



The Just Transition Fund

Is the EU becoming more just?

A theoretical research.

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Cohesion declaration

Management of technology is often said to be about applying innovative technology for an enterprise to enhance profit. This is certainly true and important to stay competitive in the market. The implementation of new technology, however, comes with potential risk of future, currently unknown risks. Climate change, increasing pollution and resource depletion due to fossil-based technology is the aftermath of such risks. Within the European Union, awareness has spread that an energy transition is needed to reduce such dangers. As such, the question

What technologies do we need and when?

has an entirely different meaning than enhancing economic ones. In the light of climate change and fossil-based fuel depletion, the question is more relevant than ever to businesses, government, and society alike. Although it is uncertain which technology we will need in the future, we can be certain which ones are not desirable anymore – fossil-based energy technology. Investigating the ethical aspects of technology is thus a key part of technology management. The implication of phase-out of such technology is a task for technology managers, governance, and society as a whole and are, therefore, a suitable topic for a master's thesis of this program.

This master's thesis investigates the EU's endeavours to ensure a just energy transition. What at first seems like a technological task becomes much more complex when looking at the role fossil-based energy plays in the shaping of technology that is powering homes, transporting people, and producing goods. Deep lock-ins can be identified due to the reliance on fossil-based fuels. As such they pose a significant impact on the complexity of an energy transition towards a more sustainable future. The change goes far beyond the technology itself. It reaches governance and policymaking but will also ultimately change the way many people live. Such a change of life can be for the better but can also be for the worse of some. Those who now live off fossil-based energy may be negatively impacted as it is deeply rooted in their society. This thesis focuses specifically on the injustices that may arise during that change.

Executive Summary

In 2018, the European Union laid the foundation for a large-scale energy transition: away from fossil-based energy and towards renewable, sustainable energy solutions. The need for a transition is mainly accepted, but it is questioned whether all European Union citizens benefit from such a change. In fact, the greenhouse gas reduction will lead to a costly restructuring of carbon-intensive regions. Consequently, the European Union and its critics expect extreme job destruction and decreased economic activity in such areas. To cope with the ills that an energy transition brings, the Just Transition Fund is proposed. It serves as a financial buffer and provides strategic support for the successful energy transition to decrease injustices. Support for the most affected regions is undoubtedly necessary but is the Just Transition Fund increasing justice for these regions? The European Commission provided a similar strategic support program earlier with the Initiative for Coal Regions in Transition, which included providing support to apply for funding. As such, the question arises whether the Just Transition Fund increases justice when comparing to the predecessor programs.

This master thesis serves as a first insight into the justness of the European Union's proposed Just Transition Fund. To do so, several projects of the Initiative for Coal Regions in Transition are compared to the current setup of the fund. The data for the Just Transition Fund has been gathered in previous research while information on the Initiative for Coal Regions in Transition was acquired with an exploratory desk research approach. The gathered data was structured coherently by the creation of two main categories, the project and contextual factors. Each was complemented with subcategories allowing the comparison of the projects. Ultimately, these findings could be evaluated with a transition justice framework that has been adapted to the research needs.

It becomes clear that many injustice issues were present and often left unresolved in the assessed projects. Compared with the Just Transition Funds current criticism, many of these issues can be detected again. The most prominent justice issues found were of distributive nature due to scarce funding and a lack of stakeholder participation. The interplay of both problems leads to the desire to reach one goal: receiving as many funds as possible. As a result, the eligibility criteria seem to be seen as obstacles to overcome or boxes to tick leading to window dressing to meet imposed requirements. Implementing the same process kind for both programs is thus an inadequate path to take as the most critical justice issues stem from precisely this process.

The inadequacy of some criteria leads to the conclusion that the Just Transition Fund merges indicators of funding needs with requiring solutions to grand societal problems. The European Union needs to reassess the posed criteria on their ends and make the said challenges a priority to be addressed during the energy transition. Furthermore, it becomes evident that the application process can lead to injustice due to a lack of capacities and political capabilities of the regions in need.

With the current setup of the fund, transition justice can only increase to some extent. Still, there is potential for this program the first step is made towards a more holistic approach to coping with justice issues. The monetary aid, although insufficient now, can help the most affected if distributed and spend adequately. Besides, the fund serves as a symbol of solidarity with the most affected regions currently left behind. Policymaking is always a trial and error. Now, the identified shortcomings must be addressed to increase the fund's impact.

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List of abbreviations

<i>AP</i>	Action Plan	<i>NUTS</i>	Nomenclature of territorial units for statistics (from French: Nomenclature des Unites Territoriales Statistiques)
<i>BUND</i>	Bund für Umwelt und Naturschutz (Union for environment and natural protection)	<i>OECD</i>	Organisation for Economic Cooperation and Development
<i>CAN</i>	Climate Action Network	<i>O&G</i>	Oil and Gas
<i>CDU</i>	Christlich Demokratische Union (Christian Democratic Union)	<i>RES</i>	Renewable Energy Systems
<i>CPR</i>	Common Provisions Regulation	<i>R&D</i>	Research and Development
<i>CV</i>	Curriculum Vitae	<i>SC</i>	Scotland
<i>COVID-19</i>	Corona Virus Disease 2019	<i>SDS</i>	Skills Development Scotland
<i>CZ</i>	Czech Republic	<i>SPD</i>	Soziale Partei Deutschland (Social Party Germany)
<i>DE</i>	Germany	<i>START</i>	Secretariat's Technical Assistance to Regions in Transition
<i>EB</i>	Executive Board	<i>TJTP</i>	Territorial Just Transition Plan
<i>EC</i>	European Commission	<i>TTF</i>	Transition Training Fund
<i>EGD</i>	European Green Deal	<i>TU</i>	Technical University
<i>EP</i>	European Parliament	<i>ZRR</i>	Zukunftsagentur Rheinisches Revier (Future agency Rhenish region)
<i>ERDF</i>	European Regional Development Fund		
<i>ESF+</i>	European Social Fund Plus		
<i>EU</i>	European Union		
<i>GDP</i>	Gross Domestic Product		
<i>GHG</i>	Greenhouse Gas Emissions		
<i>IAEA</i>	International Atomic Energy Agency		
<i>ICRT</i>	Initiative for Coal Regions in Transition		
<i>ILO</i>	International Labour Organization		
<i>IRR</i>	Innovationsregion Rheinisches Revier (innovation region Rhenish region)		
<i>JT</i>	Just Transition		
<i>JTF</i>	Just Transition Fund		
<i>JTM</i>	Just Transition Mechanism		
<i>JTSC</i>	Just Transition Commission Scotland		
<i>JUST</i>	Justice, Universal, Space and Time		
<i>NECP</i>	National Energy and Climate Plans		
<i>NGEU</i>	Next-Generation EU		
<i>NGO</i>	Non-governmental Organisation		
<i>NIMBY</i>	Not In My Backyard		
<i>NRW</i>	North Rhine Westphalia		



The Just Transition Fund

Part One

A thesis introduction

1 Introduction

In 2018, the European Union (EU) laid the foundation for a large-scale energy transition: away from fossil-based energy carriers and towards renewable, sustainable energy solutions (European Commission [EC], 2020g). The ambitious plan is called the European Green Deal (EGD), which aims to reduce greenhouse gas emissions (GHG) by 55% by 2030 and to become climate neutral by 2050 (Widuto & Jourde, 2020). The need for such a transition is largely accepted due to climate change, pollution, and resource depletion, but it is questioned whether all EU citizens benefit from such a change (Becker, 2020; Colli, 2020). In fact, the GHG reduction will lead to a costly restructuring of some carbon-intensive regions (EC, 2020c). Consequently, the EU and its critics expect extreme job destruction and decreased economic activity in such areas (EC, 2020d; Storm, 2020). Without any measures, the EU would put the transitions' burdens onto some regions while others reap the benefits.

On behalf of the EU, the European Commission (EC) has already funded and monitored several transition projects under the Initiative for Coal Regions in Transition (ICRT) program to cope with such regional injustices. This initiative aimed at connecting stakeholders and delivering technical assistance to support a just transition. Besides, information sources are provided on an online platform such as toolkits and previous case studies for project participants to consult.

In January 2020, the Just Transition Mechanism (JTM) was introduced as an extended assessor of the ICRT (EC, 2020g). This program also aims at supporting the most affected in the energy transition with strategic support but additionally offers a funding budget. The component that has received much attention and will be focused on in this thesis is named budget, the Just Transition Fund (JTF). The JTF functions as a financial buffer and guides the regions that experience the lion's share of the adverse energy transition effects (EC, 2020d). Scholars and non-governmental organizations (NGO) alike have questioned the justness of this fund, and rightly so, as a transition directly affects society and people's lives. Previous dramatic restructurings have shown that entire regions can fall into poverty and depression if not supported appropriately (Strambo, 2020). Such outcomes lead to a great inequality between regions and, thus, a lack of justice towards the worse-off.

The current criticisms of the JTF lead to the question of whether the justice quality has been enhanced compared to its predecessor, ICRT. This is a crucial question as repeating criticisms of both programs seem to overlap largely. This raises the danger that past injustices will be repeated. Therefore, the predecessor program will serve as a counterpart to a qualitative justice evaluation. The research question is thus the following:

The Just Transition Fund – does it enhance the quality of transition justice within the EU?

This thesis consists of three parts. Part one introduces the topic and explains the research method and data analysis. Part two contains the theoretical research of past projects and the ethical analysis of such. This part concludes with the development of requirements that serve as a base to assess the JTF. Part three, the heart of this thesis, assesses the JTF based on the posed requirements. It further provides conclusions and recommendations and gives an insight into the implications and limitations of this research.

2 Approach and methods

This chapter provides a guide through the setup of this research. In short, a qualitative comparison of predecessor ICRT and the JTF will be performed to determine whether the JTF enhances transition justice. To operationalize the knowledge of the ICRT program, three projects will be selected that will serve as the assessment baseline. The selection of the projects is outlined in Section 2.1. Once the projects are chosen, qualitative and quantitative data of the projects themselves and the country's contextual factors must be collected. An introduction to the data collection method is given in Section 2.2. Based on the collected data, the assessment of the JTF and the ICRT is carried out as described in Section 2.3. The outcome of the investigation of each ICRT project can then be translated into requirements that the JTF should fulfil to enhance transition justice. A tailored justice framework supports the translation of project issues into transition justice requirements. The used concepts can be found in Section 2.4. A visualisation of the general research setup can be seen in Figure 1 below.

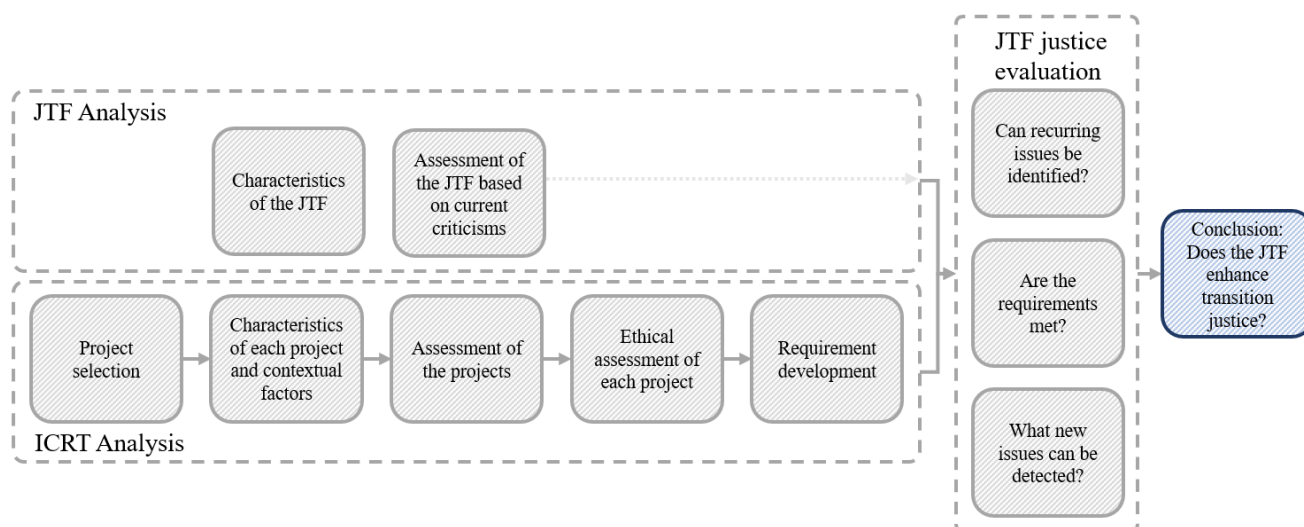


Figure 1: Research setup

2.1 Project selection

The project selection is a crucial part that determines the outcome of this research. Table 1 shows the case selection briefly. It must be ensured that a large number of challenges and situations are covered to discover diverse issues. Therefore, each selected project shall be:

- (1) Assessed by the EU,
- (2) Located within the EU,
- (3) Relevant to the research at hand,
- (4) Related to JTF criticism.

For the research question, it is imperative to confirm that the EU is acquainted with the project. Only then it is certain that this knowledge is available within the EU. The most straightforward process to satisfy (1) is by taking projects that can be found within the EU's database. The EU publishes a range of such on the ICRT platform. Here, a total of 15 projects

can be found. As the exploration of all given case studies will vastly exceed this thesis' scope, the amount must be reduced. The investigation of the projects revealed that three of these projects are conducted by overseas nations. Consequently, these are not supported by EU knowledge. It is further expected that the contextual factors may differ vastly for overseas projects which make comparisons complex or impossible. With the exclusion of these three projects, (2) is satisfied, and 12 projects remain. It must be noted that Scotland is counted as an EU country as it was still an EU member during the project implementation.

Many of the projects have only recently been started and are thus immature. Often, implementation results are lacking. Although it is possible to identify challenges and justice issues, the assessment of problem-solving and lessons learned cannot be undertaken. Three of the remaining projects are deemed immature and, therefore, are inappropriate for this study. One other project is considered unacceptable as there is a lack of English, Dutch or German data. Now, eight case studies remain that satisfy the criteria (1) to (3).

Lastly and most importantly, the projects need to be relevant to the study. The focus of this research is chosen to be on humans and human interaction. The projects of the ICRT and the goals of the JTF are broader than that as they focus on three incurring challenges during energy transition – economic, environmental, and social cost. Although the environmental rehabilitation of coal-intensive regions is a crucial part of justice, including these aspects will exceed this investigation's scope. Therefore, projects with a core focus on this are excluded. Besides, projects often purely focused on business development and less so on typical transitional challenges. Consequently, three projects did not satisfy criteria (4) and were thus excluded.

The general evaluation left five possible projects. Because this amount is still too high for this thesis's scope, the number must be reduced further. Each selected project needs to have a unique, justice-related characteristic closely addressed in the JTF's criticism to ensure the most learning. The project of Lewarde, France, is excluded as it was conducted over 30 years ago. The situational circumstances may have changed significantly over this large period of time. Therefore, this project is deemed unsuitable. The Midlands of Ireland is the second eliminated project. Although it fits all criteria, it does not show any unique characteristics. It has many similarities to the German case. However, the Rhenish region possesses transition experiences from prior anthracite coal phase-out. This characteristic may provide valuable knowledge and it thus preferred in this research.

The remaining three projects, the Rhenish Region in Germany, Karlovy Vary in the Czech Republic, and Scotland's training fund, on the other hand, seem much more promising. Each of them shows a unique characteristic of JTF criticism. Scotland's project revolves around closing oil and gas (O&G) mines and is specifically geared towards the adequate compensation and reskilling of workers who have lost their jobs. The compensation for incurred social costs is one of the main goals of the JTF. Therefore, including this project can reveal crucial learnings and issues.

The project conducted in Karlovy Vary, Czech Republic, is exemplary as the region is highly dependent on coal for heating and already left behind structurally. It shows that regional injustices are already present and that coal phase-out can worsen it even more. The project covers both aspects, overcoming economic and social costs that arise with an energy transition.

The Rhenish region in Germany is characterised by a long history of mining and previous energy transitions. The particular focus here is on implementing better governance with stakeholder inclusion that proves highly challenging. The JTF has also been criticised for not ensuring participation and stakeholder inclusion sufficiently. A comparison of both studies may therefore provide valuable insights into recurring problems. Besides, Germany possesses a vast knowledge of energy transition from past endeavours that can be favourable for mitigating economic and social costs.

Table 1: Project study selection of available case studies on the ICRT platform

Case	Country	EU?	Available data?	Focus	Meets criteria?	Selected?
Rhenish Area	Germany	Yes	Yes	Social, economic	Yes, stakeholder inclusion	Yes
Coalfield development	USA	No	-	-	No	No
InnovationCity Ruhr	Germany	Yes	Yes	Economic	No, no focus on justice	No
Transition in Genk	Belgium	Yes	Yes	Environmental, economic	No, no focus on justice	No
Transition training fund	Scotland	Yes	Yes	Social	Yes, focus on reskilling	Yes
Latrobe Valley Authority	Australia	No	-	-	-	No
Matra power plant	Hungary	Yes	No, language	Environmental, economic, social	No	No
Information platform	Poland	Yes	Yes	Information platform	No, outside JTF scope (but JTM)	No
Taskforce	Canada	No	-	-	-	No
Lewarde Mining History Centre	France	Yes	Yes	Environmental, economic	Yes, but outdated	No
Wałbrzych “Invest-Park”	Poland	Yes	No, lack of results	Economic	No	No
START: Karlovy Vary	Czech Republic	Yes	Yes	Social, economic	Yes, highly coal-dependent	Yes
START: Asturias	Spain	Yes	No, lack of results	Economic	No	No
START: Malopolska	Poland	Yes	No, lack of results	Economic	No	No
START: Midlands	Ireland	Yes	Yes	Economic, social	Yes, but no specific issue	No

Note. Data adapted from “Resources” by the European Commission, retrieved on 22 February 2021 from https://ec.europa.eu/energy/topics/oil-gas-and-coal/EU-coal-regions/resources_categories_en?redir=1. Copyright by European Union, 1995-2021.

2.2 Data collection methods

The data collection method of the JTF and ICRT projects differ drastically due to their implementation state. As the JTF has just been put into force at the start of this year, 2021, there are no experiences to draw upon. As a result, data is limited and often based on assumptions and expectations. Besides, there is barely any media sources covering this program.

In contrast, the selected ICRT projects are either completed or are running for several years already. As such, a wide range of information sources is present. First, however, the same explorative approach has been taken. The websites of several EU bodies have been consulted for data on the JTF, the general ICRT program content and the selected project. Table 2 shows the consulted websites and the number of relevant papers and pages found.

Table 2: Consulted websites of EU bodies

Website	European Body	Used pages and papers
ec.europa.eu	European Commission	9
europarl.europa.eu	European Parliament	8
eur-lex-europa.eu	European Union	2

Governmental papers are critical to this thesis. All factual content of the JTF is taken from the governmental websites of the EU bodies. As such, these papers provide the base of the JTF assessment. These I consider accurate as the spreading of incorrect information would lead to confusion within the government and a loss of credibility.

With this first data at hand, the data collection methods of the JTF and ICRT projects divert. Each will be outlined in separate subchapters below, starting with the JTF.

Table 3: Database research – academic literature of the JTF

Data Base	Search query	No. of results	Remarks	Used sources
Google Scholar	“Just Transition Mechanism”	220	Few papers expected due to funding novelty but still too broad	0
	“Just Transition Mechanism” pillars	104	More narrow and better scope towards the pillars of the framework	4
	“Just Transition Fund”	494	Too broad, many disperse topics	0
	“Just Transition Fund” (restricted to 2020)	393	Topic narrower, 1 potential paper found with no access	3
	“Just Transition Fund” AND critic (restricted to 2020)	51	Much narrower, country-specific articles neglected	4

2.2.1 JTF data collection

The JTF data collection has been conducted during a previous stage of this study in early 2021. Therefore, the information gathered enjoyed a greater time scope. The details on this program, as such, could be more thoroughly worked out than the data collected in the ICRT projects. The literature search was split into two parts, an academic and a grey literature search. Table 3 shows the core results of this search. It must be noted here that, besides Google Scholar, other search engines, Scopus, TU Delft Library and Microsoft academic, have been consulted but did not lead to any additional valuable findings.

The literature used for assessing the JTF is written by academics and semi-experts such as NGOs or other foundations. Academic assessments are the heart of the critical assessment of the JTF. They point out current issues and shortcomings. Due to the fund's newness and its volatility, they seem to be conducted on a very short-term basis. The papers are often brief, and no complex methodologies are used. This makes sense, of course, as the JTF keeps changing, and the publishing needs to be done timely to deliver current content to make an impact on the future framework adaptations. Due to the time pressure, I expect that the papers are not comprehensive. NGO and other foundation assessments complement the criticisms of the academic papers. These critics usually fight against the current status-quo, the JTF belonging to that. Therefore, they need to be handled with extreme care, as I expect these papers to be negatively biased. Such documents aim to reach people's emotions. Therefore, specific facts may be exaggerated, and others neglected. Besides, it is not clear whether experts or laypeople carried out the assessments for most identified papers. Concluding, the papers used for the JF need to be assessed thoroughly on their credibility. This assessment is part of the literature review that will follow shortly.

2.2.2 ICRT project data collection

The data gathering for the project content started as explained above. As the projects were mainly conducted by the regions or countries themselves, only the rough project setup could be found on the EU databases. To get a comprehensive picture of the projects, more information was needed. The references given in the EU case studies provided the first lead for more information. Notions of the project data collection opportunities and challenges can be found in the literature study of each project.

The purpose of the contextual data gathered for the ICRT is to understand the setting of the project and the resulting decision-making process and outcomes of the projects based on, for example, past experiences, politics, and expectations of society. Due to the highly qualitative and often subjective nature of the information needed, this approach is distinct from applying for the JTF.

To capture the setting of the project literature, such as media reports and newspaper articles, are crucial. This is an essential information source as they convey governmental and public attitudes, fears and other factors that may play an important role. As a result, such data sources provide a wealth of information leads. Being aware that the content of grey literature may be flawed, they are investigated on its trustworthiness. For its reliability to be accepted, one or more of the following requirements need to be met. Trustworthy sources must be:

- renowned for its accuracy and professionalism,
- written by governmental representatives,
- written or hosted by a professional recognized private organization,
- written in a semi-academic manner with adequate references to academic literature.

Often, the grey literature does not meet these requirements but still provides valuable insights. Academic literature and trusted grey literature sources were used to back claims and complement data in these cases.

The information on the projects always provided the first leads for the contextual factors. The contextual knowledge of the ICRT projects was gathered in an exploratory manner. The rough procedure was as follows. Based on the contextual factor categories given in Section 2.3, searches were performed with basic queries in the Google Search engine. Relevant information is then triangulated by consulting multiple online multimedia sources and academic literature found in Google Scholar. While this process is laid out linearly, it must be noted that there was a feedback process between each step. Table 4 shows an exemplary search query process. Note that this one is highly shortened.

Table 4: Example exploratory research

Search Engine	Search query	Interesting source	Leads and ends
Google Search	Czech Republic AND History	Osborne et al. (2021)	Nuclear power* (→)* Velvet revolution (→)
↓			
Google Scholar	Czech Republic AND Nuclear	Kratochvil and Mišík (2020) Frantál and Malý (2017)	Society, nuclear (→) Czech politics (→) Status nuclear energy (→)
Google Search	Czech Republic AND Nuclear	WNA (2020) IAEA (2020)	Status on nuclear energy, Czech Republic (.:)*
&			
Google Scholar	Czech Republic AND Velvet Revolution	Too many and too unspecific at this point	(.:)
Google Search	Czech Republic AND Velvet Revolution	Kopsa (2019)	Czechoslovakia, (Zeman & Hauner, 2016) (.:) Society, communism (→)
...			

Explanations: (→) lead to further research, (.:) end of the research.

2.3 ICRT project and JTF analysis

To compare both programs in a meaningful manner, both need to be assessed in a similar. For this, several factors need to be considered. Firstly, the context of the projects needs to be established to draw meaningful conclusions in their assessment. Policymaking is always conducted in a dynamic and contextual environment. Without knowing the situational factors of a country or the region, a regional project assessment is incomplete at best. Therefore, the region or country of each project is summarized based on its history, politics, economy and society to create a concrete context.

Secondly, the projects need to be analysed with a coherent structure that allows for direct comparison. The system employed for the assessment is built up from four main pillars:

- *Goals.* A short description of *what* the project or programs try to achieve. This category is crucial to see what the initiators believe is the issue at hand that needs solving. Such an investigation also allows the identification of projects with similar goals but different solving approaches. It also facilitates the assessment of what issues are recognized and what is omitted. As a result, a project's identified goals can show whether there is an understanding of a region or country's problems. This first understanding is crucial to develop adequate solutions that enhance justice.
- *Approach.* The approach describes *how* the goals are to be achieved. Here, the main procedure of the project is discussed, and relevant stages or parts are identified. Identifying the approach facilitates the detection of process issues and opportunities for a just transition.
- *Actors involved.* This category aims at identifying *who* is involved in the project and decision-making and who is affected but does not have a stake. In short, stakeholders are identified, and the adequacy of their involvement will be assessed. This can lead to essential findings in justice in terms of participation.
- *Funding and resources.* Here, it is identified *how much* funding and resources are provided to a program and whether these are stable or volatile. The budget is a crucial part of project success. Without it, actors will be incapable of acting. Therefore, a detailed analysis of this pillar is vital for assessing the adequacy of a project as a whole.

It needs to be noted that the pillars evolved throughout the research as in-depth knowledge increased. The four stated pillars summarized appear to be the most suitable to construct an overall holistic picture of the ICRT project and the JTF without omitting relevant factors. Once the assessment of all ICRT projects and JTF are finalized, the ethical evaluation can be conducted.

2.4 Ethical assessment

This subchapter addresses the development of a research structure based on transition justice considerations. At first, I assumed that the relatively new Just Transition Framework¹ by Heffron and McCauley (2018) would be an appropriate way to assess the transition justice of the JTF. However, throughout the research process, it became evident that the framework is intended to evaluate large international and possibly global projects. A significant component of this study is the assessment of regionally and time-limited projects and applying the results onto the JTF. Thus, although the JTF is an extensive international program, the core assessment is based on a rather regional level. Therefore, the framework needed to be adapted to match the scope. The process of doing so will be described in the following. Firstly, the JT Framework will be introduced, and then the adaptations will be elaborated.

The Just Transition Framework

The JT framework is a unique human-centred perspective that merges climate, energy and environmental (CEE) justice theories. The JT framework posed by Heffron, and McCauley combine them in an overarching framework to provide a holistic approach, as seen in Table

¹ Throughout the thesis also referred to as JT framework.

5. For the full explanation of the framework, please refer to Heffron and McCauley's (Heffron & McCauley, 2018; McCauley & Heffron, 2018) works.

Table 5: Just transition framework by Heffron and McCauley

J	Transition	Justice	Justice takes the form of three forms of justice Distributive Procedural Restorative
U		Universal	Universal takes the form of two universal forms of justice Recognition Cosmopolitanism
S		Space	Space brings in location, where are 'events' happening? (In principle at local, national and international levels)
T		Time	Time brings into transition timelines such as 2030, 2050, 2080 etc. and also 'speed' of the energy transition (i.e. is it happening fast enough?).

Note. Adapted from "What is the 'just transition'" by R. J. Heffron & D. McCauley, 2018, *Geoforum*, 88, p. 77. Copyright 2017 by "Elsevier Ltd."

Refining the JT framework

Throughout the assessment of the projects, it became evident that the JT framework is not entirely suitable for this endeavour. More explicitly, the pillars (6) space and (7) time are too broad to draw meaningful conclusions. The detected justice issues of both pillars could each be assigned as a unit of other justice pillars. For the projects at hand, space justice issues can also be located under distributive justice because they all involve funding and resource challenges. For time justice, most issues such as intergenerational justice are distributive involving project ambitions. Thus, keeping these separate do not add extra value but lead to repetition in this research. As a result, the last two pillars will be omitted as a self-standing assessment point. Instead, they will emerge as an assessment unit within the other justice pillars if necessary.

Table 6: Working framework and assessment tools

Type	Units	Evaluative tools and concepts	Main theory providers
Distributive	Time	Intergenerational justice	(Barry, 1997)
	Space	Distributive justice theory	(McCauley & Heffron, 2018)
Procedural	Performance	Stakeholder inclusion and participation	(Miles, 2017), (Pesch, Huijts, Bombaerts, Doorn, & Hunka, 2020)
Restorative	Mental Material	Outplacement theory	(Doherty, 1998), (Marzucco & Hansez, 2016)
Recognition	Stakeholders	Status model	(Fraser, 2000), (Cuppen, 2018), (van Uffelen, 2021)

Besides, the category cosmopolitanism is not helpful for the assessment of the projects and JTF. The projects are all regional, focusing on one particular issue (unemployment) or region only. Such a project aims to succeed within their specific area, not on a global scale. This, of

course, gives rise to justice issues. However, this assessment is out of scope for the research at hand. Consequently, this pillar will be omitted as well.

The pillars that are of concern in this research are thus (1) distributional, (2) procedural, (3) restorative and (4) recognition justice. Each of them is often described in a theoretical but not measurable manner in the corresponding literature. To make them workable, each of them needs to be supported with a particular empirical assessment tool.

Distributional Justice

Distributional justice focuses on allocating costs and benefits that come with energy transitions and stakeholders' responsibilities (Milchram, Hillerbrand, van de Kaa, Doorn, & Künneke, 2018). It questions the desirability of technology in the light of emerging ills (Jenkins, McCauley, Heffron, & Stephan, 2014). To assess whether a transition is distributionally just, the equality of all human beings must be ensured. This holds for each living human, irrespective of the place he lives and for future humans. The former can be assessed by evaluating whether the benefits and ills are spatially just distributed. The latter can be evaluated by examining how the current actions affect future generations according to the intergenerational justice principle.

Time. Barry (1997) argues that there is general equality between human beings. Thus, as the current inhabitant of this earth, we have the responsibility to ensure that future generations would not find themselves in a worse situation as we are now. If we fail to do so, we will act as if the future humans would be not equal to us but beneath. Climate change threatens the future generations to fall short of our situation and creates intergenerational injustice if not addressed. The ICRT and JTF programs both promote transitioning into a more sustainable future. They are, therefore, means to address intergenerational inequities.

Space. Unequal distribution of costs and benefits of a just transition is the main factor for injustice. McCauley and Heffron (2018) argue that the ills and benefits are often inversed where the polluter reaps the benefits while more vulnerable parties bear most of the ills, which is highly unjust. On a small scale, the distribution of goods, that may be services, products or funds, is a crucial factor for the local economy. If one region or actor captures all business opportunities and funding, the others will ultimately be worse off, leading to injustice.

Procedural

Procedural justice primarily focuses on facilitating participation in decision-making processes (McCauley et al., 2019; Milchram et al., 2018). It demands processes that ensure stakeholder inclusion and supports their engagement in a non-discriminatory way (Jenkins, McCauley, Heffron, Stephan, & Rehner, 2016). Pesch et al. (2020) propose a list of conditions that can be used to measure successful participation. Procedural justice is evaluated by the following conditions:

- (1) *“A symmetrical selection of actors.* A non-hierarchical dialogue between experts and local institutional actors should be facilitated;
- (2) *A case-specific approach.* The actor selection needs to be case-specific that cannot be determined beforehand. The boundaries of the local actors may not be too narrow to allow for flexibility to adapt to new knowledge along the road;
- (3) *The need for political leverage.* The decisions of the public must have political legitimacy and, thus, need to be taken into account during the decision-making process;

- (4) *A level-playing field*. All actors need to be able to voice their concerns, irrespective of their frame and interests;
- (5) *An ex ante agreement on the rules of the game*. All parties must agree to honor normative diversity and plurality before starting the process (Pesch et al., 2020).

It must be noted that some additionally given requirements do not apply to this case. Due to the JTF's newness, there is no experience to draw from which is needed to assess these conditions.

Restorative justice

Restorative justice aims at restoring “[...] the harm that has been done to an individual, rather than simply focusing upon punishing the offender”, (McCauley & Heffron, 2018). Types of restoring activities can involve restoring lost jobs, the damaged environment and the climate (McCauley & Heffron, 2018). Since this research focuses on the impact on society, the focus here will be on restoring the harm done by the loss of a job.

Redundancy and Outplacement. Organizational change and cost reduction is inevitable in today's economy to stay competitive by increasing efficiency and effectiveness (Doherty, 1998; Marzucco & Hansez, 2016). Doherty (1998), Marzucco and Hansez (2016) claim that a means of cost reduction is often found in personnel lay-off, especially in times of recession. But also in transition, there is a significant turnover in jobs (Storm, 2020). New jobs will emerge while others will be destroyed. The people that occupied the destroyed jobs will face redundancy and unemployment.

To decrease the perceived injustice of redundant workers, outplacement services are set in place. Usually, outplacement is defined as a third-party service paid for by the former employer to assist with finding a new job, providing coaching options, counselling, and developing a new career plan (Doherty, 1998; Marzucco & Hansez, 2016). Doherty (1998), further adds skills training as a typical component. Such services are believed to increase the re-employment success, workers earn higher wages (Westaby, 2004) and are feeling better (Marzucco & Hansez, 2016).

To measure the level of restorative justice provided by an outplacement program, the material and mental consequences need to be evaluated. Restorative justice is partly ensured if the worker's wage does not fall below what was earned previously. Therefore, an indicator to measure material restorative justice is comparing wages before and after the redundancy. Evaluating perceived fairness is much less straightforward. The mental consequences of a layoff are diverse as a job offers more than purely economic support. It is a social activity and, often, a part of personal identity (Doherty, 1998). Doherty (1998) further claims that a job loss leads to mental distress, anxiety, and a loss of self-confidence, while for others, it can be a liberating experience. While the latter leads to perceived justice, the former needs to be addressed to ensure restorative justice. Marzucco and Hansez (2016) empirically showed that outplacement services could influence the redundant worker's overall justice perception and thus, affect negative emotions, perceived well-being, the intensity of job-search activities and future perspectives. A positive outplacement experience can therefore increase the perceived restorative justice. Measuring restorative justice can thus be done by analyzing the experiences and emotions of workers that received the support of the outplacement services. This type of measuring is traditionally done in assessing the outplacement quality of company-led outplacement services (Marzucco & Hansez, 2016; Westaby, 2004).

Recognition justice

Recognition justice is a type of justice that has been scarcely addressed as a self-standing justice component in literature to date. As a result, there is a lack of an actionable definition. Fraser (2000) defines misrecognition as a form of subordination. Individual group members are not seen as equal and thus, are prevented from participating in social interactions. Social institutions must be adapted to overcome such a problem, and *institutionalized value patterns* must be replaced (Fraser, 2000). Cuppen (2018) defines misrecognition as a social conflict. It arises when there is a problem that cannot be solved with the present institutions. As a result, overflow occurs, and with this, social conflict emerges. Cuppen (2018) further argues that these conflicts show political engagement from a normative view, which is highly valuable for a democratic society. The citizens' norms and values can be heard and, as such, incorporated into the decision-making process. From a substantive perspective, social conflict increases the knowledge about the issue at hand that can lead to more sophisticated solutions.

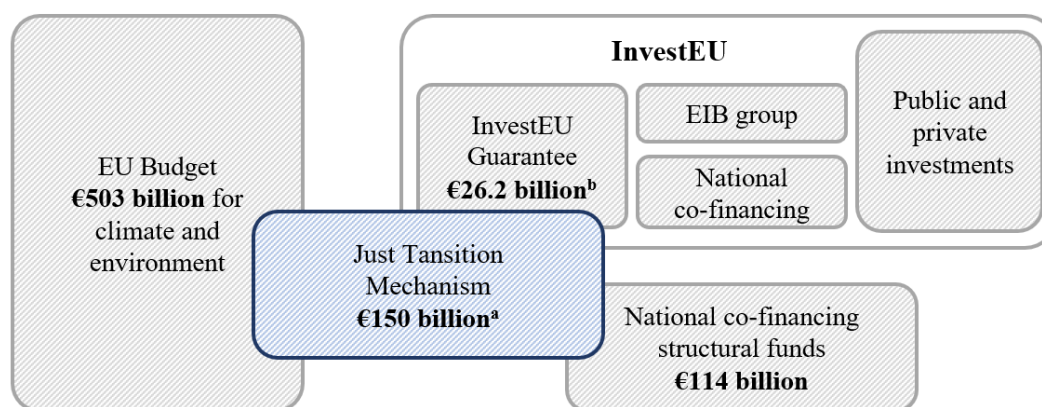
From Cuppen (2018), a straightforward measure for misrecognition can be constructed by evaluating current stakeholder groups and comparing them to the actors that can be identified in literature and media. There is a reason for recognition justice concerns if there is a gap between the recognized stakeholders and the actors involved. As a result, the stakeholders that are not included feel misrecognized and harmed. Van Uffelen (2021) claims, however, that misrecognition through the exclusion of stakeholders is not sufficient for covering misrecognition justice. She proposes that recognition justice stems from experiences of (mis)recognition (van Uffelen, 2021). As a result, recognition justice has the person at the core rather than procedures or distributions. Such issues can be identified with interviews and media reports.

3 Literature review

The literature review is composed of two parts, the JTF and the ICRT. The JTF findings in Section 3.1 are structured in three parts. The first introduces the parent program, the JTM. Then, the JTF itself is detailed with its funding amounts and the dynamic of the past year. Then, a previously conducted study is given that assessed the current criticisms on justice issues. In Section 3.2, the ICRT program is introduced. Firstly, a short overview of the program and its goals is given. Then, in the subsequent sections, each of the selected projects is presented.

3.1 The Just Transition Mechanism

The JTF is a monetary and strategic aid program that supports the most affected regions in the energy transition. It is part of a larger program, the JTM. The JTM is structured in three pillars, the JTF, the InvestEU Just Transition scheme and public sector support. The JTM is not easily placed in the transition plans of the EU. It draws from some of the monetary sources and redistributes them on the one hand, provides additional funds, and aims to mobilise external financial sources on the other, as shown in Figure 2. Whether the mobilised resources can be counted as fresh money is challenging to determine as one cannot be sure that these investments would not have been captured without the JTM.



^{a&b}Adjusted to the new amended fund of May 2020.

Note. Image adapted from ‘The European Green Deal Investment Plan and Just Transition Mechanism explained’, by European Commission, 2020, p. 2. Copyright 1995-2021 by “European Union”.

Figure 2: JTM placement in the European Green Deal

The initial goal was to assess the JTM and its entire program. Throughout the literature research, it became evident that the JTF has received the most attention. The other two pillars are currently barely addressed in the literature and have not been amended much by the EC. Thus, they do not provide a significant foundation for assessment.

How can member states receive the funds?

According to the EC (2020c, 2020g), each party that desires funding needs to draw up one or more territorial just transition plans (TJTP). These plans must contain a strategy for the transition process until 2030, coherent to the National Energy and Climate Plan (NCEP). Besides, it must identify the most impacted regions within the country (EC, 2020c, 2020g).

3.1.1 The Just Transition Fund

The JTF aims at ensuring a just transition towards a sustainable, carbon-neutral future by 2050. It provides a part of the fund needed to support the regions most affected by the transition, and it offers strategic support. In the following, the JTF content will be lined out with the categories goals, approach, actors, and funding and resources. Based on these categories, the program's critics will be assessed on its validity.

Goals

The main goal of the JTF is “[...] enabling regions and people to address the social, economic and environmental impacts of the transition towards a climate-neutral economy”, (EC, 2020g, p. 13).

Approach

The JTF is used to support the regions of EU member states that are more affected by the transition (EC, 2020c; 2020g). More specifically, the funding goes to regions “[...] where many people work in coal, lignite, oil shale and peat production or to regions that host greenhouse gas-intensive industries”, (EC, 2020c, p. 4). It shall be used to diversify the affected regions, reskilling and including the affected workers and unemployed (EC, 2020g). Projects that are deemed fundable are specific investments related to diversification, innovation and social inclusion (EC, 2020g). The complete list can be found in Appendix 12.

To receive funding, member states must meet certain eligibility criteria. A country's eligibility is based on the size of the transition process and the resulting social and environmental impact (EC, 2020d). The fund share of a member state is calculated with the data of regional GHG and the percentage of employment in impacted industries, taken from the Nomenclature of Territorial Units for Statistics (NUTS2), the number of jobs in mining, the production of peat and oil shale (EC, 2020g). The assessment also considers the economic strength and investment capacity (EC, 2020g). Besides, a country must draw up a territorial TJTP that shows the transition strategy up to 2030 and identifies the most affected regions. A separate territorial transition plan is needed for the identified regions that show their social, economic and environmental needs. The TJTP also needs to satisfy the Common Provisions Regulation (CPR) from 2021 to 2027. The CPR specifies, among others, stakeholder inclusion requirements and documentation of agreements (EC, 2018). Based on this, the JTF is used as an instrument to ensure ownership by the receiving states. This shall allow for tailored programs and actions towards a successful just transition (EC, 2020g).

Actors involved

The assessment of the actors involved needs to be separated into two categories: the actors involved in policymaking, called executing actors, and the actors involved that apply for JTF in their respective country, referred to as funding applicants. Both will be introduced below.

- *Executing actors.* The EC states that a public consultation took place to assess the adequacy of the current programmes and funds and that several EU bodies² have been consulted. As this research aims to compare former projects with the current

² Court of Auditors, European Economic and Social Committee, the Committees on Budgets, Economic and Monetary Affairs, Employment and Social Affairs, Environment, Public Health and Food Safety, Industry, Research and Energy, Transport and Tourism and Agriculture and Rural Development, Regional Development.

JTF program, the executing actors are outside the scope of this research. Still, it may be worthwhile researching the actors involved to assess its inclusivity.

- *Funding applicants.* To gain eligibility, the TJTP needs to be drawn up for the most affected regions. This plan will then be the guideline for transition plans for the upcoming years. It requires an outline of the “Arrangements for the involvement of partners in the preparation, implementation, monitoring and evaluation”, (EC, 2020g, p. 7) and reports public consultation results. Who must and should be involved in the creation of the TJTP is very untransparent.

Table 7: JTF proposal adaptations in 2020

#	Proposal	JTF amounts	JTF content
1 ^a	Jan 14 th COM(2020) 22 final	€7.5b grant of EU budget	Explained in this chapter.
2 ^b	2 nd , 27 May COM(2020) 460 final	€40b grant of EU budget, thereof: €10b of MFF, €30b of NGEU ³	Only the MFF part is to be complemented with the ERDF/ESF+ fund.
3 ^c	3 rd , 9 December Provisional, no official regulatory paper available, press release used	€17.5b grant of EU budget, thereof: €10b of MFF, €7.5b of NGEU	ERDF/ESF+ matching is now voluntary Green rewarding mechanism implemented, rewarding regions that reduce GHG with 50% extra support of the JTF A new review clause included for 2025

Note. Data retrieved from ^aEuropean Commission (2020g), ^bEuropean Commission (2020a), ^cEuropean Commission (2020b).

Funding and resources

On 14 January, the EC proposed the first JTF setup, equipped with €7.5 billion (EC, 2020c). To receive the fund, it needs to be complemented by matching other existing funds and national co-financing. The matching refers to the European Regional Development Fund (ERDF) or European Social Fund Plus (ESF+). Here, each Euro received of the JTF needs to be complemented with €1.5 to €3 from these funds (EC, 2020c, 2020g). All funds shall add up to a total of €30 to €50 billion (EC, 2020c). Table 7 shows the funding structure and the changes that occurred in 2020.

3.1.2 Assessment of the Just Transition Fund

The assessment of the JTF is conducted as explained in Section 2.3. It is again split into four familiar categories goals, approach, actors involved, and funding and resources.

Goals

The goal of providing support to the regions that need it the most is certainly an important step to prevent unjust transitions. However, it is questioned whether the ambitions, that are addressing social, economic and environmental impacts, are set too high especially with regards to the relatively limited funds available (Cameron, Claeys, Midoes, & Tagliapietra, 2020). Cameron et al. (2020) recommend focusing on social impacts only. Reducing the

³ Next Generation European Union (NGEU), a EU recovery package that provides support to member states that were affected most by the COVID-19 pandemic.

scope of the fund to prevent it from being spread too thin in the light of limited funding is certainly a sensitive recommendation. However, this recommendation also implies that the goals mutually exclude each other. Taking some goals out of the equation may lead to the neglect of them altogether in the proposed solution although there may be solutions that combine all and, as a result, lead to the highest increase in justice. Consequently, the recommendation of Cameron should rather be formulated as putting focus on social impacts while considering the other aspects as well.

Approach

Besides, several authors doubt whether the allocation of funds is determined appropriately on a national level. More specifically, the data (taken from NUTS2) determining a location's carbon intensity is claimed to be highly volatile and, therefore, not an appropriate measure (Cameron et al., 2020). The authors underpin this claim with their calculations, showing that monthly fluctuations lead to significantly different results. Therefore, the allocation method may prove unjust. Marty (2020) agrees with this standpoint, using Cameron et al. (2020) as a source of this information. The data used, and the authors' replicability makes this claim valid. The EU has not addressed this claim in its past amendments.

CAN Europe argues that the JTF “[...] omits to hold polluters to account [...]”, (CAN, 2020). More specifically, the NGO criticises the funding eligibility for funding fossil-based gas projects for district heating (Gündüzyeli & Moore, 2020). Therefore, it seems that unambitious climate targets are tolerated, and transition lagging countries are supported. This issue has been addressed partially by introducing a Green Rewarding Mechanism. Here, ambitious countries may be rewarded with an increase of the JTF of up to 50% (EC, 2020b). The triggers for this mechanism are not explained, however. Therefore, it remains unclear whether this response is adequate. Besides, the core issue is still unaddressed as fossil-based gas projects are still eligible for funding (Council of the European Union, 2020).

Many authors (Cameron et al., 2020; Colli, 2020; Storm, 2020) agree that the JTF fails to *recognise* more transition-affected sectors than the fossil-based fuel industry. Although no claim is underpinned in great detail, it seems very likely that this will be the case. Major restructuring of the economy affects the entire society. Nonetheless, it is also clear that a single fund cannot solve all issues. Therefore, the reason for scoping the fund towards the most vulnerable is apparent and an essential step towards justice. Consequently, I argue that the authors' claim is not appropriate.

Even if an affected nation receives substantial funds, past experiences show that these do not necessarily reach the *local* projects the fund is intended for (Gündüzyeli & Moore, 2020; Strambo, 2020). In fact, Gündüzyeli and Moore (2020) back their claim by providing calculations that they have conducted themselves earlier, which is based on EU data. However, this claim is seen as largely speculative as for Gündüzyeli and Moore (2020), the calculations are not reproducible and, Strambo (2020) does not explain his claims. Nevertheless, the EU has implemented a reviewing clause for 2025 to check whether the implementation of the JTF is successful (EC, 2020b). This clearly is a first step towards monitoring how the fund is used.

Storm criticised that the ones affected by job loss will not be compensated adequately as a drawn-out process, and protection mechanisms are missing. This will ultimately lead to the violation of *restorative justice*. To underpin this argument, Romania is given a recent example, where the funds meant for reskilling workers never reached their destination due

to fraudulent behaviour (Gabor 2020, as cited in Storm, 2020). As stated earlier, the reproducible calculations and citations give the argument validity. The deficit in reskilling will lead to a skill gap between new jobs and the unemployed, leaving the unemployed behind, which is naturally highly unjust (Storm, 2020). The EU fails to provide a transparent process to ensure a successful reskilling process, making the JTF prone to injustice.

Actors involved

Looking at the current criticisms, two authors believe that not all stakeholders are included sufficiently. Colli (2020) and Marty (2020) point out inclusion deficits for creating the TJTP. Colli (2020) adds that also, project implementation and governance lack stakeholder involvement. The comparison with the TJTP template, one can see that this is the case. The word partnership is used as an equivalent to stakeholders. Its definition refers to Article 6 of the Common Provisions Regulation (CPR) where partners to be involved are “(a) urban and other public authorities; (b) economic and social partners; [and] (c) relevant bodies representing civil society, environmental partners, and bodies responsible for promoting social inclusion, fundamental rights, rights of persons with disabilities, gender equality and non-discrimination”, (EC, 2018, p. 28). This article shows that there is an emphasis on stakeholder inclusion for transition projects. It contains a static list of who needs to be involved. Consequently, other stakeholders that are not part of this list but are relevant in a particular case will run the risk of being excluded. Besides, it is not clarified how these should be involved increasing the risk of participation issues.

Funding and resources

Funding stability. The JTF proposal and the discussions around it are highly dynamic. Additionally, the fund shows dramatic fluctuations in size. A reason for this fluctuation is the impact of the COVID-19 crisis (EC, 2020a). The first proposal was made on 14 January 2020 (EC, 2020g). During the year of the JTF setup, adaptations were published in May and December. Here, only the amendment in May has officially been accepted by all EU bodies. The lack of an official acceptance of December is worrying since the implementation phase begins in 2021. It seems that EU bodies could not agree on one JTF structure between the last amendment in May and the provisional agreement in December 2020. If there were consensus, the amendment would have been made official and more information would have been provided. Therefore, is likely that more amendments published in the upcoming months. As the implementation has then already started, issues and confusion may arise.

Funding sufficiency. At the first proposal in January, the funding has been set to €7.5 billion, which critics claim to be far too low (Cameron et al., 2020; Marty, 2020; Storm, 2020). The different ways this claim is backed are convincing. Cameron et al. (2020) point out that, if looking at past comparable national projects and scaling it to EU size, this amount less than example projects spent. While each project will, of course, differ in needed funding, their calculated minimum amount of €10.8 billion do stress that the amount is far too low. It could be questioned, however, whether the countries used for comparison are appropriate. Storm (2020) bases his calculations, which refer to the JTM as a whole, on the share of mining jobs in highly impacted countries. His example calculations show that at least €130 billion are needed to satisfy Eastern countries' demand only, which exceeds the number of mobilised funds proposed in January and barely covers the amount presented in May (€150 billion). Storm's (2020) claim is adequate as he backs his reproducible calculations with EU data and generally accepted economic theories. Also, Becker (2020) and Marty (2020) argues that even €40 billion (proposed in May) is still insufficient to enable a just transition. While the

latter assessments do not show adequate underpinnings, Storm (2020) and Cameron et al. (2020) do. The critique can, therefore, be taken up seriously. A cut of the already too limited fund to the amount of €17.5 billion (proposed in July) increases the possibility of injustices arising as not all the regions in need will receive an adequate amount of funding. The EU has not increased the funding amount until December 2020 (EC, 2020b). However, the European Parliament (EP) favours a raise to €25 billion (Kefalogiannis & Buzek, 2020), which is still vastly below what is needed.

Next to the fund size, several authors (Climate Action Network Europe [CAN], 2020; Storm, 2020) claim that the lion's share of the JTF is not 'fresh money' but re-allocated EU budget. Using EU data, Storm (2020) points out that the ERDF and ESF+ are both existing funds and that national co-financing hardly provides new funds as they are bound to the Stability and Growth Pact, and that nations do not have spare money. Thus, a large part of the fund is re-allocated money, meaning money is taken away from other projects. This re-allocation will lead to injustice as some regions and countries will ultimately be stripped of existing funds (Colli, 2020). Although Colli (2020) does not detail her hypothesis any further, it seems likely that injustices arise. This criticism has been partly addressed by the EU in July, stating that the coupling of the ERDF/ESF+ can be done voluntarily (Widuto & Jourde, 2020).

Main notions

It becomes evident that the JTF has several shortcomings that need addressing. The four key notions found are summarized in the following:

- The goals may be set too high when considering the limited funds.
- The approach that is chosen to assess the eligibility for the funds seems inadequate. Detected issues are the use of the NUTS2 data as an eligibility criterion and that certain fossil-based projects are deemed eligible for the fund.
- The process that surrounds the project is flawed. Three issues could be identified that lead to injustice. Firstly, adequate stakeholder participation is not ensured. Secondly, a clear process that ensures compensation for redundant workers is missing. Lastly, it is not ensured whether the allocated funds reach the intended regions and projects.
- The funding amount is too limited and highly unstable.

3.2 The Initiative for Coal Regions in Transition

This subchapter gives a short introduction to the ICRT and the selected projects. It will serve as a starting point to assess whether the JTF increases justice in the energy transition. Each selected project will be presented with the familiar categories goals, approach, actors involved and funding and resources. To give context to the projects, situational factors are outlined with the categories historical context, politics, economy and society.

The ICRT is a non-legislative element launched by the EU aiming at mitigating social consequences during the low-carbon transition (EC, 2021a). The program does not offer funding but refers to funding possibilities such as the ERDF and the ESF+. Karlovy Vary and the Rhenish Region both applied for EU funding and are considered eligible. Eligibility for any of these funds is based on several requirements laid down in the Common Provisions Regulation (CPR). The CPR that is important here was established in 2013 and valid until 2020 (EC, 2013).

The ICRT rests on three pillars (EC, 2021a, 2021b):

- *Connecting all relevant stakeholders.* The ICRT shall promote knowledge sharing and facilitate collective dialogues
- *Technical assistance.* The ICRT shall enhance the region's capacity by providing “tailored needs-oriented assistance” (EC, 2021a). This shall ensure the development of practical measures towards a sustainable low-carbon transition.
- *Resource availability.* The ICRT provides toolkits, guidelines and reports that contain information on governance, environmental rehabilitation or employment. The collaboration shall be extended from a national to an international scope.



Note. Blank map retrieved and adapted from www.hist-geo.com.

Figure 3: Location of the selected case studies

Since 2019, a secretariat has been introduced that oversees and advises the projects (EC, 2021b). It consists of experts in sustainable transitions, economic and climate policy⁴. Figure 3 shows the location of each selected project. Each will be introduced in the following subsections, beginning with the Rhenish Region in Germany.

3.2.1 The Rhenish Region, Germany

The information gathering of the Zukunftsagentur Rheinisches Revier (future agency Rhenish region, ZRR), finding project information was relatively straightforward. The EU case study referenced the website of the ZRR, which contained a wealth of information. From there, all knowledge gaps on the project could be filled. It must be noted that the sheer amount of data could not all be assessed due to the scope of the thesis. The short time led to some assessment restrictions that are pointed out throughout the research if necessary. The reports that complemented the information given by the EU provided leads to relevant contextual factors. These leads were used to create an overall context of the ZRR project.

The resulting relevant information is structured in two parts. Firstly, the ZRR project is explained in detail, followed by contextual factors.

The ZRR project

The approaching energy transition and the downturn of coal as an energy carrier led to the creation of the ZRR. It was founded in 2010 with the initial name of Innovationsregion Rheinisches Revier GmbH⁵ which changed in 2014 (Vallentin, Wehnert, Schüle, & Mölter, 2018). In the first four years, a strategy for the future development of the region was developed. The main implementation phase started in 2014 and is an ongoing endeavour.

Goals

The overall goal of the ZRR is to determine ways to restructure the region in a preventative way to avoid an unjust transition. It aims at preventing a rise in unemployment and an increase in poverty due to the energy transition. The main pillars were the *connection of stakeholders* and the *implementation of locally created projects* that help to transition towards a sustainable and economically strong region.

Approach

The government of North Rhine Westphalia (NRW), a German federal state, initiated the ZRR rendering it a top-down initiative. The ZRR aimed at connecting stakeholders to create a coherent strategy that achieves overall consent. In the first part of the project, from 2010 to 2014, the focus of the project was to create an actor-network was initiated and to perform research on the region's characteristics (EC, 2020h).

After completing the research and set-up phase, the ZRR planned to search for suitable transition projects. For this, the Rhenish region, also referred to as IRR⁵, was split into eight

⁴ The secretariat's members are from Ecorys (economic research and consulting company), Climate Strategies (not-for-profit research network for climate and energy policy), ICLEI Europe (network of local and regional government), and the Wuppertal Institute for Climate, Environment, Energy (researches goals, strategies and instruments for transitions to a sustainable development).

⁵ The name Innovationsregion Rheinisches Revier (IRR) is used in literature as the description for the region rather than the project and its agency. In the remaining of the thesis, I will refer to the agency as *ZRR* also before it was renamed. For references to the Rhenish region both *IRR* and *Rhenish Region* are used as equivalents.

innovation areas based on their strengths and weaknesses. For each of these, a structural profile was developed that should guide the kind of projects needed. The projects were to come from the local public to capture grassroots ideas and movements and increase public acceptance.

An idea competition was launched to identify new transition projects and to capture already running or successfully implemented projects that can function as best practices (Innovationsregion Rheinisches Revier GmbH [IRR], 2016). For both, the public and organizations were asked to send in ideas. As such, a bottom-up approach has been chosen.

The project selection was conducted by the board of associates of the ZRR with advice from experts where the eligibility criteria are also set by mentioned experts and the German government (IRR, 2016). After the application round, 20 projects were chosen, from which ten were best practice projects and ten new model projects. In 2017, 51 projects started officially, and 14 were in a new qualification round. Ten of the selected projects have been delayed or discontinued as they were deemed not promising at a later stage (IRR, 2017).

Actors involved

The project is set up in four distinct actor categories: the ZRR, the supervisory council, the board of associates, and the Rhenish conference. The first two take on guidance and advisory responsibilities. Both have no decision power. The supervisory council consists of a wide array of members such as the chambers of industry, trade and craft of Aachen, Mönchengladbach and Köln, worker unions, political members of the affected and neighbouring regions, and a member of the NRW government (ZRR, 2021b).

The board of associates are responsible for setting targets, developing strategies and presenting action plans (Wirtz, 2014). Members of the board are areas and cities located wholly or partially in the lignite mining areas and diverse chambers of craft, industry and trade and other unions, as seen in Appendix. A decision that raised attention was the exclusion of the city of Köln. The reason for its exclusion from the executive board is the belief that homogeneity would make the agency more actionable (EC, 2020h). Besides, the agency claims that this categorization is not fixed and can be extended or reduced if needed. (IRR, 2013). Looking at the member list of 2014 and today, only minor changes can be found. A member representing the city of Mönchengladbach and a member speaking for eight cities, non-governmental associations and many other regions that partly overlap with the regions that already have several members are added (Wirtz, 2014; ZRR, 2021b).

The neighbour conference consists of delegates of directly affected sub-regions. They provide advice with their regional knowledge about the developed strategies and action plans. Their opinions and inputs are of “suggesting character” (ZRR, 2021b) for the supervisory council and the board of associates.

As mentioned in the subsection *Goals*, the civil public is asked for project ideas and opinions. Besides, civil participation was ensured via “[...] a variety of platforms such as the public coal region conference (‘Revierkonferenz’), online dialogues, meetings with civil society organisations, and activities in the municipalities [...]”, (EC, 2020h, p. 4).

Funding and resources

The EC (2020h) claims that this project's primary challenge is parochial thinking. Here, each district pursues to capture the most benefits of the transition. This likely done by pushing for projects that are conducted in their respective regions.

The ZRR was funded by the EU and the federal state NRW in the project setup phase from 2014 – 2017 with a budget of 500,000€ (EC, 2020h). Besides, one of the supervisory council members, the electricity generation company RWE, sponsors this project with €70,000 annually (Oei et al., 2019). After, the German government provided €2 million per year to support the selected projects with a maximum of €200,000 per single project or €800,000 per combination project (ZRR, 2021a). A combination project is several projects conducted together to enhance their impact.

Contextual factors

Within the EU, Germany is the leading producer of coal (EMBER & Agora Energiewende, 2021). The energy transition will thus hit the country and some highly carbon-intensive regions therein hard. One of the most impacted regions is the Rhenish region, with 2.1 million inhabitants (Vallentin et al., 2018). Here, three of the last ten still active mines are located in close proximity, all owned by the lignite giant RWE (Schubert, 2018).

The Rhenish region is located in the country's west in a densely populated region. It is a collection of different counties and cities that are directly affected by decarbonization. Due to large urbanization, the region is highly connected in itself and to major cities such as Aachen, Köln and Mönchengladbach (Baur & Schwartzkopff, 2015; Frondel et al., 2018). It is traditionally known for being a highly industrialized area where most German lignite coal is extracted (Vallentin et al., 2018). While this and neighbouring regions once were responsible for the country's extreme wealth gain and a magnet for workers throughout the country, it now faces an existential crisis with the mines' shutdown.

Historical context

The history of the Rhenish region delivers insights into the current contextual factors that influence the current transition as it is well acquainted with a coal phase-out. Only in 2018, the last anthracite mines were shut down in the Ruhr area (Dahlbeck & Gärtner, 2018). The Ruhr area is neighbouring the Rhenish region and, thus, closely connected. Both are part of the federal state of NRW and, as such, subject to the same government.

The anthracite mines operated for over 150 years and were the reason for the prosperity of an entire country. The closing reminds of the dramatic failure of the last restructuring attempt. Until today, the consequences of this failure is visible in some parts of the regions, especially the geographic north that still ranges the highest unemployment rate in the country. Other issues are higher-income poverty, more people relying on long-term governmental financial support and generally lower education (Dahlbeck & Gärtner, 2018).

The main reasons for this failure can be found in politics. The politicians ignored the downturn of anthracite. By clinging onto the old, known ways, change was avoided. Instead, financial support was poured into the mines and the R&D activities thereof leading to heavy losses (Baur & Schwartzkopff, 2015).

Politics

NRW was one of the first federal states to adopt a climate protection plan in 2015. While the politicians agree that a coal phase-out is crucial, the timeframe is still the core of debates. On the one hand, there is a push from the Social Party Germany (SPD) to speed up the phase-out to 2030 (Baur & Schwartzkopff, 2015). This is in accordance with the climate protection law signed in 2013 that aims at reducing emissions by 25% by 2020 and by 80% in 2050 (Vallentin et al., 2018). In contrast, the Christian Democratic Union (CDU) warns of

significant job losses and economic instability (Welt, 2015). The tension between ambitious climate politics and conservative protection of mining work constrains the formulation of an actionable decarbonization plan and leads to the insecurity of the population, investors and corporations within the region (Baur & Schwartzkopff, 2015). Consequently, the leading decision of the NRW government took on a conservative stand by set a plan for the phase-out of most lignite mines for 2030 but guaranteeing the continuance of the mines Garzweiler II and Hambach, owned by RWE (Vallentin et al., 2018).

Economy

In comparison to Germany, the IRR performs relatively weak. This can be seen in the difference in the gross domestic product (GDP) per capita. For the IRR, it is 13.3% lower than the German average. Also, unemployment is less favourable in the region with 7.8% compared to 6.4% in Germany as a whole. (Frondel et al., 2018 data of 2015)

The services sector is the most important in the region with almost 79% of the workforce employed. The lignite sector is thus only of marginal importance. Still, in 2016, more than 14.000 directly, indirectly and induced workers in the lignite sector, which is 1.8% of the regional workforce. (Frondel et al., 2018)

The education of the Rhenish region is due to the high number of universities and other research facilities above the German average. Still, the research intensity is very low compared to the German average (48% lower) (Frondel et al., 2018). That may be because the universities are in neighbouring regions such as Köln and Aachen.

Society

The society in the Rhenish region is split into two hardened fronts: for and against the coal phase-out. The conflict revolves mainly around two core topics driven by the expansion of lignite fields, the Hambacher Forest and the re-location of entire villages. Both conflicts peaked in 2018, resulting in escalations involving violence and vandalism from both sides. Although the emotional responses calmed down, these conflicts are still unresolved. Both fronts describe their counterpart as the “enemy” (Rueter, 2018). The narrative often revolves around them against us. There seems to be no understanding for the other. The hostility, threats and violence of the few are translated to the behaviour of the entire front.

The *coal-mining supporters* often state that they feel like scapegoats. They feel blamed by society for the rising temperatures (Rueter, 2018). Besides, they feel mistreated because coal mines in other countries are not shut down. Besides, there is the fear of a job loss and being left behind.

The *anti-coal community* is very diverse. Their supporters range from anarchists, extreme environmentalists to the moderate middle (Kaufer & Lein, 2018). Two main streams can be identified: One concerns the re-location of the villages and communities with the initiative *Alle Dörfer bleiben* (All villages stay). The other is concerned with combatting climate change and protecting the environment, ensuring a liveable future. The protesters living in the Hambacher forest can primarily be counted to this part (Kaufer & Lein, 2018). Especially this latter stream shows extreme diversity. The uniting point marking RWE as the enemy by holding the company responsible for both the village re-location and clearing the Hambacher forest.

3.2.2 Karlovy Vary, Czech Republic

Due to language barriers, the data gathering of the RE:START Project with the focus of the Karlovy Vary region proved partly challenging. Starting from the EU case study, the given references lead to the main websites of the projects. An extensive amount of information was available there but mostly provided in Czech. Therefore, most could not be used. Critical documents such as the Actions Plans were translated with Google Translate. As this option gives rise to translation errors, the information was as much as possible triangulated with academic project assessments written in English. As a result, the interpretation errors should be reduced to a minimum.

The found academic papers gave leads to critical contextual factors. Besides, the EU provided a pervasive regional profile on its economic situation and other important factors. As such, the finding of the project's context was relatively straightforward. The language issue as experienced during the project's content search was not present here.

To facilitate comparison at a later stage, the setup of the literature findings is the same as for the other projects. Firstly, the project is detailed. Then, the contextual factors are elaborated based on the categories given in Section 2.4.

The RE:START project

The RE:START project is launched by the Czech government with the aim of economic support for the most affected regions due to the energy transition. The regions are Karlovy Vary in the North-West, which is the focus of this thesis, Usti in the far North and Moravian Silesian in the country's far east. The project started in 2015, where the first three years were used for strategy development first three years. In the consecutive years, the strategy was implemented in form of Action Plans (AP) (EC, 2020e).

Goals

The goal of the project is the setup of a governance structure to re-activate the economy in the three regions and increase the living quality with the help of an annually updated AP. The initial version of the AP was proposed and approved in 2017. The plan identifies seven key pillars, *entrepreneurship and innovation, foreign direct investments, research and development, human resources, environment, social exclusion and instability, infrastructure and the quality of public services* (Soukup, 2020). It assigns specific tasks given to particular ministries that need to be tackled that year. The APs state the following activities regarding coal mining (RE:START, 2017):

- Revitalization of the environment of reclaimed areas,
- Resocialization (creating new activities) of reclaimed areas,
- Re-assessing the protected coal areas, including scope assessment,
- R&D on coal mining (i.e. reducing coal mining, environmental impacts),
- Reduce coal heating on a municipality level (suggested action).

The focus of the APs rests on economic growth and stabilization of society. There are no active steps for reducing coal as an energy carrier.

Approach

The project's focus is bringing decision-makers from the national and regional level together to find sustainable solutions for the disadvantaged regions and develop an actionable strategy that considers the national strategic decisions while being coherent with each region's specific circumstances. As such, the government takes a top-down approach.

Actors involved

The Governmental Plenipotentiary and the Regional Supervisory Board are responsible for appointing leaders of the working groups that develop the action plan's tasks which then form their working group independently (Heuer, 2018). The action plan is drawn up by the working teams with suggestions from the general public via online questionnaires and media calls from regional actors in working groups and platforms (RE:START, 2020).

Funding and resources

The EC(2019) claims that the RE:START strategy is backed by a reliable financial framework. This framework consists of national and EU funds, as seen in Table 8. As can be seen, the governmental funds have been subject to drastic fluctuations. The funding is meant to support the strategy development and implementation of the project until 2030. Each of the regions competes for the funds of this budget (RE:START, 2020).

Table 8: Funding structure

Budget	AP 2, 2018^a	AP 3, 2019^b	EC, 2020^c	AP4, 2021^d
Funding	227.88	362.70	383.00	2,820.99
State budget	6,542.36	30.81	1,100.00	51.01
Total	6,770.24	393.51	1,483.00	2,872.00

Note. ^aRE:START (2018), ^bRE:START (2019), ^cWorld Resource Institute (2020), ^dRE:START (2020).

Contextual factors

In the past decade, the Czech Republic experienced heavy job losses in the coal sector due to economic and technological reasons. To counteract the trend of declining jobs, the government, together with the EU, started a restructuring program, RE:START Strategy, in 2015. The goal was to thoroughly assess the most affected regions, Karlovy Vary, Usti and Moravian-Silesian, and develop a tailored strategy and governance structure (EC, 2019). Still, the country is highly dependent on it as an income and energy source. A total of 48% of the energy used stems from coal (International Atomic Energy Agency [IAEA], 2020).

Karlovy Vary is located in the Northwest of the country and shares borders with Germany and Poland. It is known for its Spa resorts and heavy industry due to the large lignite reservoirs (2020e).

Historical context

The Czech Republic is marked with dramatic transitions, especially the change from communism to democracy that emerged after the velvet revolution. The velvet revolution received its name through the Czech dissident Rita Klímová as an indicator for the protests being non-violent (Kopsa, 2019). While the main rally was indeed not violent, the preceding ones were (Zeman & Hauner, 2016). The velvet revolution was one of the many revolutions and protests within central Europe to fight communist suppression (Zeman & Hauner, 2016). With the end of the communist regime, the differences between the Czechs and the Slovaks could not be covered anymore. Four years after the velvet revolution, the countries separated, where the Czech Republic left as the winner with a seemingly stable economy (Osborne et al., 2021; Zeman & Hauner, 2016). Its economy grew strongly and society was euphoric about the new system and the introduced reforms of the reigning parties as they hoped for more freedom and an increase in living standards (Osborne et al., 2021).

The stability did not last. Only a few years later, the economy began to spiral down, and unemployment rose. The reason was the failure to transform critical sectors and create a transparent financial market, leading to corruption (Osborne et al., 2021). Banks failed, and citizens lost their money.

Politics

The Czech government pushes the country towards decarbonization for economic rather than climate concerns (World Resource Institute, 2020). The decreasing coal prices force the country to reconsider its energy mix, which is still heavily coal-dependent. According to the International Atomic Energy Agency (IAEA) (2020), the lion's share of produced electricity came from coal with 48.6% (which is largely lignite with 41% of the total electricity production (Frantál & Malý, 2017)) followed by nuclear plants with 34,7%. Only 12.2% came from renewable sources. Oil, gas, and other sources pose only a minor fraction of the energy mix (IAEA, 2020).

To decarbonize, the country essentially sets on nuclear energy. The IAEA (2020) reports that the State Energy Policy aims at increasing its importance to reach 50% of the electricity generated in the country. Currently, the country hosts two plants but plans to extend it to six, where two are added to each current location, Temelin and Dukovany. The support of nuclear energy is at 74% in 2020. The government and the plant operators are highly involved with the public to increase acceptance (IAEA, 2020). Frantál (2017) supposes that the reason for such high acceptance for people that live in close proximity is the economic benefits that such a plant delivers to the community, the familiarity with this type of electricity generation and the perceived cleanliness of the generated electricity.

Although renewables are also seen as a solution, the general scepticism around climate change and the needed changes often seem unattractive compared to nuclear power. Support of renewable energy systems (RES) such as wind turbines is much lower than nuclear plants, especially in the vicinity of currently operating nuclear plants (Frantál & Malý, 2017). The reason for this seems to stem from the governmental attitude and media frames. RES are outlined to be unreliable and forced onto the country by the EU while the Czech republic strives for independence due to past crises brought from abroad (Kratochvil & Mišík, 2020). The negative framing of RES as an inappropriate solution to provide energy security is mirrored in society. However, changes can be seen in the younger generations as people under 30 seem more likely to support RES (Frantál & Malý, 2017).

Another political controversy that touches the goals of the EU's just transition is becoming carbon neutral until 2050 as the Czech Republic does not plan on phasing out coal at all. In December 2020, the broad state commission recommended a phase-out date of 2038, which misses the Paris Agreement date by seven years. Here, all Organisation for Economic Co-operation and Development (OECD) nations, including the Czech Republic, agreed on phasing out by 2031. Both proposals did not reach a consensus within the Czech government.

Mining has been a controversial topic in the Czech government for decades. In 1991, the mining activities were limited by the Government Resolutions No. 331, 444, and 490 to curb environmental degradation, pollution and to protect settlements (Sivek, Vlček, Kavina, & Jirásek, 2017). The limit is still a core of political discussions today. According to Sivek et al., the boundaries have already been loosened for the Bilina Basin, the Northern Bohemia, in 2015. It came as a response to the forecasted emptying of the lignite mines within 19 years. The authors also notice that this resolution recommended reviewing the mining limits in

2020 (Sivek et al., 2017). The limit review has been taken up in the RE:START action plan to be discussed later.

Economy

The economy in the region is among one of the weakest in the country. The GDP per capita is only 65% of the national average (EC, 2020e). This weakness shows in the rate of unemployment as well as the gross monthly average income. While the unemployment rate is above average, the monthly income is almost 20% lower than the national average (EC, 2020e).

The Karlovy vary region is one of the smallest regions in the country and inhabits less than 300.000 citizens (EC, 2020e). The region is highly dependent on coal as 50% of the used electricity stems from that resource, while 75% of the heating energy come from coal plants (EC, 2019, 2020e). Due to the decline in coal prices, jobs have been reduced. The most affected region is Solokov. Here the EC (2020e) estimates that about 20% of the population lives at the risk of social exclusion.

Karlovy Vary's economy rests on the profit made from lignite mining, low-tech products and spa resorts. Due to coal mining, energy-intensive production has settled in the area, such as non-metallic mineral products (glass, ceramics etc.) and textile (EC, 2020e). All of them have lost in importance due to their high expenses in energy consumption. The current economy is fairly heterogeneous one unique expertise can be found: balneology (EC, 2020e).

The education in the region is among the lowest in the country. According to the EC (2020e), more than 19% of the population has less than a secondary education level, while 11.7% obtained tertiary education. Besides, no technical universities are present, leading to low innovation, a lack of qualified jobs and qualified personnel. As a result, the younger population leaves the region searching for better opportunities (EC, 2020e; Heuer, 2018).

Society

Due to the past promises of a flourishing economy and increasing wealth that were not lived up to, the people within the region are sceptical towards the new transition plans. Many of the people show a do-it-yourself attitude for resolving issues such as threatening job loss due to redundancy (Davidová & Ilčíková, 2018). It seems that these people do not believe in support of the government. Heuer (2018) claims that the inhabitants often have no roots in the Karlovy Vary Region and lack a sense of belonging. The local population has seen large fluctuations due to the mining boom and downfall, the velvet revolution and the world war, leading to a low identification with the region (Heuer, 2018).

Society does not lean clearly in any direction in the coal question. Černocho et al. (2019) show contrasting opinions in a national poll of 2017. Here, the results partially contradict one another when looking at whether the extension of mining areas where the majority (49%) opposes but only 27% favours. Still, almost half of the respondents see their modernization and the operation for as long as possible as positive, while only roughly a third do not (Černocho et al., 2019). The same split opinion can be found for RES. Here, the opinions differ vastly, which can partly be attributed to the lacking information of traditional mass media, which focuses solely on technological aspects and the information of the so-called media bubbles of the internet, such as social media (Čábelková, Strielkowski, Firsova, & Korovushkina, 2020).

3.2.3 Transition Training Fund program, Scotland

Gathering information on the Scottish Transition Training Fund (TTF) proved challenging. The primary reference given by the EU case study led to the website of the project, which has been shut down. Parts have been moved to the website of the implementing party of the project, the national skills agency called Skills Development Scotland (SDS)⁶, but also here, information on the project was limited. It seemed that much information on the project was simply removed. As a result, little information could be gathered. However, an overall picture that lent itself for an ethical assessment on transition justice could still be created with the focus on the funding structure that has been communicated transparently.

As the TTF directly aims at workers of the O&G industry, the contextual factors are also geared towards it. Due to the project's limited aim, the context could thus be kept short but detailed in this specific topic. Many Scottish governmental papers have been used for the contextual factors as the data was deemed most trustworthy. Information on society has been complemented with newspaper articles and NGO criticisms to capture the feelings and fears of the involved workers.

In the following, again, the project is firstly outlined, followed by the contextual factors that focus heavily on the O&G sector.

The TTF

Due to the high and rapid job reduction in the O&G industry, the Scottish government established an O&G Taskforce to tackle its emerging issues. A fund and strategy to reskill workers for jobs in sectors with a lack of workforce was set up and implemented between 2016 and 2019 (EC, 2020f).

Goals

The TTF's goal was to *decrease unemployment in the O&G sector and fill employment gaps in other sectors*. According to the EC (2020f), the aim was to re-employ 1000 workers per year in “oil and gas, the wider energy sector, or engineering and manufacturing” (Scottish Government, 2017). Ultimately, 4272 workers could be supported with the fund. The EC (2020f) further claims that 89% of the funded workers found a job of which 47% remained in the O&G sector while 13% switched to RES industries (EC, 2020f).

Approach

The TTF is essentially an outplacement program to battle unemployment. “[A]ny resident who had worked in the Scottish O&G sector or its supply chain and lost their job since 2015, as well as any active workers at risk of being laid-off due to redundancy”, (EC, 2020f, p. 2) could apply for the fund⁷.

The Scottish government initiated the implementation of the fund while the SDS was charged with the program's execution. This program follows thus a top-down approach. The decision to start this program came quickly, such that there was no time for the SDS to erect structures and processes beforehand (Donoghue, 2019; EC, 2020f).

The SDS hired external parties to provide the training. The TTF team of SDS employees chose the applicants. Workers that did not get a funding offer could use the services of the

⁶ The main website of the SDS is <https://www.skillsdevelopmentscotland.co.uk/>.

⁷ For the ease of reading the redundant workers and the workers at risk of redundancy will be referred to as redundant workers only.

SDS for their job search. This included CV assistance, teaching how to network or supporting senior workers (EC, 2020f). Ultimately, two different programs could be applied for, the individual and the procured route as outlined in the following.

The individual route

Individual training of up to £4,000 (roughly €4,600) is offered to meet the applicant's preferences (Donoghue, 2019).

The procured route

Standard training is offered in employment shortage sectors (i.e. Railway engineering, specialist welding or wind turbine engineering) (EC, 2020f).

The SDS provides some short success stories of redundant workers that participated in the TTF program. The reports contain information about the participants and their future plans, the program's impact on their future career and their attitude towards the program. A table with the most important quotes can be found in Appendix 12.4.

The funds were only awarded to the training providers once the worker completed the training, carrying all the risk if a candidate did not complete the course (Donoghue, 2019; EC, 2020f). Donoghue indicated that there was a lack of discussions between the SDS and the providers due to this risk. However, this communication could have increased the relevance of the training (2019).

Lastly, there was an effort to monitor the success of the program. However, issues arose due to international working and the fact that data provision was voluntary, leading to 36% of the selected workers providing follow up (EC, 2020f).

Actors involved

Three different types of actors could be determined as relevant stakeholders in this program: the O&G task force, the SDS and the redundant workers.

The O&G Task Force. According to the EC the task force was set up by the Scottish government to, among others, tackle the increasing unemployment due to the closing of large parts of the sector's facilities. It was responsible for calling the SDS to come up with a program that combats unemployment. The task force does not seem to be actively involved in the program but to set some requirements.

SDS. A team with 12 members, selected by the SDS, were responsible for the training fund, including choosing the workers and giving career advice (Donoghue, 2019). These members were not solely dedicated to this program but continued working in their prior positions (EC, 2020f).

Redundant workers. A total of 108,00 workers became redundant from 2014 to 2017 and an unknown number of workers are threatened by redundancy (JTCS, 2019). To access the fund, the worker is required to prove that the desired training is relevant to future employment by contacting respective companies and must meet several criteria. A worker is only eligible if the date of redundancy lies between 2015 and 2017 or if an official proof of being threatened by redundancy can be shown (SDS, 2019). All requirements are detailed in the TTF's terms and conditions (SDS, 2019).

Besides, it was indicated that the selected workers "[...] did not always have realistic expectations about what their income levels would be after transferring to new fields", (EC, 2020f, p. 3).

Funding and resources

The TTF consisted of £12 million (approx. €14 million) spread over the project period of three years, 2016 – 2019 (EC, 2020f). This amount remained stable during the project duration. The administrative costs for the project were low as the team was not entirely dedicated to this program. In total, £178,000 were spent on administration costs (EC, 2020f).

The SDS estimated a need of £4,000 to support each selected worker. In the end, an average of roughly £2,400 was required, leading to an increase in workers that could be helped (Donoghue, 2019). Thus, instead of supporting 1000 workers per year, amounting to 3000, a total of 4272 could be helped. The SDS received a total of 10,500 applications. It is important to note that the fund included the cost of the training but no other expenses that come with the training, such as travel or housing costs (EC, 2020f).

Contextual factors

Scotland is the largest oil producer and the second-largest gas producer in the EU (Just Transition Commission Scotland [JTCS], 2019). Both lead to a significant amount of highly specialised infrastructure and industry around the UK continental Shelf.

Historical context

Scotland is historically highly dependent on O&G. Gas production began in 1966, the first oil was produced in 1975 (Jeliazkov, Morrison, & Evans, 2020). With the beginning of the O&G production, Scotland acquired wealth that peaked in the 1990s and then declined rapidly. Scotland is the largest oil producer and the second-largest gas producer in the EU. As such, exports are a primary source of revenue for the country. Within its own borders, 75% of all energy consumed stems from O&G, while it is even almost 100% for transport today (JTCS, 2019). Still, the O&G basins are maturing. Many fields will be decommissioned in the future that requires costs of £15 million within the UK in the next decade, according to the UKCS (JTCS, 2019).

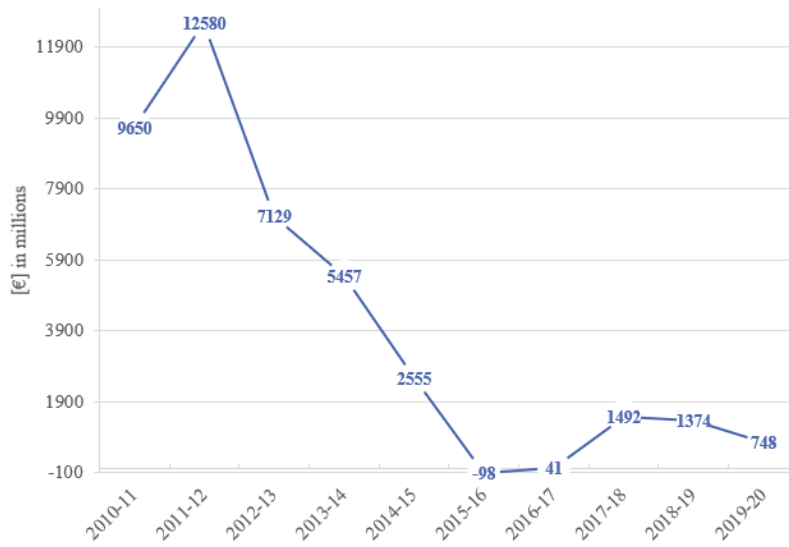
Politics

Scottish politics focuses on reducing inequality, increasing economic growth and becoming more sustainable (Scottish Government, 2015). In 2015, the Scottish government presented a new economic strategy that highlighted “increasing competitiveness and tackling inequality”, (Scottish Government, 2015, p. 7). At the same time, the government aims at reducing GHG emissions by 80% from 1990 levels until 2050 (Scottish Government, 2015). Still, the O&G sector is still seen as a significant economic component in the future (Scottish Government, 2016a).

Economy

The O&G industry differs significantly from the coal industry. The sector has been operating on a bust and boom cycle for decades due to the dramatic volatility in oil prices. Consequently, economic declines in the sector and resulting mass lay-off is a well-known phenomenon. Although Scotland has seen dramatic downturns in the O&G industry, it is a critical factor in its economic success, contributing 9% to the national GDP (JTCS, 2019). Currently, the O&G sector is declining. The reasons for this are threefold. According to Gibb, Maclennan, McNulty, and Comerford (2017), the oil production of Scottish O&G was decreasing from 1990 onwards with only a slight recovery in 2015. At the same time, there was an increase in extraction costs due to O&G field maturity.

Additionally, the O&G prices in Scotland are dependent on the world trading prices with are highly volatile (Gibb et al., 2017). All the factors lead to a decline in revenue and, as such, an increasing focus on efficiency improvement. Due to redundancy, a massive layoff of personnel was a consequence estimated to affect 108,000 workers in Scotland alone in 2014-2018 (JTCS, 2019). Figure 4 shows the resulting volatility of the North Sea Revenues from 2011 to 2020. One can see a drop in the revenues of the O&G sector from 2011-2012. In 2014, the global market had a significant downturn, leading to a fall in supply chain revenue of over 30% between 2014 and 2017 (JTCS, 2019). In 2016, a short period of rehabilitation followed until 2019. Then, the revenue declined again due to the COVID-19 pandemic.



Note. ^a2010-11 to 2014-2015 by Scottish Government (2016b), ^b2015-16 to 2019-2020 by Scottish Government (2020).

Figure 4: North Sea revenue of the UK from 2011 to 2020

Society

The society of Scotland is marked with inequality. The gap widened even more in the years of mass lay-off due to the downturn of oil prices (Scottish Government, 2018). Besides, unemployment, especially among youth, is a known issue in Scotland (Scottish Government, 2015). Besides, a survey conducted by Greenpeace, Friends of the Earth Scotland and Platform (2020) shows that many of the O&G workers fear a job loss and indicate precarious working conditions such as a hostile environment and pay reductions. Many are willing to leave the sector and retrain for other jobs. However, the report revealed that barriers exist, like the low trust in governmental support and untransferable job skills (Jeliazkov et al., 2020).



The Just Transition Fund

Part Two

A theoretical analysis

4 Project assessments

This chapter will deal with the assessment of the selected transition projects. It begins with assessing the Rhenish Region, then moves to the RE:START projects of the Karlovy Vary region and closes with the TTF of Scotland. Each assessment is based on the findings of the literature study (Section 3.2). Here, the same categories are used again for clarity, goals, approach, actors involved, and funding and resources. This chapter provides the baseline for the ethical analysis presented in the following chapter.

4.1 The Rhenish Region, Germany

The assessment of the ZRR revealed issues with stakeholder inclusion and the selection of projects. Still, the approach the ZRR chose is promising and can serve as an example for future projects in terms of the preventative approach taken and with regard to funding. The assessment will be detailed in the following.

Goals

The goal of restructuring the region to prevent unjust transitions is likely a product of the region's history. The closure of anthracite mines led to a massive increase in poverty and unemployment as the government failed to act timely. This preventative approach is undoubtedly a more just way to ensure a sustainable transition for everyone. The main pillars, the connection of stakeholders, and the implementation of locally created projects are promising approaches for a more inclusive decision-making process. This can ultimately lead to a higher quality outcome.

It needs to be stressed that the economic growth within this region seems to be in focus rather than achieving a sustainable future economy. An amplifier of this thinking is the tension between the coal phase-out plans within Europe and the region. Europe strives to step away from coal in 2030, but in NRW, coal mining has been extended to 2038. As a result, the sustainability ambition will likely have a lower value in decision-making processes than economic factors.

Approach

There is a general tension between the top-down approach of preventative restructuring and the grassroots approach they implement with conducting projects that local actors have submitted. In its funding eligibility requirements, the German government states that "structural change cannot be ordered from above"⁸, (Bundesministerium für Wirtschaft und Energie, 2017) and continues with outlining the requirements that deem a project desirable. Consequently, the change is highly constrained from orders from above, limiting the drive of initiatives and, therefore, hamper locally-driven change.

The tension between the two approaches reaches further into the project selections. The approach of inviting the public for ideas is generally acknowledged to increase public participation and acceptance. Consequently, it can increase public ownership and commitment and thus, increase the chance of sustainable success. However, the selection of the project is led with the top-down approach and proves to be undemocratic as they are

⁸ Original: „Strukturwandel kann nicht von oben angeordnet werden.“

chosen by some of the ZRR only. Additionally, the selection of projects is highly untransparent. While it is clear that each project needs to adhere to the governmental requirements, it is unclear how the projects are selected if they adhere to these, and an overflow of project submissions exist.

Actors involved

In the category actors, several issues that relate to participation issues could be identified. Most issues stem from the lack of inclusion of certain actors, as will become clear in the following.

Foremost, the appointment of the invited public is untransparent and seems somewhat arbitrary. Firstly, there is no transparent clarification on why, how, and by whom the committee representatives are selected. The case study refers to the selectors as “they” (European Commission, 2020h, p. 4), which has no direct reference to any actor or group or actors. Secondly, comparing the member lists of the executive board and the supervisory council, one can identify some oddities. While the lion’s share of the executive board representatives is also part of the supervisory council, others are only represented in either one. The complete lists of members and analysis can be found in Appendix 12.2. For example, the city of Mönchengladbach has recently been added to the executive board members but not to the supervisory council. Evidently, this disparity is known by the ZRR, as many of the parties are in the process of becoming voting supervisory council members.

A questionable decision was made when looking at the exclusion of specific stakeholders, especially the Köln. It seems that excluding the heterogeneous city only led to the ZRR becoming more actionable because difficult decisions were removed. However, more actionable does not mean higher quality decisions. The mere notion that it is beneficial to keep a decision-making unit homogeneous seems highly problematic. In fact, it implies that conflicting views are not desirable, although they are proven to enhance the quality of decisions due to improved knowledge and different opinions and ideas.

Besides, there are no representatives of the general civil public, self-organized initiatives such as *All Villages Stay* or environmental protection groups. The general civil public and initiatives are not given seats in the EB. Instead, their opinions can only be heard via named events and platforms. Ultimately no mechanism ensures its opinion carries any weight. Improvement in stakeholder inclusion can be detected in the environmental protection groups. Here, the NABU is in the process of gaining a vote in the supervisory council. Still, that one vote is almost negligible compared to the representatives of cities and regions (currently 12, 5 will be added) or interests of industry (currently 6, 1 will be added).

Funding and resources

The funding seems to be stable from the German government and the ERDF funding. The funding size has been determined beforehand, such that plans could be set up and followed. What is worrying is the monetary support of only one of the supervisory council members, the RWE. Recall that the RWE is one of the most powerful actors as it owns all coal mines in the regions and many others throughout Germany. Therefore, it is possible that the funding is used to create a hierarchy. However, there is no more detailed information on this topic. Thus, it is not certain whether this funding may be used as an instrument of power by the company. More research is needed to assess this situation.

4.2 Karlovy Vary, Czech Republic

The assessment of the RE:START project with Karlovy Vary as the focus leads to several issues that need ethical assessment. Detected issues are, among others, a lack of sustainability, missing inclusion of the civil public and volatile funding. The detected issues are outlined in the familiar categories goals, approach, actors involved, and funding and resources.

Goals

The goals of the RE:START project are to create an actionable strategy to ensure a just transition for regions such as Karlovy Vary. The communicated aims for the regional restructuring range from environmental revitalization over resocialization, improving infrastructure and many more. The program thus aims at tackling a vast range of topics that are affected in a low-carbon transition. Although it is correct that transition has far-reaching consequences, it seems that the ambitions for this project are set too high. Firstly, the RE:START project supports two more regions besides Karlovy Vary and secondly because the funding amount is limited. Consequently, it seems unlikely that all goals mentioned in the program can be addressed in a meaningful manner with this project. A more likely outcome is that funds and attention is spread too thinly, leading to low-quality results.

Additionally, the goal of a just transition may not be reached, due to the programs low ambitions of a transition. If one looks at the steps to be taken related to coal mining (Section 3.2.2, Goals), one can see that there are no active plans for phasing out or reducing coal mining activities to enhance sustainability. The measures taken are focusing on coal-mining related R&D and the strategic re-use of reclaimed areas. Only one action touches coal-mining activities more directly: the reduction of coal-based heating within municipalities. This could lead to lower demand and, thus, lower coal production. However, within the Czech Republic, only 8.8% of all homes use coal for heating purposes (Sivek et al., 2017). Therefore, it is rather unlikely that a reduction in coal-based heating will lead to a significant decrease in coal demand. Besides, the protected coal-mining areas shall be re-assessed. Looking at the Czech Republic's political past, one can see that the limit has already been loosened once. It may be loosened again. In sum, the goal of transitioning towards a more sustainable future seems to be highly unambitious in terms of reducing coal mining.

Approach

The top-down governmental structure promises to support all three affected regions while acknowledging their unique strengths and weaknesses. Issues due to the top-down approach and the tension between a one-fits-all and uniquely tailored solutions could be detected.

Firstly, a top-down approach may lead to the misrecognition of problems. Looking at the Czech Republic's past, one can see that traditionally large transition projects such as democratization have been conducted with top-down approaches. This transition led to a significant rise in unemployment and poverty in Karlovy Vary and, consequently, a lack of trust in the government and low participation. Therefore, it is surprising that the same approach has been chosen again. Especially the fact that there are other projects such as the ZRR in Germany that tackle similar issues with a more inclusive approach and online EC resources that stress the importance of bottom-up initiatives, the approach at hand seems rather retrogressive. A possible explanation that can be given is the lack of knowledge of how to include stakeholders that do not want to be included. This additional factor adds to the complexity of this process which is not present in the German case.

Secondly, there is a tension between creating an overall re-structuring strategy for the entire project and acknowledging the regions' specific characteristics. Who and on what basis is decided what measures can be carried out as a 'one-fits-all' solution and what needs unique addressing? Assessing this topic vastly exceeds the scope of this thesis. However, one must be able to draw the line between general measures and unique location-dependent ones in large-scale transitions. Further research could give more insights into this matter.

Actors involved

It became evident that the project enabling factor was political interest rather than the interest of society. This can be confirmed by looking at the list of consulted stakeholders in AP1 and AP2 (see Appendix 12.3). One can see that the majority of stakeholders are governmental representatives. The largest share takes on the national representatives from several ministries. Experts and stakeholders with power are thus involved and relied on.

The RE:START project claims that all local stakeholders and the government support the program contrasting a key challenge named by the EC, namely lacking civil participation. In an interview, Deputy Government Plenipotentiary Gabriela Nekolová admits that input from the public via, i.e. the website is marginal and that there is not enough capacity for handling participative communication and "[...] be out on the streets all the time getting everyone's opinions about everything", (Just Transition, 2018). The wording Nekolová uses makes it clear that citizen participation is not acknowledged as an integral part of a just transition. The understanding seems to be that only once the program is delivering results and is stabilized they "[...] can earn the people's trust and make the participatory process much more open", (Just Transition, 2018). Thus, the issue of civil participation is dismissed as a point to consider in the future.

Funding and resources

In this category, issues could be detected in terms of funding stability and funding sufficiency. Both will be elaborated separately.

Funding stability. The EC states that the RE:START project is backed by a reliable financial framework (RE:START, 2020). Looking at the graphs in Figure 5, however, two things become evident. Firstly, the funding amount is not reliable as claimed. The revised APs show a dramatic variability in the amount and plans for spending it⁹. Besides, when investigating the funding amount used by the EC, it turns out that it is nowhere else to be found. This could be explained by the time of writing, which was in 2020 where no AP was published. A reason for this could be the COVID-19 pandemic occupying resources for revising the AP. This lack of AP in 2020 can also be an indicator of its perceived low importance in the government. This can be backed with the state allocated state budget on the right. Where at first, in 2018, almost €6.55 billion was dedicated to the cause, it became practically negligible in 2021 with €0.05 billion with significant fluctuations in between. It seems that if other issues seem more important, resources will be cut. Such unreliability is undoubtedly worrying and cannot lead to long-term planning and a just transition. Secondly, when looking at the resource planning on the left, the planned amounts are only indicated for the following

⁹ Please note that in the graph on the left the even amounts spent in the later years is taken as an average from a generally given sum. For example, AP 2 allocated €6,7 billion for the years 2020-2030. For visualization purposes, I assumed that in the consecutive 11 years, the same amount will be spent which is highly idealized.

year. It seems thus that the planning is done on a short-term basis with major disruptions between the plans. However, a holistic transition needs to be planned for the long-term with short-term flexibility, to ensure sustainable success.

Table 9: Mining workers in the RE:START regions

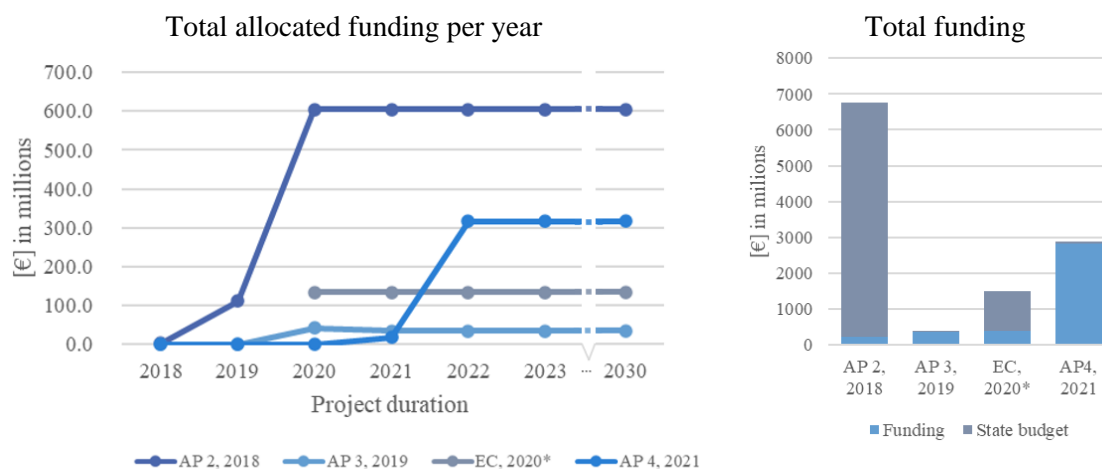
Region	Inhabitants	Workers	Share
Ústecký	821,080.00	11,556	1.41%
Karlovy Vary	295,686.00	7,031	2.38%
Moravskoslezský	1,205,886.00	17,442	1.45%
Total number of workers		36,029	

Note. Data retrieved from 'Just Transition in Czech Republic' by D. Heuer, 2018, p. 5-6. Copyright 2021 by Centre for Transport and Energy.

Funding sufficiency. The funding is likely to be too low for the ambition of the project. Consequently, the EC indicated worry that the regions' funding is threatened by the other supported regions. Parochial thinking in terms of capturing sufficient funding is thus a core issue here.

With only a few rough calculations one can see the amount is not nearly enough to ensure a just transition. Table 9 shows the estimated number of coal workers with a total amount of 36,029 for all supported regions combined (Heuer, 2018). Storm (2020) estimates that Eastern European workers would require €52,500 to ensure a just transition. Thus, if all coal mining workers lost their jobs, a total of almost €1,9 billion would need to be spent on compensation. Of course, not all of the jobs will be reduced until 2030, especially when looking at the lacking coal-phase out plan of the country. According to Storm (2020), the International Labor Organization (ILO) expects a reduction of lignite jobs of 19% to meet the goal of limiting climate change to 2°C. He assumes a more conservative amount of 15%, which I will use in this model calculation. As a result, almost €500 million will need to be spent on worker compensation. This amounts to a sixth of the entire RE:START budget of 2021. Of course, with the restructuring of the regions, new jobs will be generated, but this action takes time. The destruction likely foregoes the creation by many years, leaving a gap of unemployment.

Variability of the funding per annually revised action plan



Note. Find the data sources in Table 8.

Figure 5: Funding amounts of the adapted RE:START action plans.

4.3 TTF, Scotland

The assessment of the TTF revealed some positive outcomes but also some significant issues. The fund seemed to have a positive impact on the supported workers emotionally but some issues related to the eligibility for receiving this fund.

Goals

The TTF was put in place to address unemployment in the O&G sector and employment gaps in others by supporting workers with practical training. Both will be assessed in the following.

On a small scale, the TTF seems to be largely successful in addressing unemployment. Many of the funded workers found a new employer and indicated to be satisfied (see Appendix 12.4). From an implementation and execution point of view, this project's lessons may be a good starting point for future training programs. Besides, the goal of re-employing at least 1,000 redundant workers per year were achieved. With 89% of the 4,272 helped workers, a total of 3,802 workers found a job within the three years of project conduction.

Still, a large part of rehired workers stayed in the O&G industry (47%). As such, it is questionable whether employment gaps have actually been closed if only roughly 2,000 employees moved to other sectors. Another question that arises when looking at the re-employment within the O&G sector is whether the TTF promotes a sustainable transition. With the high number of workers remaining in a declining industry, I believe that the risk is high that the re-employed will again become obsolete in time. Keeping redundant workers in the same sector does not seem sustainable for reducing unemployment.

Approach

Several issues can be detected in terms of the training setup and monitoring, but positive outcomes can also be seen for the selected applicants. Each will be detailed below.

This project was initiated by the government with the top-down approach. It was not possible to determine how the project was led and whether there were any participatory processes involved due to a lack of information. Whether this information lack is due to the shut-down of the primary homepage or general untransparent operations is unclear. As a result, an analysis cannot be conducted without speculating.

The training providers were left with the risk of candidates not completing a course and prove to hamper collaboration between the training providers and the SDS. This can have serious consequences. If there is no collaboration on the training content, the relevance and adequacy are also not assessed. The training providers' needs and the redundant workers may stand in tension. The training providers need security that the training will be conducted successfully to receive the funds of the SDS. This problem can give incentives to oversimplify the courses to make sure all workers complete them. As such, the workers will not get adequate education and will thus not be prepared for future jobs. Consequently, the training for re-skilling may merely provide empty certificates that decorate a CV.

Besides, it became evident that no long-term indicators prove the success of the training program. The numbers and success rates given are short-term outcomes with no indicators for sustainable success. Due to a lack of monitoring, future issues cannot be detected and as such, possible quality improvements will be omitted. To enhance the quality of programs, a strict monitoring process should be implemented for program evaluation.

Although the TTF has some issues, the assessment of the available interviews cut-outs proved overwhelmingly positive. This may be so for two reasons. Firstly, it needs to be noted that the SDS uses the interviews as promotional material on their website. Thus, there is a great likelihood that negative interviews were omitted. Secondly, the service the TTF provides on the individual level is adequate. Although the first argument shows that the data needs to be handled with care, the second argument may still be valid. The outcome matches with the satisfaction rate of 90%, as given by the EC (2020f) case study. Therefore, the personal support that the accepted workers received seem helpful and adequate.

Actors involved

Recall that the main actors involved in the TTF were the O&G task force, the SDS and the redundant workers.

The task force does not seem to be actively involved in the program but to set some requirements. Due to a lack of information on this task force, no further assessment could be made. Also, for the involvement of the SDS, it needs to be noted that there is an information gap on how the team of the SDS has been assembled and who was part of it. Due to this lack of transparency, an assessment of its adequacy could not be conducted. Further research could clarify this.

Some eligibility criteria for redundant workers seem to be set arbitrarily. On the one hand, the eligibility for being admitted to the program is increased by including threatened workers, but on the other hand, it is reduced by making only redundant workers from 2015 onwards eligible. Why this year is chosen is unclear because the oil crisis began in 2014. There is no explanation for what makes the redundant workers of 2014 and before not eligible. Excluding worker that lost their jobs in that year seems thus highly questionable.

Funding and resources

The funding has been clear and transparent from the start of the project. In the following, funding stability, sufficiency and adequacy are addressed separately.

Funding stability. The funding stability enabled the SDS to set up and conduct the TTF successfully. The funding amount of the entire period was set beforehand and could thus be used to carefully structure the program. The transparency and stability of the fund can certainly be taken as an example for future projects.

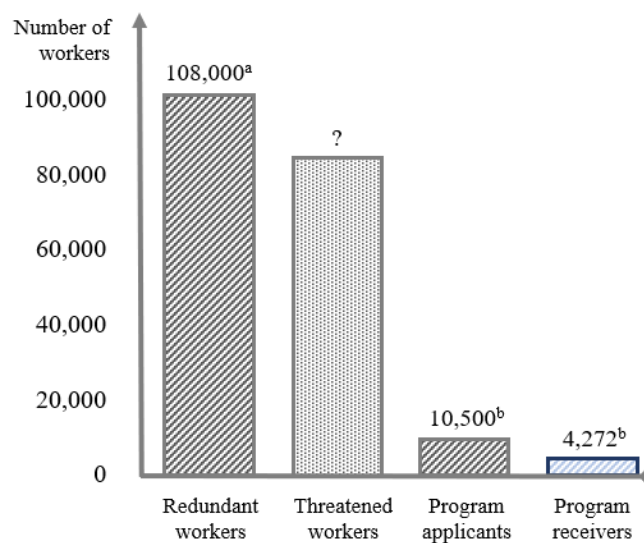
Funding sufficiency. In short, the funding was more than sufficient for the ambitions of the TTF. It is favourable that more workers were supported than previously estimated. It shows that the planning was conducted carefully and with expertise. As such, the conduction of the project can be taken as an example for future re-employment supporting projects.

Funding adequacy. When looking at the total number of workers provided training, it is largely insufficient to ensure a just transition as the total number of redundant workers exceeds this dramatically. To put the program into perspective, the number of laid-off workers between 2014 and 2018 is about 108,000 (JTCS, 2019). This is roughly tenfold of the ones applied for the program, 10,500, and more than twentyfold than the workers supported with the program. A visual comparison between the redundant workers, the program applicants and the program receivers can be seen in Figure 6.

When looking at the money spent on one redundant worker, I fear that such a program is not viable on a larger scale. Using the costs per worker, £2,400 and the number of redundant workers between 2014 and 2018, the cost of training would amount to £25,92 million

(roughly €30,31 million). This amount only shows only a fracture of the costs as the program can also be used by workers threatened by redundancy. This can significantly increase the number of eligible people and thus, increases the insufficiency of the program. However, the number of workers to be considered threatened are kept in the dark. More research is needed to identify the estimated number of workers that are threatened by redundancy.

Of course, it is likely that not all workers desire to partake in such a program. Still, this program is not viable on a large scale due to the massive expenses. Besides the costs per worker, a countrywide program would require much more administration, staff and training providers. The administration staff costs were relatively low in this case because the SDS staff aided the workers next to other duties. With a massive increase in scale, such an approach is not likely to be feasible. This would drastically increase the administrative costs. Determining the rise in cost due to up-scaling is out of the scope of this thesis but is certainly interesting to consider.



Note. ^aJust Transition Commission Scotland (2019), ^bEuropean Commission (2020f)

Figure 6: Comparison of redundant and threatened workers vs program admissions

Lastly, the TTP only covered training costs, not other expenses. This raises questions of whether such a fund is adequate for all redundant workers. Of course, there were possibilities to receive support for these from the UK Department of Work and Pensions, and some workers received support from their former employers. But the split of applying for aid with two departments increases the risk of not receiving one or the other. This extra administrative step increases uncertainty and, as such, builds an additional barrier for more impoverished workers to apply.

5 Considerations on justice

This chapter summarizes the findings and draws some comparisons and links between them. It is structured with the developed transition justice framework as found in Chapter 2.4. Table 10 shows a summary of the issues found in Chapter 4.

Table 10: Summarized assessment findings of the ICRT projects.

	ZRR	RE:START	TTF
Goals	Restructuring the region by connecting stakeholders and implementing transition projects	Restructuring three regions by implementing government-led projects	Reducing unemployment and filling employment gaps by providing training grants to redundant workers
Goal issues	Focus on many topics, especially on economic growth and social sustainability rather than on ecological considerations	Low decarbonization ambitions Many goals for limited funding	Doubtful whether employment gaps were filled due to project size Same sector reemployment
Approach	Top-down initiation with bottom-up project ideas	Top-down with expert ideas	Top-down with expert ideas
Approach issues	Project selection untransparent Approach tension	Top-down can lead to issue misrecognition	Top-down can lead to issue misrecognition Training providers are sole risk carriers Lack of communication
Actors	Focus on the inclusion of all relevant stakeholders	Regional experts and persons in power are included	Focus on redundant workers
Actors issues	The public has no vote Some stakeholders are knowingly excluded	Low civil public involvement	Questionable eligibility criteria
Funding	DE and EU funding	CZ and EU funding	SC funding
Funding issues	RWE may use donations to exert influence on the project	Insufficient, highly volatile funds from CZ	Limited project size Limited funding coverage

Distribution justice

For all three projects, it is evident that the most common injustice is *distributive*. The issues that have been found the funding stability and the funding distribution approach. Besides, problems of chosen eligibility criteria and intergenerational justice can be detected.

Funding stability was detected to be an issue of the RE:START project and could also be detected for the JTF. It is impossible to justice distribute funding over time if it is not certain of its amount. Consequently, thorough planning of the actions facilitated by the use of the funds is impossible. The recurrence of this issue shows the general scarcity of funds and

indicates the given importance of the fund is relatively low. In sum, a large fluctuation of the funding gives rise to distributions justice issues.

Limited funds are available for each project. Requiring an application for support is the solution of the EC to divide the scarce resources. For the Rhenish region, the civil public can apply for funding by submitting transition project ideas; for the RE:START project, each region can submit ideas to the government, and for Scotland, it is the workers that can apply for the training fund. Together with the knowledge that there is a limited amount of funding, the application process leads to the rise of competition between the parties. The competitors of Germany and the Czech Republic were the affected (sub)regions, and in Scotland, the competition about the funds raged between the redundant workers. The JTF shows a comparable approach to funding distribution by requiring an application from the nations for its most affected regions. Consequently, similar issues likely arise.

As a result, parochial thinking is deeply embedded in the distribution process. Each party is incentivized to capture as many resources as possible to ensure sufficient funding from an insufficient fund. Injustices inevitably occur in such a setup. When looking at regional distributions, capturing a large funding amount for one region can lead to distribution injustice in terms of both space and time. Inequities in terms of space because an increase in funding for one region leaves it better off while the other loses out. In terms of time, the rise in financing and the resulting economic growth may lead to a snowball effect. A wealthier region may be more attractive and thus, leads to increasing investment by other businesses. Therefore, the region may be better off in the future as well, while other regions still lose out. Secondly, capabilities play an essential role in capturing resources. Often, weak regions lack the capacity to draw up funding applications that can compete with parties with more resources and more capabilities, to begin with.

The approach taken by all projects to overcome issues such as the ones named above is the setup of eligibility criteria. However, these criteria can lead to inappropriate eligibility if set too narrowly or too broadly. For the TTF of Scotland, a too strictly set eligibility criterion can be found. Workers are only deemed funding eligible if they are made redundant between 2015 and 2017 (the year of project implementation start) or if they can prove being threatened by redundancy. The crisis began, however, in 2014. Workers that were laid off at the beginning of the crisis are thus treated unjustly. An example of criteria that are set too broadly can be found in Karlovy Vary. Here, the lack of strict sustainability criteria leads to actions that are not desirable for an energy transition such as the re-assessment of the protected coal areas for future use.

The extended use of coal by expanding mining areas ultimately leads to more environmental degradation, pollution and climate change in the future. Consequently, intergenerational injustices can be identified. Also for the ZRR, an evident lack of sustainability ambitions can be found as the strengthening of the economy took a much more critical role than sustainability considerations. Here it needs to be noted that the time constraints hindered the evaluation of the conducted projects. Doing so could provide better insights into the sustainability ambitions of the projects.

Procedural justice

Procedural justice issues could be found in terms of inadequate participation facilitation. Here it should be noted that the TTF project cannot be assessed for this type of justice. The

reason for this is the lack of information on how the project was structured and conducted. More research is needed to assess this type of justice.

The restructuring projects of the ZRR and Karlovy Vary show issues on participation and stakeholder inclusion. Similar issues of stakeholder participation and inclusion have been detected in the JTF as no clear processes are found in the current proposals making this issue relevant for further investigation. As the topic of participation is complex, each project will be assessed separately, then an overall comparison will lead to the forming of requirements.

The ZRR agency actively promotes itself by being inclusive to all stakeholders that want to participate but does not live up to its promise. Several issues arise regarding the lack of voting mandate for the civil public, stakeholder setup, and hierarchy. The investigation revealed problems with conditions (1), (2), (3) and (5) that are proposed by Pesch et al. (2020)¹⁰. The issues found on each condition will be outlined below. It needs to be noted that this list may not be comprehensive. The internal processes of the committees' work are largely undisclosed. Therefore, additional issues may simply not be uncovered but still present.

Firstly, it became evident that the civil public has no voting mandate. Participation is done through platforms or events without ensuring that the outcome carries any weight. This issue touches components (1) and (3) that ensure just participation. For the former, the civil is not seen as an equal to other stakeholders as they are not granted decisive power. A hierarchy is clearly present. For the latter, the lack of voting rights also leads to a loss of legitimacy of the civil public. There is thus no reason for other stakeholders to take its opinion into account. Consequently, civil public participation seems to be merely a form of window dressing.

Secondly, when looking at the arbitrary setup of the different boards, one can detect that measures to satisfy condition (2) are taken, their nature is flawed. The presence and absence of some actors in either one of the boards make no sense and raises the question of whether there is a process in place that validates the choices.

Lastly, condition (5) is not met due to the denial of diversity. The case of excluding the city of Köln shows that diversity is not honoured within this process. Instead, it seems that homogeneity and the resulting reduction of complexity of the decision-making process have priority over higher quality outcomes that can be achieved by including diverse actors. It is thus the project initiator, the ZRR, that does not honour diversity and plurality.

For the Karlovy Vary Region and the RE:START project as a whole, participation justice is of primary concern as well. Again, using the conditions are given by Pesch et al. (2020), several issues are detected. The affected conditions are (1), (3), and (4). It must be noted that conditions (2) and (5) could not be assessed due to a lack of information on this part. Condition (2) required a thorough analysis of all stakeholders included, which vastly exceeded the scope of the thesis due to language barriers and time constraints. For condition (5) no indicators on how the process was initiated have been found. It is possible that more detailed project research can lead to additional findings that help assess this condition.

¹⁰ Just participation conditions: (1) A symmetrical selection of actors; (2) A case-specific approach; (3) The need for political leverage; (4) A level-playing field; (5) An ex ante agreement on the rules of the game.

For conditions (1) and (3) the same issues found in the ZRR project can be detected. Again, public opinion is only included in some surveys or meetings, but they are not directly included in the decision-making process. The issue here, however, reaches further. There seems to be a tension between promoting and discouraging public participation. Looking at the interview with the Deputy Government Plenipotentiary, this tension becomes clear. Here, she firstly claims that public participation is crucial for understanding local issues but admits later that the received opinions have a marginal impact on the actual decision making because the views are not of high enough quality. As a result, condition (4) can be seen as violated subtly. One can indeed say that actors are able to voice their concerns, irrespective of their interests and frames, but at the same time, these are regarded as unhelpful if they do not meet the standards set by the project initiators.

Both projects seem to simplify the decision-making process and display untransparent stakeholder inclusion processes. As a result, procedural justice is not ensured here. Both projects were awarded funding, and as such, the requirement of stakeholder inclusion was deemed met by the EC. The conclusion that one can draw is that the requirements set by the EC do not affect practical stakeholder inclusion. Procedural justice is thus not adequately ensured in the processes set up by the EC.

Restorative justice

Restorative justice has been limited to restoring harm done to individuals due to scope constraints. The JTF claims to support redundant workers and to leave no one behind but critics noted that clear processes for such endeavours are missing. The characteristics of past projects may reveal important learning points or propagated justice issues.

The ZRR focuses on re-structuring the regions via projects to strengthen the economy. The focus was on preventing damage rather than restoring harm done. As a result, no indicators for restorative justice issues were detected. The RE:START and especially the TTF project have a focus on restorative justice which will be investigated separately.

The RE:START program takes steps to increase the region's social stability, improve living standards, and reduce unemployment and social inequality. The APs show a high number of measures taken, but there is a lack of documented results. Besides, the limited time and the already mentioned language barrier made it impossible to assess the adequacy of all measures taken in terms of restorative justice. However, it is evident that this type of justice is the focus of the project, which is a big step towards an increase in transition justice.

Consequently, restorative justice is primarily an issue found in the TTF project as it directly deals with redundant individuals. The assessment is two familiar parts: restorative material and mental justice.

In terms of material restorative justice, a challenge pointed out by the EC's case study were high worker expectations and of administrative nature. For the former, the challenge is described as workers "[...] did not always have realistic expectations about what their income levels would be after transferring to new fields" (EC, 2020f, p. 3). The wording of the challenge seems to indicate that redundant workers should be happy with the opportunity of working at all. This is clearly an issue of restorative justice. Providing a job that is paying significantly less does not restore the harm done to an individual when their job was taken.

Still, the TTF seems to have a positive impact on restorative mental justice. It becomes evident that the TTF often has a positive effect on the redundant workers, increasing

restorative justice as they perceive the procedure as more just. The approach of the TTF thus seems to be successful.

Nevertheless, the workers who applied for the fund unsuccessfully may perceive to be treated even more unfairly as there is a possibility of enhancing future career paths, but they are not seen as eligible. The issue is somewhat softened because all the redundant workers can count on career advice and counselling services. Nevertheless, there is a lack of information about workers that were not approved for the grant. This issue clearly needs more research to draw any concrete conclusions on possible negative impacts for these workers.

Recognition justice

In all projects, some parties were misrecognized, which shows that there needs to be increased attention towards this topic. The extensiveness of the participatory issues hints that there are deeper issues regarding recognition. These recognition issues are often more challenging to detect as misrecognized parties are often also invisible. As a result, this list of recognition injustices is certainly incomprehensive. However, for the ZRR and TTF projects, misrecognition can be identified.

The issue of the ZRR is particularly interesting as it seems that both fronts, pro and contra, an energy transition and change, are misrecognized. These streams are represented by civil initiatives and coal-mining workers. The civil initiatives feel misrecognized by the lack of sustainability ambitions of the region that leads to deforestation and re-location of villages. At the same time, the coal-mine workers feel misrecognized as they are deviled for the work they carry out. Clearly, both parties have a stake in this transition and as such must be recognized accordingly. But if one looks closer, this is only partly the case as civil initiatives, exemplified by *all villages stay*, are not included in the decision-making process of the ZRR, although it is visible for years. For the coal-mine workers, however, representatives can be found. There is an imbalance between the recognition of the importance of societal desires.

For the RE:START project, identifying misrecognition issues is complex. Due to the lack of general civil participation, as mentioned above, cases of misrecognition are unavoidable. The denunciation of the civil public's opinions by a high ranked politician is a dramatic act of open misrecognition. The statements she made clearly show that the civil public is not at eye level with the government or experts invited into the decision-making process. As a result, the civil public likely feels discouraged and harmed in their self-esteem. It follows that civil initiatives and movements are likely to be denounced and misrecognized as well. No activist groups have been mentioned in any of the used literature. This is surprising considering the emotional loading and the consequences that a transition of such scale can have on the region. However, due to time pressure, a thorough analysis of local activist groups or conflicts of Karlovy Vary could not be conducted. More research on this topic is needed to see whether conflicts are present in the region.

If looking at the earlier introduced eligibility criteria of the TTF, one can see a mismatch with the downturn of the O&G industry and the workers deemed eligible. Workers that became redundant before 2015 are excluded from the program, although the crisis already began in 2014. Any worker that lost their jobs before 2015 is thus deemed less equal, which may harm self-esteem and leads to injustice in terms of recognition. The lack of reason behind the cut in 2015 is unclear, which may amplify the feeling of being mistreated by the perceived arbitrariness.

6 Requirement synthesis

This chapter will provide a summary of the found issues and the corresponding requirements that should be met to increase justice per type. It serves as a base to be compared to the JTF in the following chapter.

The assessment of the three projects revealed several issues that arose, some of them could be found in all of them, and some were unique. While all three projects classify as transition projects, the Rhenish Region and Karlovy Vary projects aimed to restructure the region and formulate a strategy. The TTF was a means of enhancing justice for the workers that became or will become redundant. This finding has an important implication; the different goals lead to different actions being in the program's focus and other issues. Consequently, not all projects lent themselves for all justice type assessments. Still, all four types of justice show issues and many of these problems are recurring in several projects, as seen in the overview of Table 11.

Firstly, it became evident that several distribution justice issues need to be addressed to increase transition justice. A stable funding structure and a sufficient funding amount are crucial to avoid parochial thinking and some current regions or individuals losing out. Besides, the eligibility criteria posed often seem to be flawed and set untransparently leading to distribution issues. Lastly, intergenerational justice is often of concern as the distribution of benefits and ills seem to be much more beneficial towards the present generation than the future ones. The lack of sustainability ambitions leads to an increased burden of climate change and pollution for future generations, which is clearly unjust.

Table 11: Summary – Types of injustice found per project and resulting requirements

#	Justice type	ZRR	RE: START	TFF	Requirements
(1)	Distribution	x	x	x	Ensure a stable fund structure and sufficient funding Eligibility criteria need to be adequate Ensure intergenerational justice
(2)	Procedural	x	x		Ensure appropriate stakeholder participation, especially the civil public
(3)	Restorative			x	Support redundant and threatened workers appropriately materially and mentally
(4)	Recognition	x	x	x	Acknowledge misrecognition by exclusion and by mistreatment

Secondly, stakeholder participation is an issue for all projects. To increase procedural justice for future programs and projects, appropriate stakeholder participation needs to be ensured. This means that all stakeholders need to be treated equally and be included in the decision-making process. Especially the civil public needs to gain political legitimacy, which is lacking in the restructuring projects ZRR and RE:START. Stakeholder inclusion needs to be thoroughly implemented in practice, rather than on paper only, as it currently seems to be the case for EU projects.

Thirdly, workers that face redundancy or are threatened by it due to the energy transition need to be supported adequately from a mental and material perspective. From a material standpoint, it needs to be ensured that they are sufficiently compensated for their job loss. Their follow-up job must be equal in salary or has the perspective of reaching this pay in the foreseeable future. From a mental standpoint, the support needs to ensure that the workers perceive their treatment as fair and helpful. The TTF provided a successful small-scale example of management and structuring from which future projects can learn.

Lastly, all relevant stakeholders need to be recognized. Here, both recognition types need to be included, the issue of harming actors by their exclusion or by mistreating them, although they are part of the decision-making process. For the former, there needs to be a thorough stakeholder evaluation per project that exceeds the identification of traditional stakeholders by broadening the focus. An example is the identification of local conflicts and initiatives and their interests. For the latter, the experiences of the involved stakeholders need to be monitored and analysed. With this, issues can be identified, and solutions developed.

A total of six requirements have been developed by analysing past conducted transition projects:

- Ensure a stable fund structure and sufficient funding to prevent parochial thinking and competition.
- Develop adequate eligibility criteria. This is particularly important to reach the desired just transition while ensuring that all relevant stakeholders are included.
- Ensure intergenerational justice by increasing sustainability ambitions.
- Ensure appropriate stakeholder participation with a heightened focus on civil public participation to prevent distribution justice and increase acceptance.
- Support redundant and threatened workers appropriately from a material and mental perspective.
- Acknowledge past misrecognition by exclusion or mistreatment and increase sensitivity towards this issue.

The requirements can now be operationalized to assess whether the JTF increases justice for the most affected regions in the EU.



The Just Transition Fund

Part Three

A justice assessment

7 JTF assessment based on developed requirements

With the findings of Chapters 5 and 6, the baseline for the assessment of whether the JTF increases transition justice has been set. The developed requirements can now be compared to the JTF’s issues. The previously developed JT framework, as seen in Section 2.4, will be applied to structure the findings and visualize the underlying justice issues. Table 12 summarises the issues detected in the JTF setup and connects these with the requirements.

Table 12: Summary – Justice issues of the JTF

#	Justice type	Issue summary	Matching requirements
(1)	Distribution	Funding upon request and criticised eligibility factors	Eligibility criteria need to be adequate
		Inadequate funding and highly volatile funding amount	Ensure a stable fund structure and sufficient funding
		Funding supports polluters with lacking environmental ambitions	Ensure intergenerational justice
(2)	Procedural	Unpersuasive stakeholder inclusion process	Ensure adequate stakeholder participation, especially the civil public
(3)	Restorative	Process for redundancy remedy and protection mechanisms are missing	Support redundant and threatened workers appropriately materially and mentally
(4)	Recognition	Possible stakeholder misrecognition	Acknowledge misrecognition by exclusion and by mistreatment

Distributional justice

In Section 3.1.2, it became evident that there is insufficient funding available for the JTF. The requirement of providing an adequate funding amount is, therefore, not met. This is undoubtedly a recurring issue when looking at the insufficiency of Karlovy Vary to support all three regions in all ambitions and the overall funding adequacy of the TTF in Scotland to support all redundant workers. This issue does not come as a surprise as funding will always be scarce. Because of this scarcity, a just distribution must be a priority to ensure a just transition, especially focusing on the worst off.

What is more surprising is that dramatic volatility of the ensured funding can also be detected for the JTF. This insecurity is worrying as other past projects, the ZRR and the TTF, were more stable in this sense. An increase of justice is thus not ensured on this aspect.

Next to the fund’s volatility, the implemented eligibility criteria are also a reason of concern, which seems to be a recurring topic of transition projects. As the eligibility criteria are the basis of who will receive support and who will not, it is crucial for them to be just. Currently, however, some criteria are ill-suited to ensure distributional justice. The NUTS2 data does not guarantee that all most affected regions are identified.

Lastly, intergenerational justice issues have been present in the ICRT program, namely the restructuring projects ZRR and the RE:START project of Karlovy Vary. For both, the economic prosperity of the current generation carried much more weight than sustainability considerations that benefit future generations. The trade-off between sustainability and

economic growth lead to unambitious re-structuring plans. As a result, intergenerational justice was not ensured. For the JTF, the same concerns can be found when looking again at one of the criticized eligibility criteria. District heating with fossil-based gas is seen as a project worth funding, although the transition aims as moving away from fossil-based energy carriers. Again, it seems that current economic factors play a more critical role than the resulting potential impacts on future generations. As a result, intergenerational justice is not ensured.

Procedural justice

The ZRR and RE:START restructuring projects were dependent on EU funding granted once specific requirements and eligibility criteria were met. The JTF applies a similar process for determining funding eligibility. This finding essentially shows that the JTF adopts the same conventional approach to solve the problems of transitional justice as seen in the ICRT projects. Applying the practically same process implies that the issues of this traditional process will be repeated. It is precisely the eligibility requirements responsible for many of the detected injustices of the ICRT projects. As such, it seems that the EC did not recognize this crucial link between its established processes and justice issues.

Consequently, the explicit issue of stakeholder inclusion is repeated in the JTF. In fact, it lacked entirely in the first draw. This is highly surprising as stakeholder inclusion is heavily promoted by the EC. The EC improved on this issue with their provisional proposal in December. Here, Article 6 of the CPR 2021-2027 has been included as a requirement of the TJTP. The acknowledgement that stakeholder inclusion was omitted is undoubtedly an important step to increase justice. However, it became clear that the CPR of 2014-2020 did not ensure adequate stakeholder participation processes. When comparing the CPR 2021-2027 to its predecessor, one can see that this article does not provide much new content when comparing to the CPR 2014-2020. Thus, although some stakeholder groups have been added, such as representatives for fundamental rights and rights of persons with disabilities, it is questionable whether this article's inclusion would make a difference if its content is not enforced. It is unlikely that there will be a better implementation without a fundamental change of the funding requirements that go further than enforcing to draw up a list of included stakeholders.

Restorative justice

Restorative justice has been restricted to restoring the harm done to workers that become redundant. The TTF of Scotland provides an example attempt to tackle this issue. Although the Scottish project had shortcomings, it was a pragmatic first step in terms of restorative justice. In contrast, the JTF offers a step back in terms of restorative justice. Although supporting redundant workers is said to one of the JTF's core missions, a process that ensures this support is missing. The lack of a support guarantee in the form of a written process indicates that restorative justice is fragile.

Recognition justice

The assessment of recognition justice is complex as the JTF is only in its infancy. As a result, no experiences and social conflicts can be identified yet. Nevertheless, the setup of the stakeholder inclusion process can be analysed on potential issues. The primary stakeholder inclusion information given for the JTF is the CPR requirement. In the CPR article, a possible reason for recurring misrecognition may be found in its wording. Here, stakeholder inclusion is connected to the word "competent". The connection of competency and stakeholders is

repeatedly used in both CPR legislations. It seems stakeholders must be deemed competent before they may be involved in programmes. The same issue was detected in the RE:START project where the stakeholders mainly seemed to be selected based on competency. The recurrence of this problem is worrisome for procedural justice as, often, excluded stakeholders are excluded for the same reason: the lack of acknowledged competency. The outcomes are twofold. Firstly, stakeholders who do not see themselves as competent are discouraged from participating in decision-making processes. Secondly, stakeholders that see themselves as capable may not recognize others that they see as less so. Misrecognition is thus deeply embedded in the stakeholder participation requirements and the minds of the decision-makers.

8 Conclusion and recommendations

This study aimed to determine whether the JTF enhances transition justice compared to past conducted projects. This aim has clearly been achieved. It was possible to assess the JTF and selected ICRT projects and operationalize the findings such that they could be compared to one another. A justice assessment was facilitated by using an adapted form of the JT framework. As critics indicated, the JTF and the ICRT indeed showed significant overlapping issues.

Both programs base their support provision upon meeting eligibility criteria by assessing the application of the countries or their respective regions. It became evident that these eligibility criteria contain flaws leading to distribution, procedural and recognition justice issues. Together with the scarcity and volatility of the fund size, competition and parochial thinking arise. Within the ICRT, the competitors of the ZRR and the RE:START projects were the affected (sub)regions. In the TTF project, the competition about the funds raged between the redundant workers.

The interplay of both issues leads to the desire to reach one goal: receiving as many funds as possible. It follows that the eligibility criteria seem to be seen as obstacles to overcome or boxes to tick, not as a method to increase transition justice. With this mode of thinking, a just transition where *no one is left behind* cannot be reached. Instead, window dressing and half-hearted implementing efforts are likely to occur. Reusing the same process kind for the JTF as for the ICRT projects is an inadequate path to take as the most critical justice issues stem from precisely this process.

The criteria of stakeholder inclusion and participation have been identified as major issues in both programs. The recurrence of this issue indicates that this endeavour is highly complex and time-consuming. Consequently, it must be questioned whether this criterion is appropriate for determining funding eligibility. For example, Karlovy Vary is a region that undoubtedly needs transition support as it is already lacking behind other regions in the country. Here, stakeholder participation is found to be a major problem due to a lack of trust in society in the government resulting from past transition failures. It seems that this issue is rather a problem that needs solving during the transition process. The complexity of solving such an issue is not suitable as an eligibility criterion. For this, much more time and support are needed.

With the stakeholder inclusion issue in mind, it becomes evident that the JTF eligibility criteria merge indicators that show the funding need of a region with the challenges that need to be addressed with the help of that particular fund. This finding is critical as the two are fundamentally different. The former are facts and data of a country while the latter are grand societal problems that are deeply embedded in the system. These problems are most likely to be more complex in the countries in need. It follows that it is clearly unjust to require solutions to these challenges as a criterion for funding eligibility.

Based on these concluding remarks several recommendations can be proposed to EC policymakers. Here it must be noted that the proposed actions are not to be seen as ultimate solutions but as considerations on how to improve the justice of the JTF.

Firstly, the criteria determining JTF eligibility need to be investigated on their ends to find out whether they display the need for funding or whether they address a transition challenge. The criteria that address a transition challenge must be removed and instead used as goals for the transition process.

Secondly, solving issues of stakeholder recognition, inclusion and participation should be made a tangible goal of the JTF. To facilitate this, the EC should acknowledge the complexity of the task and provide adequate support. The current stakeholder inclusion demands are not suitable for this endeavour as it enforces the inclusion of a static set of stakeholders only. This is inadequate as it does not capture the dynamics of stakeholders and unique contexts. Instead, a detailed process on how stakeholder recognition, inclusion and participation can be facilitated should be developed. Undeniably, the development and implementation of such a process is a complex undertaking. It will be challenging to develop a strategy that can be adhered to by different kinds of regions while ensuring adequate inclusion for each unique scenario.

Lastly, the nature of the application procedure of both programs poses capability concerns. The rough procedure of obtaining funds is very similar to each other but one key difference can be identified: the ICRT projects were initiatives by certain regions or countries that were granted support after the first initiation. This implies that there was a certain level of capacity available that allowed starting a restructuring attempt.

Such capacity is also needed to apply for the JTF and meet set requirements. As such, countries with higher capacity and political capabilities can likely exploit their advantage and capture more funds than they need. Especially due to the scarcity of available funding, this can lead to distribution injustice as some highly affected regions or countries may fall short due to their dramatic situation. Therefore, such an application process may prevent the support of the most affected as they are not seen. The capacity issue has not been part of this thesis but is certainly one of the most pressing ones when trying to ensure a just transition for all. An alternative system to the application procedure must be put in place to determine the eligibility for receiving funds. More research on how such a process can be structured will need to be carried out to overcome this injustice issue.

Although the JTF has some profound issues, one must also acknowledge the inherent complexity of the endeavour. The JTF has taken several crucial steps to increase transition justice. First and foremost, it must be noted that a fund that tackles transition justice issues is direly needed. Although the funding is insufficient to date, creating such a funding structure is a big step towards the increase of transition justice. With a stable system in place, the discovered issues can be addressed, and the fund can be improved. Besides the monetary aid, the JTF serves as a symbol of solidarity with affected regions and the workers that often dedicated their lives to provide energy to others. This fund is a necessary step for ensuring recognition justice as currently, many of the workers and inhabitants of affected regions feel left behind. Lastly, the relative flexibility of the JTF shows awareness that the setup of such a program will not lead to a perfect solution on the first try. Adaptation to unforeseen criticism and issues is crucial for improvement and to increase justice. Concluding, the JTF enhances transition justice to some extent. If implementing the recommendation and adapting the program further in the future to increase transition justice, it is possible to enhance it even more.

9 Implications

Two main implications can be taken from this research that involves the way how the EU sets up new processes and the practicality of justice theory.

It became evident that the application process gives rise to many justice issues. As this process is in use for several types of funds the question arises whether the same process is also applied for other EC funds or supporting projects other than transition endeavours. A large re-use of the same process would imply that injustice is deeply embedded in the EC's processes. At the same time, a rethinking of that one process can achieve a dramatic increase of justice. As such, this implication presents a great chance to make a significant impact on justice within the EU.

A new problem that arises for the JTF but could not be found in the ICRT is the way the funds are disbursed. For the ICRT projects, the funding has been handled by the project conductors and consequently, funding was received by them directly. In contrast, the JTF is disbursed to the corresponding national authority. The national authority is then responsible for transferring the funds to the region. However, research has proven that these funds do not necessarily reach their intended destinations. Also here, it is indicated that different funds are disbursed similarly, propagating justice issues. This is undoubtedly a great problem as it violates distribution justice that needs to be investigated further.

The EU thus seems to apply the same sort of processes where it sees fit, which certainly increases the efficiency of policymaking. The problem that arises here, evidently, is that justice issues are carried further as well. While it is certainly unfeasible to set up new processes for each new program it is as undesirable to propagate justice issues. More research on how the processes are set up for new programs can give insights into how justice issues are propagated. Consequently, mechanisms to avoid such processes can be developed.

The implications reach further than the research findings and towards justice theory. With the practical assessment of transition justice notions, it became evident that the JT framework lacks the connection to real-world problems. The different types of justice are theoretical constructs that lack practical guidelines. Putting the JT framework into practice, several issues arose. Firstly, with the current theoretical notions on procedural and recognition justice, many overlaps occur. Consequently, the justice assessment would have contained many repetitions. Van Uffelen (2021) provided the first step to overcome this issue by redefining recognition justice in a more practical manner. The other justice types need such practical definitions to facilitate the assessment of real transition projects.

The lack of practical guidance also put the justice types space and time under question. In this research, they seem to be factors of other justice types. Using them stand-alone lead to repetition, not new findings.

Besides the lack of practical guidance, there is also a clear lack of recommendations on how to improve real situations. Justice theory, at this point, is highly abstract. It is difficult for non-ethicists to draw actionable measures from it.

10 Limitations

This thesis is the first step to understand the use of past gained knowledge within the EU. However, this study has several limitations that are in short:

- (1) A limited number of projects analysed
- (2) A limited number of available projects to select from
- (3) Limited research time
- (4) Timestamp, 1st semester of 2021 – the JTF is subject to change
- (5) Transparency and politics – crucial data may be undisclosed

This thesis is based on analysing three selected projects that the EU has conducted and analysed. This relatively *limited number of projects (1)* means that this study is undoubtedly incomprehensive. More case studies could reveal other issues that have not yet been addressed.

The list of *available projects (2)* the EU has certainly analysed is limited. This lack of projects likely stems from two reasons, reputation and lack of reach. For the former, I argue that more projects may have been analysed but were not published. I expect that the cases found on their database are poster child cases that put their work in a favourable light. Although the EU deserves credits for improving justice in the energy transition on successful projects, it is important to not forget about cases that might not have been so successful and where injustices are still grave. In fact, these cases deserve the most attention as the unsolved issues that arose there may also be present in future projects. Learning more about it could help to overcome grave future injustices.

This study was performed as a master's thesis. Consequently, the time frame has been short, approximately 20 weeks. The *limited research time (3)* lead to the construction of the general categories of the ICRT project that facilitated the rapid collection of information deemed relevant that is comparable to each other. However, due to time limitations, comparisons could not always be facilitated. The Scottish TTF, for example, proved difficult to compare with the restructuring projects of the German ZRR and the Czech RE:START project. More research time could lead to a more thorough comparison and potentially uncover additional issues and the sources of the found ones.

Besides, it is essential to note that the thesis was conducted in the *1st semester of 2021 (4)*. At that time, the JTF was firstly put into implementation but was still subject to adaptation. Therefore, it was uncertain whether the JTF was still subject to change. The JTF was formally adopted on 21 June 2021 which was after all JTF assessments have been taken place. This ultimate setup of the JTF is not included in the research. Consequently, possible changes in the setup are not considered but may impact the justness of the fund.

Lastly, the analysis is based on the data that is made available by the EU. Due to the highly political nature of the JTF, not all information may be made available. The EU pledges to grant *transparency (5)* on their processes, but much decision-making is certainly done behind closed doors.

11

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12 Appendix

12.1 The Just Transition Fund

Funding eligibility for projects:

- a. “Productive investments in SMEs, including start-ups, leading to economic diversification and reconversion;
- b. investments in the creation of new firms, including through business incubators and consulting services;
- c. investments in research and innovation activities and fostering the transfer of advanced technologies;
- d. investments in the deployment of technology and infrastructures for affordable clean energy, in greenhouse gas emission reduction, energy efficiency and renewable energy;
- e. investments in digitalisation and digital connectivity;
- f. investments in regeneration and decontamination of sites, land restoration and repurposing projects;
- g. investments in enhancing the circular economy, including through waste prevention, reduction, resource efficiency, reuse, repair and recycling;
- h. upskilling and reskilling of workers;
- i. job-search assistance to jobseekers;
- j. active inclusion of jobseekers;
- k. technical assistance”, (EC, 2020g).

The scope has been broadened in the amended proposal of December (EC, 2020b), including:

- l. creating and safeguarding of jobs;
- m. investments in smart and sustainable mobility;
- n. rehabilitation of district heating network.

12.2 ZRR, Germany

Members of the ZRR project voting supervisory council:

2021 (ZRR, 2021b)	Category	Seats¹¹	Comments
The city of Mönchengladbach	Region	-	Not part here but in the executive board (EB)
City region Aachen	Region	1	
City region Köln	Region	1	Not part of EB
District Düren	Region	1	
District Euskirchen	Region	1	
District Heinsberg	Region	1	
Rhein-Erft-District	Region	1	
Rhein-District Neuss	Region	1	
Region Köln/Bonn registered association	Region	-	Not part here but in EB
Administration union Aachen	Region	1	
Chamber of crafts Aachen	Industry, civil	1	
Chamber of crafts Düsseldorf	Industry, civil	1	
Chamber of crafts Köln	Industry, civil	1	
Chamber of industry and trade Aachen	Industry, civil	1	
Chamber of industry and trade Köln	Industry, civil	1	
Chamber of industry and trade middle-lower Rhine	Industry, civil	1	
Industrial union of mining, chemistry, energy	Civil	1	
Standort Niederrhein GmbH (Ltd.)	Commercial	1	Not part here but in EB
Federation of trade unions	Industry, civil	1	Not part here but in EB
Federal state NRW	Region	2	Not part of EB
Ministry of economics, innovation, digitalisation and Energy NRW	Region, Industry	1	Not part of EB
RWE Power AG	Commercial	1	Not part of EB

The following table shows the number of seats per interest category of the executive board (members in brackets have no voting rights yet).

Interest groups	Seats¹¹	Interest groups	Seats¹¹
Region	12 (5)	Civil	7 (3)
Industry	7 (1)	Environment	0 (1)
Commercial	2 (1)		

2014 (Wirtz, 2014)	Representatives for	#¹¹
City region Aachen	City (governmental)	-
District Düren	District (governmental)	-
District Euskirchen	District (governmental)	-
District Heinsberg	District (governmental)	-
Rhein-Erft-District	District (governmental)	-
Rhein-District Neuss	District (governmental)	-
Administration union Aachen	Region (non-governmental)	-
Chamber of crafts Aachen	City craft employees	-
Chamber of crafts Düsseldorf	City craft employees	-
Chamber of crafts Köln	City craft employees	-
Chamber of industry and trade Aachen	City industry and trade employees	-
Chamber of industry and trade Köln	City industry and trade employees	-
Chamber of industry and trade middle-lower Rhine	City industry and trade employees	-
Industrial union of mining, chemistry, energy	German mining, chemistry and energy employees	-

2021 (ZRR, 2021b)	Representatives for	#¹¹
<i>The city of Mönchengladbach¹²</i>	City (governmental)	3
<i>City region Aachen</i>	City (governmental)	3
District Düren	District (governmental)	3
District Euskirchen	District (governmental)	3
District Heinsberg	District (governmental)	3
Rhein-Erft-District	District (governmental)	3
Rhein-District Neuss	District (governmental)	3
<i>Region Köln/Bonn registered association</i>	Region (non-governmental)	1
Administration union Aachen	Region (non-governmental)	1
Chamber of crafts Aachen	City craft employees	1
Chamber of crafts Düsseldorf	City craft employees	1
Chamber of crafts Köln	City craft employees	1
Chamber of industry and trade Aachen	City industry and trade employees	1
Chamber of industry and trade Köln	City industry and trade employees	1
Chamber of industry and trade middle-lower Rhine	City industry and trade employees	1
<i>Federation of trade unions</i>	German trade employees	1
Industrial union of mining, chemistry, energy	German mining, chemistry and energy employees	1
<i>Standort Niederrhein GmbH (Ltd.)</i>	Investors and investing companies	1

¹¹ Without deputies.

¹² The representatives highlighted in italic are added in comparison to the list of 2014.

Members of the supervising committee with no voting rights yet:

2021 (ZRR, 2021b)	Category	Seats ¹¹
Federal state NRW	Region	1
The city of Mönchengladbach	Region	1
Region Köln/Bonn registered association	Region	1
Neighbour conference	Region	3
Standort Niederrhein GmbH (Ltd.)	Commercial	1
Ministry for home, community, construction and equality NRW	Industry, civil	1
Ministry for work, health and social matters NRW	Civil	1
Ministry for traffic NRW	Region	1
NABU NRW	Environment	1
Federation of trade unions	Civil	1

For your convenience, a table with the used translations per language can be found below. Please note that the translations are done based on either existing translation, else I translated them freely (marked with a *)

German	English
Aufsichtsrat	Supervisory council*
Anrainerkonferenz	Neighbour conference*
Gesellschafterversammlung	Executive board*
Gewerkschaftsbund	Federation of trade unions
Handwerkskammer	Chamber of crafts
Industrie- und Handelskammer	Chamber of industry and trade
Kreis	District

12.3 Karlovy Vary, Czech Republic

Stakeholder setup:

Category	Count
Governmental (national)	16
Governmental (regional)	3
Governmental (municipalities)	5
Experts, non-governmental (regional)	3
Educational institute	13
Health institute	2
Development institute	6
Commercial	17
Industry	7
Civil	13

Stakeholders – Governmental & regional level

Governmental level	Category
Ministry of Regional Development	Governmental (national)
Ministry of Industry and Trade	Governmental (national)
Ministry of Labor and Social Affairs	Governmental (national)
Ministry of Education, Youth and Sports	Governmental (national)
Ministry of Transport	Governmental (national)
Ministry of Health	Governmental (national)
Ministry of Agriculture	Governmental (national)
Ministry of the Environment	Governmental (national)
Ministry of Defense	Governmental (national)
Ministry of Finance	Governmental (national)
Office of the Government of the Czech Republic - Section for Science, Research and Innovation	Governmental (national)
Office of the Government of the Czech Republic - Department of Advisers	Governmental (national)
Committees of the Government Council for Sustainable Development	Governmental (national)
Technology Agency of the Czech Republic	Governmental (national)
CzechInvest Business and Investment Support Agency	Governmental (national)
Czech-Moravian Confederation of Trade Unions	Governmental (national)

Regional level (1)	Category
Senators elected for the Ústí Region	governmental (regional)
Senators elected for the Karlovy Vary region	governmental (regional)
Deputies elected for the Ústí Region	governmental (regional)
Deputies elected for the Karlovy Vary region	governmental (regional)
Regional self-governments - Council of the Ústí, Moravian-Silesian and Karlovy Vary region	Governmental (regional)
Regional Standing Conference of the Ústí Region	Experts, non-governmental (regional)
Regional Standing Conference of the Moravian-Silesian Region	Experts, non-governmental (regional)
Regional Standing Conference of the Karlovy Vary Region	Experts, non-governmental (regional)
Towns and villages of the Ústí Region	Governmental, (municipalities)
Towns and villages of the Moravian-Silesian Region	Governmental, (municipalities)
Towns and villages of the Karlovy Vary region	Governmental, (municipalities)
Employment Pact of the Ústí Region	Civil
Employment Pact of the Moravian-Silesian Region	Civil
Labor Office - regional branches in the Ústí, Moravian-Silesian and Karlovy Vary region	Civil
Economic and Social Council of the Ústí Region	Civil
Economic and Social Council of the Sokolovská region	Civil
Friends of the earth	Civil
Council of the Economic and Social Agreement of the Moravian-Silesian Region	Civil
Council of the Economic and Social Agreement of the Karlovy Vary Region	Civil
Council for Research on Development and Innovation of the Karlovy Vary Region	Industry, development institute
Association for the Development of the Moravian-Silesian Region, working group for education	Development institute
Research and educational platform of the Ústí Region	Development institute
Karlovy Vary Business Development Agency	Development institute
Ústí-Chomutov agglomeration - integrated development strategy	Development institute
Jan Evangelista Purkyně University	Educational institute
Center for Transport and Energy	Educational institute
Czech Technical University in Prague - Faculty of Transportation	Educational institute
University of Finance and Administration, ops	Educational institute
University of Ostrava	Educational institute
Silesian University in Opava	Educational institute

Regional level (2)	Category
College of Business and Law	Educational institute
University of West Bohemia - Faculty of Economics, Faculty of Mechanical Engineering	Educational institute
Integrated technical and economic high school	Educational institute
UniCRE Research Training Center	Educational institute
Research Institute for Brown Coal	Educational institute
Vysoká škola Báňská - Technical University of Ostrava	Educational institute
Regional Chamber of Commerce of the Ústí Region	Industry, civil
Regional Chamber of Commerce of the Moravian-Silesian Region	Industry, civil
Regional Chamber of Commerce of the Karlovy Vary Region	Industry, civil
Confederation of Industry of the Czech Republic - regional branches	Industry, civil
MS Autoklastr - association of employers from the automotive industry	Industry, civil
ARR - Agency for Regional Development	Development institute
Balneological Institute of Karlovy Vary	Industry, educational institute
Krajská zdravotní (hospital in the Ústí Region)	Health institute
University Hospital Ostrava	Health institute
Chart Ferro - location Děčín (cryogenic equipment)	Commercial
Fuel plant Ústí (state-owned, coal mining)	Commercial
UNIPETROL (oil processing and production)	Commercial
DIAMO (state-owned, environmental rehabilitation after mining)	Commercial
Českomoravská záruční a rozvojová banka - Ostrava branch (national development bank)	Commercial
AZ GEO (consulting, implementation company in the field of environment)	Commercial
Association for the construction of roads I / 11-I / 57	Commercial
Třinecké ironworks (steel production)	Commercial
OKD (Mining)	Commercial
EVRAZ VÍTKOVICE STEEL, as (steel production)	Commercial
Biocel Paskov (Biorefinery)	Commercial
ArcelorMittal Ostrava (Pipe products)	Commercial
TATRA TRUCK (heavy vehicles)	Commercial
MOLNLYCKE (medical solutions)	Commercial
MAHLE Behr Ostrava (supplier automotive industry)	Commercial
GABEN, SPOL (supplier manufacturing and logistics)	Commercial
Tieto Czech (information technology services industry)	Commercial

12.4 TTF, Scotland

TTF Quality assessment, based on the interview cut-outs given by the SDS.

Interviewees	Quotes	Categories
Kyle Davidson	“I would 100 per cent recommend it”	Positive, unspecified
Stewart Wilson	“I’ll always be grateful for what the Transition Training Fund allowed me to do.”	Positive: training
Brian Easson	“Vaila was very good.” “I got a lot of good advice and was pointed in the right direction which was really important as when you’re made redundant you want to get things done as quickly as possible.”	Positive: personal, directional, timeliness
Rod Munro	“The training has been quite staggered” “The adviser can help guide you in the right direction, and so it can take a bit of time to find the right training course, which means it helps to be patient, but I would certainly recommend it.”	Positive: directional. Neutral: timeliness
Lena Broadley	“I would definitely recommend the Transition Training Fund to people who can identify training that would be useful for them.”	Positive, directional

Note. ^aSDS (2018b). ^bSDS (2016a). ^cSDS (2016b). ^dSDS (2018a). ^eSDS (2017).

TTF Count

Unspecified:	Positive (1)
Training:	Positive (1), Neutral (1)
Personal:	Positive (1)
Directional:	Positive (3)
Timeliness:	Positive (1), Neutral (1)

Restorative justice - mental component. Assessment of TTF success stories published by the SDS:

	Kyle Davidson	Categories	Stewart Wilson	Categories	Brian Easson	Categories
Negative emotions	“Mixed feelings. Half of me was happy to be walking away knowing I had part of a plan in place, but the other half felt like everything had been taken away from under my feet.” ^a	Decreased due to TTF	“I’m really excited for my new challenge and what the future brings, and I’ll always be grateful for what the Transition Training Fund allowed me to do. It helped me begin this new chapter.” ^b	Decreased due to TTF	None detectable in the story	No indication
Initiative job seeking activities	“It was one of the things which helped me make the decision not to stay on” ^a	Increased due to TTF	“I’d already known what I wanted to do so I contacted Skills Development Scotland and got things moving. I knew I would have to retrain if I wanted to enter another sector.” ^b	Increased due to TTF	“One thing I looked at doing was agency work for offshore and there was a couple of courses I needed to do for that, so I funded that myself so I’d have the option of agency work if it was available.” ^c	No significant impact
Perceived well-being	"I am really enjoying it." & "Last year wasn't an easy year. It was tough going but now I'm far happier as there's light at the end of the tunnel." ^a	Increased due to TTF	No indicators in the story	No indication	“Having done this, I can breathe a bit more, which is important.” ^c	Increased due to TTF
Future perspectives	“There was the chance of retraining and doing something else” ^a	Increased due to TTF	“In the end the Transition Training Fund made the training possible. They were very particular training courses and I needed them to get the job. Having that on my CV massively boosted my employability.” ^b	Increased due to TTF	“But I also used to drive trucks when I first came out the army, and there’s a big gap at the moment for Class 1 HGV drivers, and the problem was I only had a Class 2 HGV licence.” ^c	Increased due to TTF

	Rod Munro	Categories	Lena Broadley	Categories	Count Categories
Negative emotions	“I had been through downturns before but this one has been extremely long and it has been tough for a lot of people, especially contractors.” ^d	Negative towards industry	“There was so much uncertainty in the industry.” ^e	Negative towards industry	Decreased negative emotions (2) No indication (1) Negativity towards the industry (2)
Job seeking activities	No indicators in the story	No indication	“I had already been thinking about what else I might do, and had thought about doing something similar involving exploration in academia.” ^e	No significant impact	Increased job-seeking activities (2) No significant impact (2) No indication (1)
Perceived well-being	No indicators in the story	No indication	“Because it’s in academia it’s quite a different focus to what I was doing before, but it’s definitely related, and having not had a lot of experience in exploration before this, the training was certainly useful.” ^e	Increased due to TTF	Well-being increased due to TTF (3) No indication (2)
Future perspectives	“I’m 54 now so I’m taking things one step at a time but it’s likely I’ll set up as a sole trader.” “There’s some testing equipment I’ll need to buy, but the training course provides you with a toolkit.” ^d	Increased due to TTF	“I had already applied for the post with the University, and got an interview which took place immediately before I did the course.” & “I mentioned that I was about to do the training during the interview, and they were quite pleased to hear I was doing it as it was going to be useful.” ^e	Uncertain of the impact	Future perspectives increased due to TTF (4) Uncertain impact on future perspectives (1)

Note. ^aSDS (2018b). ^bSDS (2016a). ^cSDS (2016b). ^dSDS (2018a). ^eSDS (2017).