefore, its development is an intercommunal project, which is structured as a public-private partnership between RAG MI (private) and the affected municipalities (public).
- On the basis of the questionnaire sent out in advance, both partners emphasize the importance of moving away from an "administrative structure" to a "project structure, when it comes to developing former mine sites.
- This includes the bundling of development-related tasks, such as planning, land remediation, preparation, and marketing. A fragmentation of responsibilities among different administrative areas can prevent purposeful project development.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

- There is agreement that one of the main challenges is the funding landscape. With regard to land development, there is a constant search for the right support program.
- This is becoming increasingly diverse and complex, whether at state, federal or EU level. At the same time, there is a lack of a bundling effect of different pots.

- Mr. Lohse emphasizes that increasingly dynamic times present a tremendous challenge to the private land development perspective. Accordingly, in addition to environmental aspects, climate resilience is playing an increasingly important role.
 - These trends make it increasingly difficult to calculate the economic viability of projects and require resilient management. This means that projects are thought of holistically and from the end. Setting fixed goals early on is essential, as is sticking to them.
 - Moreover, there are more and more stakeholders within a project setting who bring diverse expectations into a project.
 - Mr. Schmoll adds to Mr. Lohse that PPP simplifies the tension between the private and the public sector - it is much more complementary in terms of content and expertise. Joint management is therefore suitable for meeting the challenges of transition processes.
 - However, as Mr. Lohse reiterates, this requires the setting of fixed development targets for an area. Because this creates a common language regulation outwardly and inwardly. This is crucial for communication with the public and stakeholders.
 - In view of the stakeholder concept, Mr. Lohse emphasizes that a differentiation between "stakeholders" and "actors" is useful in order to implement resilient and effective management.
- 3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment, ...)? If possible, please give examples for obstacles identified.**
- Mr. Schmoll does not see an immediate problem in the regulatory framework. It is much more a challenge for planners and lawyers to find creative solutions.
 - When asked about existing state aid law, both interviewees first explained that European regulations were largely implemented in the same way in the federal context. State aid law is not always problematic, there are also synergies, but state aid law tends to be destructive and promotes the demolition of structures rather than the design of areas. The latter more quickly generates the suspicion of taking advantage.
 - Accordingly, there is agreement in the interview that there is definitely potential for optimization in the funding environment and in state aid law, but "where there's a will, there's a way!"
- 4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.**
- Mr. Schmoll makes it clear that de facto the informal level is now more important than the formalized one. Formal procedures are lived reality of the administration and are phased into the procedure. In fact, the weighting has reversed in recent years. The process-related question "Who do I take with me and when?" dominates most procedures. The technical evaluation is more of a "mosaic in the process".
 - The participation procedures prescribed by law in Germany are no longer sufficient. The use of new participation formats to gather experiences from the local population and economy is crucial.
 - In combination with continuous communication on the basis of a common language, suitable participation formats enable a high level of acceptance for development projects.
 - However, participation processes also generate expectations. These must be endured and met with constancy.
 - Mr. Lohse summarizes, "A dynamic process focuses on informal procedures." At the same time, the degree of dynamization is increasing in almost all development projects.

5. Do you see further potential partners in the field not yet involved in the transition process? How and when should they be involved?

- Neither can think of any spontaneously, as the list of partners has evolved from many years of experience - both for RAG MI and the public sector, represented here by the city of Herten.
- Asked whether they would exclude anyone, both partners explain that there are stakeholders with a high "sense of mission", yet in many cases they have a high level of interest and low level of influence.
- The distinction between "stakeholders" and "actors" mentioned earlier is very important in this respect. Not every interest can be followed 1 to 1 or at all.
- Furthermore, the new media landscape in many cases creates a distortion of influence (populism). Loud particular interests can thus endanger the common good in the development of projects. Politics mostly has to decide on projects and should therefore put the common good at the centre of its decisions. Ultimately, spatial planning is obliged to provide services of general interest.
- It is important to respond to this new media environment with a view to resilient management. One possibility suggested by Mr. Schmoll would be an area advisory board consisting of expert politicians and administrators.
- According to Mr. Lohse, private developers often have it easier, whereas the public sector is more subject to social dynamics and political decision-making. The market is usually more stable than political decision-making throughout multiple election periods.
- Project development usually takes two to three election periods. As a consequence, continuous communication also comes into play here. Ultimately, project continuity, including appropriate communication, is the contrast to the short-lived media landscape, which is said to promote acceptance.

6. How does the EU influence the just transition process in your region?

- The European Union stands out in Germany primarily through the implementation of directives. In this context, the interview partners would like to see greater orientation, if not obligation, of the EU wording when it comes to transposition into national law. This would help to reduce complexity and standardize necessary developments, such as the expansion of renewable energies.
- In the Ruhr region itself, the influence of the EU on the transit process is not very noticeable. This is also due to the advanced state of the process. After all, in the area along the rivers Emscher, Lippe and Ruhr, this process already began in the 1960s and was adjusted multiple times to meet modern standards in terms of sustainability.

7. In which form is "good governance" (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as "good governed"? Please explain your opinion.

- Mr. Schmoll clarifies his municipal experience with regard to the regional development perspective. Accordingly, despite multiple efforts (e.g., RVR), parochial thinking within the region is intensifying.
- Contrary to this trend, both interviewees suggest that a higher regional steering effect should be guaranteed by corresponding institutions. This could buffer the dynamization of possible processes. An example of this would be the area-wide preparation of climate impact forecasts.
- At the end of the day, many of the large-scale land development projects of former mining sites have regional impacts and are thus of regional interest. Through economic consideration, the private sector is often more advanced in terms of "cross-border" cooperation than the public sector. PPP can be supportive in this field.
- When asked about the possibility of companies taking on more social and environmental responsibility, Mr. Lohse pointed to legal hurdles and pitfalls, such as concessions.
- There is agreement on the need to identify and implement regional tasks, where municipalities, especially smaller ones, are overburdened. A regional funding management

system is just the tip of the iceberg. It is important not to build up parallel structures, but to increase effectiveness in the sense of good governance.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperations between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

- Mr. Lohse points out that political and ownership interests must be clear when establishing regional cooperation. From his point of view, such a cooperation should always be carried out in the ownership model, i.e., with joint ownership with regard to the land.
- At the same time, this model leads to additional expenses since yield areas and deficit areas are not separated. Economically, this is not always convenient, yet it provides for a distribution of risk.

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

- Mr. Schmoll and Mr. Lohse reiterate the statement that a PPP is suitable to establish and execute a strategic management.
- This is suitable to fulfil the requirement to move from an "administrative structure" to a "project structure". Actors can be activated by the strategic management, subtasks in the development process of a project.
- Mr. Schmoll concludes that the project structure also includes the acquisition of funding.

Interviews (Poland)

Interview#1

Date & Time	24.03.2023
Location	Konin
Participants	Council of the Federation of Scientific and Technical Associations NOT in Konin, Head of the Council-Zbigniew Bajcar

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

As a member of the federation, my role in the transition process towards a post-mining landscape is to contribute to the development of education, technology, science, and economy in the region. My main tasks involve providing advisory support and expertise to the relevant authorities and stakeholders to shape the ethical use of natural resources based on the knowledge and skills of engineers and technicians associated in associations.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

One of the major management challenges we face in the transition process is to ensure that all stakeholders are aware of the importance and urgency of the transformation. We need to create a shared vision and motivate everyone to participate in the process actively.

3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment, ...)? If possible, please give examples for obstacles identified.

Our legal system is a significant obstacle to the transition process. The lack of government activity and insufficient legal provisions for renewable energy sources hinder the development of the post-mining landscape. For instance, the introduction of new legal provisions for wind farms will significantly reduce the development opportunities for this type of installation, making it difficult to achieve the desired transition goals.

4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.

In Patnów (Konin district), the construction of a nuclear power plant is planned. However, the information that it is a district of Konin is not made public. It seems that it is deliberately presented in this way to avoid protests from the local population.

5. Do you see further potential partners in the field not yet involved in the transition process? How and when should they be involved?

In our opinion, the stage of stakeholder analysis in the Konin region is already completed. The number and types of entities participating in the debate are sufficient.

6. How does the EU influence the just transition process in your region?

The EU is playing a significant role in influencing the just transition process in our region. It provides financial support and technical assistance to support the transition towards a sustainable and low-carbon economy. Furthermore, the judgments of the Court of Justice of the European Union (CJEU) ensure that the just transition principles are applied consistently across all member

states.

7. In which form is “good governance” (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as “good governed”? Please explain your opinion.

Good governance is essential to ensure transparency, effectiveness, and accountability in the transition process. In our region, we have established various mechanisms to ensure good governance, however, the management of the transition in our region is still heavily influenced by politics.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperations between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

One of the major obstacles in managing the process towards a post-mining landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. To overcome this challenge, we believe that it is necessary to change the direction of state policy. The state must prioritize the public interest over economic interests, and this can be achieved by establishing regional cooperations that align with the goals of the transition process.

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

Regional cooperation is vital in carrying out the strategic management towards a post-mining landscape. It enables the connection of resources, expertise, and knowledge from different stakeholders to achieve common goals. However, the success of the cooperation will depend on the availability of funds and the ability of stakeholders to work together effectively.

Interview#2

Date & Time	30.03.2023
Location	Konin
Participants	ZE PAK SA

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

The ZE PAK Capital Group is making significant progress in energy transformation, which began with the closure of the "Adamów" power plant on January 1, 2018. The reduction of coal extraction has resulted in a decrease in the production of electricity from coal and a corresponding increase in electricity produced from renewable energy sources.

Despite continuous efforts to reduce CO2 emissions, higher fees for emissions have forced the group to move away from coal-based electricity production faster. To this end, ZE PAK S.A. announced the "Strategy Directions of ZE PAK S.A." on October 1, 2020, which aims to replace approximately 1,118 MW of installed coal energy with approximately 2-3 GW of green power by 2030 and to establish a complete green hydrogen chain in Poland. The ZE PAK Capital Group has initiated several investments to achieve this goal, including the construction of the country's largest solar farm in Brudzew with a capacity of 70 MW on post-mining land of Adamów Coal Mine.

Since 2018, the ZE PAK Capital Group has decommissioned a total of 1,293 MW of coal capacity, with 600 MW from the "Adamów" Power Plant, 600 MW from the "Pątnów" Power Plant, and 93 MW from the "Konin" Power Plant, which became the first coal-fired power plant in the country to convert to biomass. Currently, the "Konin" Power Plant operates two biomass units with a capacity of 50 MW each, the last of which produces energy and heat from 2022.

To replace coal-fired power with sustainable sources, the ZE PAK Capital Group, with capital support from the Cyfrowy Polsat Capital Group, implements projects to build onshore wind farms (Kazimierz Biskupi, Przyrów, Gołędów (Człuchów), Miłosław), a 600MWe CCGT unit at the Adamów Power Plant in cooperation with a photovoltaic farm with a capacity of approx. 211 MW (Przykona). The company is also preparing to invest in offshore wind farms and further onshore wind farms (Dobra and Drzeżewo IV), along with photovoltaic farms (onshore and floating platforms on reservoirs after closed open-pit mine), another biomass unit, and the establishment of the Green Energy Center of the Western Subregion in Rybnik.

The 2020 strategy outlined the operation of coal-fired units 1, 2, and 5 at the Pątnów Power Plant until 2024, and the "Pątnów II" Power Plant (a 474 MW unit) until 2030. However, the company has recently announced its intention to accelerate these plans, aiming to decommission all coal-fired units by the end of 2024, ahead of their eligibility for support under the capacity market mechanism. This became a fact and was officially confirmed in later company announcements.

The group is also constructing an installation to produce green hydrogen at the "Konin" Power Plant, which has received a grant under the Small Scale call for proposals of the Innovation Fund program - using the first purchased units with a capacity of 2.5 MW, and there are plans to expand to ten electrolyzers with a capacity of 5 MW each. ZE PAK Capital Group plans to build over thirty green hydrogen charging stations, including those used to power hydrogen buses produced by PAK Polska Czysta Energia sp. z o.o. in Świdnik from 2023. The factory will enable the production of approx. 100 buses per year with the possibility of increasing production to approx. 200 for 2 shifts. Additionally, the group plans to construct a nuclear power plant in partnership with PGE and the Korean KHNP, with the support of the governments of Poland and South Korea.

To mitigate the negative effects of coal production, the ZE PAK Capital Group conducts reclamation activities with full care for the natural environment. In cooperation with Polish Waters and local governments the group is restoring water resources of rivers and lake districts and creating new water reservoirs in post-mining excavations. Thanks to these efforts, Eastern Greater Poland, currently a region of Poland struggling with severe water deficits, has the potential to lead in implementing solutions for renaturation and reclamation of degraded areas. The project aims to achieve its goals, including the filling of post-mining excavations, by the end of 2026 in the Turek region and by 2028 in the Konin region. Without such initiatives, the flooding of open pits and the restoration of hydrographic conditions would take approximately 15 years in the Turek region and up to 30 years in the Konin region.

As a coal producer in a region undergoing transformation, the Company is aligned with the objectives of the Territorial Just Transition Plan for Eastern Greater Poland. A crucial aspect of this plan is to provide support to individuals leaving the mining and conventional energy sectors, including employees of the ZE PAK Capital Group. In line with this, ZE PAK S.A. is already executing projects aimed at retraining and creating new employment opportunities for its staff. For instance, it has entered into agreements with municipalities like Kazimierz Biskupi and Rychwał, established a RES training center, and initiated a pilot outplacement program for 100 people in collaboration with Jobs First. Moreover, ZE PAK S.A. has participated in the preparation of National Just Transition Plan by submitting project proposals that were included in the draft of the document. These projects include the production of green hydrogen using the post-coal infrastructure of the Pątnów-Adamów-Konin Power Plant Complex, as well as initiatives focused on raising and changing qualifications and professional activation of employees of the ZE PAK Capital Group. This is a joint undertaking of the Management Board of the ZE PAK Capital Group and Labour Unions.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

The company faces several challenges in its energy transformation, particularly in relation to the direction of activities undertaken by ZE PAK. One of the main challenges is the acquisition and development of renewable energy projects, such as wind and PV, which require careful consideration of factors such as project availability, grid connection possibilities, planning requirements (such as the “distance” act), and financing institutions (ESG procedures), the development of the green hydrogen strategy pillar. Another challenge is the proper implementation of recultivation activities, as well as taking care of the social impact of the transformation and ensuring a calmer future for employees who may lose their jobs. Addressing each of these challenges is a complicated and time-consuming process that requires significant personnel involvement and close cooperation with various stakeholders, including business partners, national, regional and local authorities, as well as NGOs.

Of all the challenges, the most sensitive is mitigating the effects of job cuts and social unrest. The ZE PAK Capital Group is the largest employer in Eastern Greater Poland and the trend of declining employment affects not only the company's employees and their families but also the mining-related sector. In the last 2.5 years, employment has decreased by approximately 2.5 thousand people, with current employment at around 3 thousand people, down from 9 thousand a decade ago. The ZE PAK Capital Group Labour Unions, with support from the Management Board of ZE PAK, are actively involved in the Just Transition work being carried out in Poland and Brussels. They participate in all meetings, discussion forums, and formal works organized by the local government in Greater Poland, as well as other entities such as non-governmental organizations e.g. Polish Green Network and others related to the preparation of the Employee Program for the employees of the ZE PAK Capital Group and obtaining funding by this project from the Just Transition Fund. The draft of Act on social protection for employees of the coal and power industry is an important topic that deserves attention. This act implements the provisions of the Social Agreement that was concluded on December 22, 2022, between the social party, employers, and the government party. The legislative work on this act has been accelerated due

to the efforts of the social side from Turkowsko-Koninskie Coalfield, which have been advocating for several months about the need to pass this act as soon as possible. Before the government act, ZZ z GK ZEPAK had prepared their own civic project, which highlighted the urgent need to create a law that would allow local employees to move to the so-called mining and energy holidays.

The Employee Program, which is currently awaiting co-financing from JTF, is an initiative led by ZZ and the Management Board of ZE PAK. The program's goal is to provide new employment opportunities for those who have been made redundant since 2018, while also offering support to their family members. Additionally, the program aims to incentivize new employers by employing individuals from the ZE PAK Capital Group.

3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment, ...)? If possible, please give examples for obstacles identified.

The development of post-mining areas typically begins with reclamation, which must comply with the Law on the protection of agricultural and forest land. The reclamation direction for a particular area is determined by the decision specifying the directions of reclamation. When the development assumptions for a given region are established early on, during the basic (technical) reclamation phase, it facilitates the development process. Proper development of the post-mining area may take place only after obtaining a decision on recognition of the reclamation as completed.

However, the lengthy reclamation process and the lack of clear guidelines for completing reclamation, especially for water reclamation, often lead to obstacles in land development. Local government authorities may issue negative opinions during the commission acceptance process of completed reclamation, further prolonging the process. As a result, the development process is delayed.

The Act on the protection of agricultural and forest land stipulates that land reclamation should commence as soon as the land is no longer needed for industrial activity, and it should be completed within five years from the cessation of this activity. However, meeting this deadline is challenging, especially for water reclamation, which requires the excavation to be filled with water to a certain level.

To overcome these challenges, legislation should specify the activities required for reclamation towards water and the objectives to be achieved at each stage. Additionally, the direction of land reclamation and development can be determined during the exclusion of land from agricultural and forestry production, which requires a decision authorizing temporary or permanent exclusion. However, the legislation does not currently allow for a change in the nature of exclusion from temporary to permanent, which may be necessary due to changes related to exploitation, reclamation, and future development.

Adapting to the provisions of planning documents in a given area can present a challenge. For example, if the planned direction of reclamation and development does not comply with these documents, it may result in a long-term process of changing the Study of Conditions and Directions of Spatial Development of a Commune and Local Spatial Development Plan.

4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.

There is an informal collaboration between ZZ GK ZEPAK, ZE PAK SA, Marshal's Office of Greater Poland, Regional Development Agency Konin, and V High School in Poznań to determine the formula and scope of support for those who have lost their jobs since the beginning of the transformation on January 1, 2018 (the closure of the Adamów power plant).

Moreover, there is an informal cooperation, animation of stakeholders in the Eastern Greater Poland conducted by the Polish Green Network, which organizes a cooperation forum for the Eastern Greater. As part of the meetings, topics also important for ZE PAK are discussed, such as the impact of transformation and employment reduction in the mining and energy sectors on the labour market in the region.

In addition, the Association for Social Cooperatives is actively collaborating with ZE PAK Capital Group employees and trade unions to develop ideas for the establishment of social cooperatives. Their aim is to have these projects prepared and ready for implementation once the Employee Program is launched.

The Higher School of Management Personne has contributed to the discussion by publishing scientific papers on the topic, including perspectives from ZE PAK. One notable article is by D. Baliński and P. Milczarek on Just Transition, viewed through the lens of ZE PAK SA. This article was published in the 9th edition (2022) of the WSKM journal.

Furthermore, Ecorys is providing advisory assistance to the Platform for Regions in Transition established by the European Commission, and requested by the Patient Europe Association. Ecorys' experts are working for 75 days to examine the needs of the GK ZE PAK and ZE PAK SA for support in utilizing the Employee Program funds.

5. Do you see further potential partners in the field not yet involved in the transition process? How and when should they be involved?

The involvement of employers could be increased by communicating the potential benefits of employing specialists leaving the GK ZE PAK and mapping new job opportunities. Additionally, local governments could be more active in animating economic development around the local labor market and fostering effective connections between employers and former employees of the ZEPAK Capital Group. The newly established Konin Agglomeration could play a key role in this effort, as it has greater freedom to shape tasks related to cooperation among local governments and coordinate efforts related to the labor market.

6. How does the EU influence the just transition process in your region?

The EU's impact is undoubtedly crucial in addressing the negative effects of the energy transformation in Eastern Greater Poland, as evidenced by the allocation of JTF support for relevant projects and activities. However, at present, there are numerous superficial activities focused primarily on analyzing the socio-economic situation, but there is a lack of active project animation to ensure preparedness for the release of funds from the JTF under the CEF 2021-2027. The distance of Brussels officials and their incomplete knowledge of practical challenges in the area may lead to problems in the implementation of public intervention mechanisms, such as adapting the support mechanism under the Employee Program. This could potentially jeopardize the achievement of the Program's objectives, particularly if DG EMPL is not aware of the specific needs and reasons for higher intervention levels under the Program compared to outplacement projects financed from the ESF, which are more familiar to the EC.

7. In which form is “good governance” (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as “good governed”? Please explain your opinion.

The management model in Eastern Greater Poland generally meets the established criteria. However, the sensitive issue of individuals left to fend for themselves after losing their jobs since 2018 has caused significant social unrest. This group, in particular, has been and continues to be a major concern, particularly for the Labour Unions of GK ZE PAK. Therefore, it is crucial that institutions responsible for outplacement support maintain permanent and non-standard cooperation with the Labour Unions to address the needs of this specific stakeholder group.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperation between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

The best example is the cooperation between ZE PAK and Polish Waters State Water Holding and local governments in the field of the hydrological project, thanks to which the reconstruction of water relations in the region will take place 5 times faster than without this cooperation.

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

Regional cooperation alone is not enough. It is a complex and challenging process that requires greater involvement from the national administration and the European Commission. There are positive examples, such as the current legislation on social protection for the coal and power industry, which will cover employees of the ZE PAK Capital Group, who will be the first beneficiaries of this act in Poland. However, the amended PGG/FUS Act, which was meant to resolve the Social Insurance Institution (ZUS) interpretation issues when examining applications for miners' pensions in Eastern Greater Poland, has not been effectively implemented, despite entering into force in the last quarter of 2022. Many applicants' requests for miners' pensions are still being rejected by ZUS, a problem that began in 2016. The European Commission should also be more present and take an active interest in flagship projects such as the ZE PAK Capital Group's Employee Program, which is the only program of its kind in the entire EU.

Interview#3

Date & Time	30.03.2023
Location	Konin
Participants	Municipal Office in Konin

1. What is your role in the transition process towards a post-mining landscape and what are your (main) tasks in it?

Konin is the largest city in the transformation region, located at the PAK Lignite Mine. The city and its surrounding areas are home to a large percentage of employees of the two plants. However, with the closure of these plants, there is a significant risk of a rise in unemployment. The city and other relevant units are currently working on preparing the region for social and economic transformation. The top priority here is to take care of the employees who will be affected by the closure by redirecting them towards new professional paths. To support these individuals, specialists will provide substantive guidance, while vocational training and courses will provide practical assistance to help them find suitable new employment.

Moreover, this transformation also aims to change people's attitudes and behaviours towards the environment. Starting with small actions, such as reducing our environmental footprint, the goal is to move towards larger projects, such as the replacement of heat sources and complete modernization, increased use of public transport, and more. Each project and conference will bring us closer to this goal. The Great Poland region has set a target of achieving climate neutrality by 2040, but Konin aims to meet these expectations even sooner, by 2030.

The city is currently implementing the "Green Urban Corridors - Climatic Awakening" project. This initiative aims to build pocket parks, green bus stops, city courtyards, and graduation towers in the city. The goal of the project is to enhance the city's resilience to negative phenomena resulting from climate change, and to adapt to these changes. Additionally, the city plans to develop an integrated system of bicycle paths, and it is currently a member of the Konin Agglomeration, which aims to develop a Sustainable Urban Mobility Plan. Acquiring SUMP would enable the city to apply for more funds from the European Union, for instance, to implement projects such as Low-Emission Urban Transport.

Finally, the city of Konin has also drafted documentation for the thermal modernization of municipal buildings, and plans to upgrade public utility buildings with photovoltaic installations. These projects aim to transform Konin into an environmentally-friendly and sustainable city.

2. What are the main management challenges you face in the transition process and how do you intend to tackle them?

The city of Konin recognizes that transformation is a multifaceted topic that extends beyond the closure of large workplaces in the region. In the last few years, the city has carried out several information campaigns, including on thermomodernization, heating source replacement, and waste segregation, to encourage residents to participate in the transformation process. The city's vision, in accordance with its City Development Strategy Plan 2020-2030, is to become a green city of energy where modern and human-friendly technology and interpersonal relationships coexist with nature. To achieve this, the city has set three strategic goals: stimulating residents to take action, transforming sources of the city's wealth, and creating conditions for a good life.

The city aims to achieve these goals through individual actions and priorities that promote the

social energy and potential of residents and support the development of modern business, transportation, and ecological infrastructure. The city is actively seeking financial and substantive support to facilitate the transition process, including information campaigns for residents and entrepreneurs. Additionally, the city collaborates with various organizations, such as the Poviats Labour Office, the Chamber of Commerce of Eastern Great Poland, and the Regional Development Agency, and participates in conferences of the Polish Green Network to discuss the broad topic of transformation.

Joining the long-term project "LIFE After Coal PL - Implementation of the Strategy for Climate Neutrality for Eastern Great Poland 2040" is a significant aspect of the transformation in the region. The project's purpose is to coordinate the efforts of communes, poviats, and other participants in the processes of just transformation of Eastern Great Poland towards climate neutrality.

3. Regarding a post-mining land use and the path towards it, can you identify major obstacles in your legal system (processes, planning framework, environment, ...)? If possible, please give examples for obstacles identified.

The post-mining areas are located outside the city of Konin, in the Konin poviat, i.e. the commune of Kleczew, Wilczyn, Wierzbinek, Kramsk.

4. Besides formal governance, do you have any form of informal governance (networks, round tables) in your region? If so, please name them and their participants.

Cooperation with the Regional Development Agency, the Polish Green Network, the Poviats Labour Office. The scope of meetings is diverse. The participants were officials, entrepreneurs, representatives of workplaces, trade unions and various organizations. The topics of economic activation, professional transformation of employees, counteracting energy poverty and generally understood just transformation are discussed.

6. How does the EU influence the just transition process in your region?

Konin is one of the five regions in Poland that is covered by the Just Transition Fund, which provides additional funds for carrying out the transformation process in the region. The Just Transition Fund in Eastern Great Poland will support competitions aimed at professional activation, learning, and training for adults entering or re-entering the labour market. It will also provide support for vocational education, educational and vocational counselling, and the development of entrepreneurship among young people in secondary schools. To facilitate women's return to the labour market, projects will be launched to support pre-school education and create new pre-school education places. The transformation process will also include actions to revitalize degraded areas in post-industrial and post-mining areas. The communal revitalization programs, including thermal modernization of buildings, revitalization of monuments, and social activities to educate the public, will also receive support.

Furthermore, the city has been actively seeking and utilizing external funds to directly and indirectly support the transformation process, such as funds for starting a business, improving air quality, and supporting public transport.

7. In which form is “good governance” (transparency, effectiveness, and accountability) ensured in your region? Would you consider your processes towards a post-mining landscape as “good governed”? Please explain your opinion.

The Regional Development Agency operates in Konin. It is an institution implementing projects and services for enterprises, local governments and institutions, especially in Great Poland in order to increase their innovation and competitiveness, using experience in granting grants and implementing projects financed from European Union funds.

8. One of the major obstacles in managing the process towards a post mining-landscape is the conflict between public interest represented by the state and economic interests by the landowning companies. Do you consider establishing regional cooperations between the two parties (e.g., Public-Private-Partnership, owner corporation, ...)? If so, which form of cooperation qualifies for your purpose?

In 2022, Konin joined the Technical Assistance Operational Programme (TAOP) project called "Increasing the Potential of Cohesion Policy Beneficiaries in Effective Urban Policy". The project aims to prepare documentation that can be utilized to apply for funds under the new EU perspective. The documentation has been provided for in the basic activities in the Complete Project Proposal under the "Local Development" program, which will ultimately not be financed from the EEA and Norwegian Financial Mechanisms. As part of TAOP, five detailed analyses were prepared and, among others, the Municipal Revitalization Program for the city of Konin was developed.

Moreover, upon joining the LIFE After Coal PL program, the city of Konin has taken significant steps to mitigate the effects of climate change. As part of this initiative, the city will hire two climate advisors, one of whom will be responsible for cooperation with entrepreneurs including:

- support for SMEs and other entities - as a Climate Advisor - in the preparation of projects and applications for funds for measures to improve energy efficiency and reduce CO2 emissions,
- cooperation within the Network of Climate Advisors,
- promotional, educational, communication and information activities related to the process of achieving climate neutrality and adaptation to climate change using solutions based on natural resources,
- educational, communication and information activities related to the implementation of green public procurement in local government units and SMEs,
- performing simplified energy assessments of real estate,
- preparation of a commune/powiat integrated plan for energy, transport and climate

9. Do you think a regional cooperation is capable of carrying out the strategic management towards a post-mining landscape? Please give reasons for your answer.

Collaboration is key in all areas, as long as there is a willingness to work together. Although the city of Konin only has a small post-mining area with post mining heap, located in the Zatorze estate, which was created after the Niesłusz opencast finished mining in the 70s and 80s, it has been gradually recultivated. This area includes about 18 hectares and now includes a shopping center, as well as bicycle and pedestrian paths around the Zatorze Lake. Additionally, the surrounding area has been adapted for general recreation and relaxation, with pavements, benches, an outdoor gym, and playgrounds. Interestingly, the first allotment gardens in this area were built in the 1980s.

On the other hand, other communes in the Konin region manage their own post-mining areas but have yet to propose joint actions for their reclamation.

As a member of the Konin Agglomeration, the city of Konin works in close collaboration with the Association of the Konin Agglomeration, which covers the Konin powiat and 14 other communes. The primary objective of this association is to promote and develop the idea of local government while defending the common interests of its members, particularly in strengthening the socio-economic, infrastructural, environmental, and cultural development of local government units in the Konin Agglomeration and fostering collaboration among communes and powiats in this regard.