STUDY

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European Parliament

A Just Transition Fund - How the EU budget can best assist in the necessary transition from fossil fuels to sustainable energy

Policy Department for Budgetary Affairs
Directorate General for Internal Policies of the Union
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European Parliament

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Abstract

On 14 January 2020, the European Commission published its proposal for a Just Transition Mechanism, intended to provide support to territories facing serious socioeconomic challenges related to the transition towards climate neutrality. This report provides a comprehensive analysis of how the EU can best ensure a 'just transition' in all its territories and for all its citizens with the tools at its disposal. It provides an overview and a critical assessment of the Commission's proposal, and suggests possible amendments based on best practices from other just-transition initiatives.

This document was requested by the European Parliament's Committee on Budgets. It designated Ms Eider Gardiazabal Rubial to follow the study.

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LIST OF ABBREVIATIONS

ACC	Assistance to Coal Communities
ACEA	European Automobile Manufacturers' Association (Association des Constructeurs Européens d'Automobiles in French)
ARC	Appalachian Regional Commission
CEF	Connecting Europe Facility
COP	Conference of the Parties
CPR	Common Provision Regulation
CRiT	Coal Regions in Transition
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EC	European Commission
EFSI	European Fund for Strategic Investments
EGD	European Green Deal
EGF	European Globalisation Adjustment Fund
EIB	European Investment Bank
EP	European Parliament
EPRS	European Parliamentary Research Service
ERDF	European Regional Development Fund
ESF+	European Social Fund Plus
ESIF	European Structural and Investment Funds
EU ETS	European Union Emissions Trading Scheme
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GND	Green New Deal

GNI	Gross National Product
GVA	Gross Value Added
GWP	Global Warming Potential
HORECA	Hotel Restauration and Catering
ICE	Internal Combustion Engine
IDDRI	Institute for Sustainable Development and International Relations (Institut pour le Développement Durable et les Relations Internationales in French)
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
JASPERS	Joint Assistance to Support Projects in European Regions
JRC	Joint Research Centre
JTF	Just Transition Fund
JTM	Just Transition Mechanism
MFF	Multiannual Financial Framework
NECP	National Energy and Climate Plan
NGO	Non-Governmental Organisation
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Cooperation and Development
POWER	Partnerships for Opportunity and Workforce and Economic Revitalisation
SME	Small and Medium Enterprises
SRSP	Structural Reform Support Programme

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EXECUTIVE SUMMARY

Background

President von der Leyen's Commission has made the ambitious commitment of making Europe the first climate-neutral continent while ensuring that the transition to this new green growth model is just and fair for all European Union citizens and territories. The climate policies enacted by the EU will have an uneven impact on European regions, communities, sectors and workers, which is why they need to be accompanied by social and economic policies to ensure no one is left behind.

On 14 January 2020, the Commission published its proposal for a Just Transition Mechanism (JTM), in the framework of the European Green Deal policy package. The aim of the JTM is to provide support to territories facing serious socio-economic challenges related to the transition to climate neutrality. This initiative is composed of three pillars: a new Just Transition Fund (JTF), the use of a fraction of InvestEU financing for climate objectives and the creation of a public sector loan facility at the European Investment Bank, partly guaranteed by the EU budget.

The JTF will be funded with EUR 7.5 billion of 'fresh money' from the EU budget, to be complemented by transfers from Member States' European Social Fund Plus (ESF+) and European Regional Development Fund (ERDF) envelopes, and by national co-financing. All Member States are eligible for the JTF, following the approval of their Territorial Just Transition Plans by the Commission. Following approval, funds are pre-allocated at the national level. Projects eligible for financing include projects aimed at social support/retraining, economic revitalisation and land restoration.

Aim

The aim of this study is to give a comprehensive analysis of how the EU can best ensure a 'just transition' in all its territories and for all its citizens with the tools at its disposal. We first describe what an EU just transition instrument should ideally do, looking into the challenges it should address, best practices from other just-transition initiatives around the world and the key policy instruments it should include. Second, we present the tools the EU currently has at its disposal to support transitioning territories and describe the Commission's proposal for a JTF. Finally, we assess this proposal based on the key policy objectives identified in our first section and suggest amendments for it to better meet its targets.

Main takeaways

- Based on best practices from other just-transition initiatives, we identify four key characteristics that are most important for a just transition: it must be locally driven, include targeted welfare and labour policies, be included in a long-term strategy for the decarbonisation and development of local economies, and allow for regular assessments and modifications.
- In the context of the EU, this translates into three key objectives for a just-transition instrument:
    1. Strong mechanisms to ensure social dialogue and the involvement of communities throughout the whole transition process
    2. Consistency with other EU programmes and policies

3. The whole process should be structured based on clear goals for the progressive phaseout of coal as well as decarbonisation pathways consistent with the objective of climate neutrality by 2050.

- The Commission's proposed regulation for a JTF is generally seen as a positive step towards ensuring a just transition for all. We analyse the following points in the JTF regulation in our fourth section, and suggest changes that might be considered by policymakers:

    1. **Scope and size of the JTF**. Given its small size, the JTF will not realistically be able to tackle all the objectives of a just-transition initiative. As such, it might be worth considering reducing the scope of its eligible activities to focus on social support and retraining.

    2. **Consistency with cohesion funds**. We discuss the possibility of removing mandatory transfers from the ERDF and modifying the regulation so transition objectives are included more broadly in cohesion funds.

    3. **Pre-allocation methodology**. We reproduce the Commission's pre-allocation calculations and discuss some elements which could be improved to ensure the transparency of this process and that real needs are accounted for.

    4. **Granularity of data**. Currently, the pre-allocation of funds is based on NUTS2-level data, but it might be worth considering using NUTS3-level data to better capture territorial needs and ensure consistency with Territorial Just Transition Plans.

SYNTHÈSE

Contexte

La Commission von der Leyen a pris l'engagement ambitieux de faire de l'Europe le premier continent neutre sur le plan climatique, tout en veillant à ce que la transition vers ce nouveau modèle de croissance verte soit juste et équitable pour tous les citoyens et les territoires de l'Union européenne. Les politiques climatiques adoptées par l'Union auront une incidence inégale sur les régions, les communautés, les secteurs et les travailleurs européens, raison pour laquelle elles doivent s'accompagner de politiques sociales et économiques pour faire en sorte que personne ne soit laissé de côté.

Le 14 janvier 2020, la Commission a publié sa proposition relative à un mécanisme pour une transition juste, dans le cadre du train de mesures sur le pacte vert pour l'Europe. L'objectif du mécanisme pour une transition juste (MTJ) est d'aider les territoires confrontés à de graves difficultés socio-économiques découlant du processus de transition vers une économie de l'Union neutre pour le climat. Cette initiative se compose de trois piliers: un nouveau Fonds pour une transition juste (FTJ), l'utilisation d'une partie du programme InvestEU pour financer les objectifs climatiques et la création d'une facilité de prêt au secteur public, à la Banque européenne d'investissement, avec des prêts partiellement garantis par le budget de l'Union européenne.

Le Fonds pour une transition juste (FTJ) sera financé à hauteur de 7,5 milliards d'euros par des crédits additionnels provenant du budget de l'Union, à compléter par des transferts provenant des enveloppes du Fonds social européen Plus (FSE+) et du Fonds européen de développement régional (FEDER), et par un cofinancement national. Tous les États membres peuvent prétendre à un soutien au titre du FTJ, après l'approbation par la Commission de leurs plans territoriaux de transition juste. Après approbation, les fonds sont préaffectés au niveau national. Les projets susceptibles de bénéficier d'un financement comprennent des projets destinés au soutien social reconversion professionnelle, à la revitalisation économique et à la restauration des terres.

Objectif

L'objectif de cette étude est de présenter une analyse complète de la manière dont l'Union peut assurer au mieux une «transition juste» dans tous ses territoires et pour tous ses citoyens avec les outils dont elle dispose. Nous décrivons tout d'abord ce qu'un instrument européen de transition juste devrait idéalement faire, en examinant les défis qu'il devrait relever, les meilleures pratiques issues d'autres initiatives en matière de transition juste dans le monde et les instruments clés qu'il devrait inclure. Dans un deuxième temps, nous présentons les outils dont dispose actuellement l'Union pour soutenir la transition des territoires et nous décrivons la proposition de la Commission relative à un Fonds pour une transition juste. Enfin, nous évaluons cette proposition sur la base des principaux objectifs stratégiques définis dans notre première section et nous proposons des modifications pour qu'elle soit mieux à même d'atteindre ses objectifs.

Principaux enseignements

- Sur la base des bonnes pratiques découlant d'autres initiatives en matière de transition juste, nous identifions quatre caractéristiques essentielles pour une transition juste: elle doit être conduite à l'échelon local, inclure des politiques ciblées en matière de bien-être et de travail, s'insérer dans une stratégie à long terme en faveur de la décarbonation et du développement des économies locales, et permettre des évaluations et des modifications régulières.

- Dans le contexte de l'Union, il en découle trois objectifs clés pour un instrument de transition juste:
    1. Des mécanismes solides pour garantir le dialogue social et la participation des communautés tout au long du processus de transition
    2. La cohérence avec d'autres programmes et politiques de l'Union
    3. L'ensemble du processus devrait être structuré sur la base d'objectifs clairs pour l'élimination progressive du charbon et des trajectoires de décarbonation compatibles avec l'objectif de neutralité climatique à l'horizon 2050.
- Le règlement proposé par la Commission pour un Fonds pour une transition juste (FTJ) est généralement perçu comme une avancée positive vers une transition juste pour tous. Dans notre quatrième section, nous analysons les points suivants du règlement FTJ et proposons des modifications qui pourraient être envisagées par les responsables politiques:
    1. **Champ d'application et taille du Fonds pour une transition juste (FTJ)**. Compte tenu de sa petite taille, le FTJ ne sera pas en mesure, de manière réaliste, de traiter tous les objectifs d'une initiative en matière de transition juste. À ce titre, il pourrait être utile d'envisager de réduire la portée de ses activités éligibles pour se concentrer sur le soutien social et la reconversion professionnelle.
    2. **Cohérence avec les fonds de cohésion**. Nous examinons la possibilité de supprimer les transferts obligatoires du FEDER et de modifier le règlement, de sorte que les objectifs de transition soient plus largement inclus dans les fonds de cohésion.
    3. **Méthode de préaffectation**. Nous reproduisons les calculs de préaffectation de la Commission et examinons certains éléments qui pourraient être améliorés pour garantir la transparence de ce processus et la prise en compte des besoins réels.
    4. **Granularité des données**. Actuellement, la préaffectation des fonds repose sur des données de niveau NUTS 2, mais il pourrait être utile d'envisager l'utilisation de données de niveau NUTS 3 afin de mieux cerner les besoins territoriaux et d'assurer la cohérence avec les plans territoriaux de transition juste.

ZUSAMMENFASSUNG

Hintergrund

Die Kommission unter Präsidentin von der Leyen ist die ambitionierte Verpflichtung eingegangen, Europa zum ersten klimaneutralen Kontinent zu machen und gleichzeitig dafür zu sorgen, dass der Übergang zu diesem neuen ökologischen Wachstumsmodell für alle Bürger und alle Gebiete der Europäischen Union gerecht und fair ist. Die Klimapolitik der EU wird sich unterschiedlich auf die Regionen, Gemeinschaften, Sektoren und Arbeitnehmer in Europa auswirken, weshalb sie von sozial- und wirtschaftspolitischen Maßnahmen begleitet werden muss, um sicherzustellen, dass niemand zurückgelassen wird.

Am 14. Januar 2020 veröffentlichte die Kommission im Rahmen des Maßnahmenpakets für den Europäischen Grünen Deal ihren Vorschlag für einen Mechanismus für einen gerechten Übergang. Mit diesem Mechanismus sollen Gebiete unterstützt werden, die im Zusammenhang mit dem Übergang der EU zu einer klimaneutralen Wirtschaft schwerwiegende sozioökonomische Herausforderungen bewältigen müssen. Diese Initiative setzt sich aus drei Säulen zusammen: einem neuen Fonds für einen gerechten Übergang, der Verwendung eines Teils der Mittel von InvestEU für Klimaschutzziele und der Schaffung einer Darlehensfazilität für den öffentlichen Sektor bei der Europäischen Investitionsbank mit Darlehen, die teilweise durch den EU-Haushalt garantiert werden.

Der Fonds für einen gerechten Übergang wird mit „neuen Mitteln" in Höhe von 7,5 Mrd. EUR aus dem EU-Haushalt finanziert, die durch Mittelübertragungen aus dem Europäischen Sozialfonds Plus (ESF+) und dem Europäischen Fonds für regionale Entwicklung (EFRE) der Mitgliedstaaten sowie durch nationale Kofinanzierung ergänzt werden Alle Mitgliedstaaten können den Fonds in Anspruch nehmen, nachdem die Kommission ihre territorialen Pläne für einen gerechten Übergang genehmigt hat. Nach der Genehmigung werden die Mittel auf nationaler Ebene vorab zugewiesen. Zu den förderfähigen Projekten zählen Projekte zur sozialen Unterstützung/Umschulung, zur Wiederbelebung der Wirtschaft und zur Wiederherstellung von Flächen.

Ziel

Ziel dieser Studie ist es, umfassend zu analysieren, wie die EU mit den ihr zur Verfügung stehenden Instrumenten am besten für einen „gerechten Übergang" in allen ihren Gebieten und für alle Bürger sorgen kann. Zunächst wird beschrieben, was ein Instrument der EU für einen gerechten Übergang im Idealfall tun sollte, wobei die Herausforderungen, die zu bewältigen sind, bewährte Verfahren aus anderen Initiativen für einen gerechten Übergang in der ganzen Welt und die wichtigsten politischen Instrumente, die es umfassen sollte, betrachtet werden. Zweitens werden die Instrumente vorgestellt, die der EU derzeit zur Verfügung stehen, um Gebiete im Übergang zu unterstützen, und der Vorschlag der Kommission für eine gemeinsame Taskforce beschrieben. Schließlich bewerten wir diesen Vorschlag auf der Grundlage der im ersten Abschnitt genannten wichtigsten politischen Ziele und schlagen Änderungen vor, damit diese Ziele besser erreicht werden können.

Wichtigste Erkenntnisse

- Auf der Grundlage bewährter Verfahren anderer Initiativen für einen gerechten Übergang ermitteln wir vier Schlüsselmerkmale, die für einen gerechten Übergang am wichtigsten sind: Er muss lokal ausgerichtet sein, gezielte sozial- und arbeitsrechtliche Maßnahmen umfassen, in eine langfristige Strategie für die Dekarbonisierung und Entwicklung der

lokalen Wirtschaft einbezogen werden und regelmäßige Bewertungen und Änderungen ermöglichen.

- Im Kontext der EU schlägt sich dies in drei Hauptzielen für ein Instrument für einen gerechten Übergang nieder:

    1. Starke Mechanismen zur Gewährleistung des sozialen Dialogs und der Einbeziehung der Gemeinschaften während des gesamten Übergangsprozesses;
    2. Kohärenz mit anderen Programmen und Politikbereichen der EU.
    3. Der gesamte Prozess sollte auf der Grundlage klarer Ziele für ein schrittweises Auslaufen und von Dekarbonisierungspfaden strukturiert werden, die mit dem Ziel der Klimaneutralität bis 2050 in Einklang stehen.

- Die von der Kommission vorgeschlagene Verordnung über einen Fonds für einen gerechten Übergang wird im Allgemeinen als positiver Schritt hin zu einem gerechten Übergang für alle angesehen. In der Verordnung über einen Fonds für einen gerechten Übergang analysieren wir im vierten Abschnitt die folgenden Punkte und schlagen Änderungen vor, die von den politischen Entscheidungsträgern in Betracht gezogen werden könnten:

    1. **Anwendungsbereich und Umfang des Fonds für einen gerechten Übergang.** Angesichts des geringen Umfangs wird der Fonds realistischerweise nicht in der Lage sein, alle Ziele einer Initiative für einen gerechten Übergang zu erreichen. Daher könnte es sinnvoll sein, den Umfang der förderfähigen Aktivitäten zu verringern, um den Schwerpunkt auf soziale Unterstützung und Umschulung zu legen.
    2. **Kohärenz mit den Kohäsionsfonds.** Wir erörtern die Möglichkeit, verpflichtende Mittelübertragungen aus dem EFRE einzustellen und die Verordnung zu ändern, damit die Übergangsziele umfassender in die Kohäsionsfonds aufgenommen werden.
    3. **Methode der Vorabzuweisung.** Wir übernehmen die Vorabzuweisungsberechnungen der Kommission und erörtern einige Elemente, die verbessert werden könnten, um die Transparenz dieses Prozesses und die Berücksichtigung des tatsächlichen Bedarfs zu gewährleisten.
    4. **Granularität der Daten.** Derzeit beruht die Vorabzuweisung von Mitteln auf Daten auf NUTS-2-Ebene, es könnte jedoch sinnvoll sein, die Verwendung von Daten auf NUTS-3-Ebene zu erwägen, um den territorialen Bedarf besser zu erfassen und die Kohärenz mit den territorialen Plänen für einen gerechten Übergang zu gewährleisten.

1. INTRODUCTION

Alongside the ambition of making Europe the first climate-neutral continent by 2050, President von der Leyen's Commission has also made clear its aim of ensuring a *'just transition'* for all European citizens and territories. Vice-President Frans Timmermans has explicitly stated that it was the EU's responsibility to "*make sure […] that nobody is left behind*"[1] in the transition.

These two goals go hand in hand. The EU has to significantly reduce its greenhouse gas (GHG) emissions to deal with the existential threat of anthropogenic climate change and environmental degradation. However, given that climate policies implemented at the EU level can be regressive (Claeys *et al.*, 2018) and that certain territories are likely to be more economically and socially affected than others by the transition, the EU must also work to mitigate the side effects of the transition. Without the right accompanying social and economic policies, the transition towards climate neutrality might reinforce or even create new inequalities within the EU.

Territories that are heavily reliant on carbon-intensive industries for their economic growth and the employment of their workers – the first of which are the EU's remaining coal regions – will need the most support. These territories face risks of rising structural unemployment and stagnating growth. In addition, they must manage the clean-up and repurposing of their mining and quarrying sites.

Ignoring this is not an option: the transition must be inclusive of all people and all territories. Anything short of this will make it socially unacceptable, politically unviable and ultimately unsuccessful. The *gilets jaunes* movement is a recent example of citizens voicing their discontent at governments who fail to address the socio-economic fallout of their climate policies.

This idea that social policies should accompany major structural change is not new. It was central to Europe's first attempt at a common social and regional policy. The European Coal and Steel Community provided a Fund for the Retraining and Resettlement of Workers in sectors that were modernising, including coal mining. The concept of a just transition linked specifically to the socio-economic effects of stricter climate policies was later developed by North American worker unions in the 1990s. Since then, it has been broadened to mean a deliberate effort made to plan for, invest in and accompany the transition to an environmentally and socially sustainable economy and is recognised as an imperative in the preamble of the Paris Agreement. Box 1 gives a full definition of a just transition and lists the main documents that have shaped this concept.

Aiming to achieve its own just transition in Europe, President von der Leyen's Commission put forward its plan for a European Green Deal (EGD) in late 2019. This policy roadmap sets out a path of action to push the European economy towards climate neutrality while ensuring the social and economic inclusiveness of the process. Released in January 2020, one of the Commission's first concrete proposals within the EGD framework is to establish a Just Transition Mechanism (European Commission, 2020a, 2020b, 2020c), whose objective is to support territories for which the transition will cause significant socio-economic disruption. This initiative is composed of three pillars: a new Just Transition Fund (JTF), the use of a part of InvestEU financing for climate objectives, and the creation of a public sector loan facility at the European Investment Bank, partly guaranteed by the EU budget.

This study aims at identifying the main challenges the EU faces in achieving a socially and economically just transition to climate neutrality by 2050. It also assesses the Commission's proposal

[1] Speech made on 11 December 2019 after Commission President von der Leyen's presentation of the European Green Deal. See https://ec.europa.eu/commission/presscorner/detail/e%20n/ip_19_6691.

for a Just Transition Fund – the most developed policy instrument of the Commission's Just Transition Mechanism proposal, at the time of writing.

We first describe what an EU just-transition instrument should ideally do, looking into the challenges it should address, best practices from other just-transition initiatives around the world, and the key policy instruments it should include. Second, we present the tools the EU currently has at its disposal to support transitioning territories and describe the Commission's JTF proposal. Finally, we assess this proposal based on the key policy objectives identified in our first section and discuss potential changes.

Box 1: A brief history of the concept of a just transition

In the 1950s, the European Coal and Steel Community's Fund for the Retraining and Resettlement of Workers was established to facilitate re-employment opportunities for coal and steel workers made redundant by the development of new technology. Though the term just transition did not yet exist, the objectives of this fund were strikingly similar to those currently considered just transition objectives: retrain workers so they are better adapted to a deeply transformed industry, help them find jobs in other industries, and, if all else fails, fund their relocation to a region with more employment opportunities. The fund represented the first attempt at a European social and regional policy. In the Treaty of Rome (1957), it was then transformed into the European Social Fund (ESF), which in its early stages was also used to support workers who lost their jobs in sectors that were modernising, such as coal mining (European Communities, 2007).

The term just transition started being used in the 1990s and was introduced in the political debate by North American trade unions. The focus for these trade unions was mostly to support workers who lost their jobs as a result of stricter environmental protection policies. This led the International Trade Union Confederation to push for a social dimension to be discussed in international climate negotiations, namely at the annual Conference of the Parties (COP). During these negotiations, trade unions began developing the argument that without the involvement of workers and their communities, the transition could not be successful. They also underlined the fact that strong social dialogue and social policies were the only way for workers to feel they could get involved in this process without putting their livelihood at risk. just transition policies were presented as a way to create a partnership between public authorities on the one hand, and workers and trade unions on the other, in order to advance climate objectives. In the early 2000s, several studies were published by these trade unions showing the strong potential for job creation if climate policies were properly managed and integrated the principles of a just transition (Renner et al. 2008).

In 2015, the International Labour Organisation published its 'Guidelines for a just transition', in which it outlines the following set of principles which should guide the transition to environmentally sustainable economies and societies: i) the need for strong social consensus on goals and pathways to sustainability; ii) the need for a comprehensive policy framework ensuring coherence across economic, environmental, social, educational/training and labour dimensions; iii) the need for a meaningful and functioning social dialogue throughout the entire process and at all levels of governance.

These efforts eventually led to the inclusion of the concept of a just transition in the preamble of the Paris Agreement in 2016, which acknowledged "the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities". At the COP24 in 2019, Heads of State adopted the Just Transition Silesia Declaration, a document underlining the need for social dialogue, as well as the employment opportunities the transition presents. Including the concept of a just transition in these frameworks has added a long-term planning dimension to it. Not only should a just transition ensure social support to the workers

and communities most affected by the transition, it should also be part of a larger, long-term planning framework for the transition of regions and countries to carbon-neutral economies.

At the EU level, the concept of a just transition is underpinned by several legal texts and policies. The first is the Energy Union package, passed in 2015 by the Juncker Commission, which acknowledged that "an energy transition that is just and fair will therefore require retraining or up-skilling of employees in certain sectors and, where needed, social measures at the appropriate level". The 2018 regulation which outlined the governance mechanisms for this package expanded on this, citing changes in investment behaviour and in incentives across the entire policy spectrum as necessary steps to achieve a socially acceptable and just transition.

The EU is also leading several initiatives to support just transitions in coal regions. The Modernisation fund created for the fourth phase of the EU ETS will allow projects with just transition objectives to be eligible for funding. Specifically, these will be projects "to support the redeployment, re-skilling and up-skilling of workers, education, job-seeking initiatives and start-ups, in dialogue with the social partners". Additionally, a Coal Platform for European Regions in Transition was established for these regions to share their experience and learn more about EU programmes and assistance available to them. This platform is a preparatory action before the establishment of the Just Transition Fund. In the course of this study, interviews with stakeholders from this Platform were conducted, which can be found in annex 2. Section 3.2. summarises the key takeaways from these interviews.

2. WHAT SHOULD AN EU-WIDE JUST TRANSITION INSTRUMENT IDEALLY DO?

2.1 WHAT CHALLENGES SHOULD IT ADDRESS?

In order to reach the goal of climate neutrality, many EU sectors need to shift their production towards more sustainable practices. The transformations this implies for different sectors range from replacing old equipment with newer, more energy-efficient equipment, to more fundamental changes such as switching from internal combustion engines to electric batteries in automotive manufacturing. This will require large investments both from public and private-sector actors – much more than what is currently being invested.

Most estimates of how much average additional investment is required every year to achieve the EU's 2030 objective range from EUR 175 billion to EUR 290 billion, but are realistically closer to EUR 300 billion (Claeys *et al.*, 2019). The Commission's own estimates reach EUR 260 billion per year, with the greatest investment needs in the residential sector (EUR 125 billion), followed by the services sector (EUR 71 billion), the transport sector (EUR 21 billion) and the energy sector (EUR 34 billion) (European Commission, 2019).

The transformations required for the transition will also significantly restructure the EU's labour market. Even if in net terms the effect of the transition on employment could be neutral or even slightly positive[2], some jobs will disappear, some will be transformed, and others will be created. This reshuffling of employment will have major social and economic repercussions that will not be felt evenly by different sectors, regions, and skill levels in the workforce. These distributional effects are precisely what a just transition policy instrument should address, by ensuring that no community or territory is left behind. This section analyses three key aspects of this issue: 1) the uneven impact of the transition in different sectors, 2) the regional dimension of socio-economic shocks, and 3) the effect of the transition on the skills and education levels required by EU labour markets.

2.1.1 Which sectors will lose most jobs in the transition?

From a sectoral perspective, there will be winners and losers in the transition. The European Commission's report on Employment and Social Developments in Europe (Griffin *et al.*, 2019) identifies fairly intuitively fossil fuel-related mining and quarrying as the sector that will experience the largest contraction in jobs, while warning that the steel, cement, chemicals and car manufacturing sectors will have to be heavily transformed in order to be a part of the low-carbon economy.

While many studies focus on the net employment effect of the transition in these sectors, it is particularly important to assess the magnitude of gross job losses – and especially of losses of low-skilled jobs– as this is where just transition policies will need to provide support. However, estimating the gross job destruction resulting from the transition is particularly complex for two reasons. First, it is difficult to disentangle the effects of other key structural factors, such as behavioural or technological change, which will also significantly impact European labour markets in the coming years. Second, some industries will be able to adapt their production by using less

[2] Studies generally find that the transition will have a small, but positive net effect on employment in the EU by 2050 (see for instance Fragkos and Paroussos, 2018, Griffin et al., 2019, IRENA, 2018 and Eurofound, 2019). The potential for growth in new green industries, and especially the renewable energy sector, is generally found to overly compensate for job destruction in carbon-intensive industries. A JRC report (Kapetaki et al., 2020) further found that job creation in clean energy technologies could offset job losses in most EU coal regions.

carbon-intensive processes and thus transform jobs internally rather than destroy them. As such, it is not clear how many jobs will be lost as a result of these processes, especially at regional and sectoral levels.

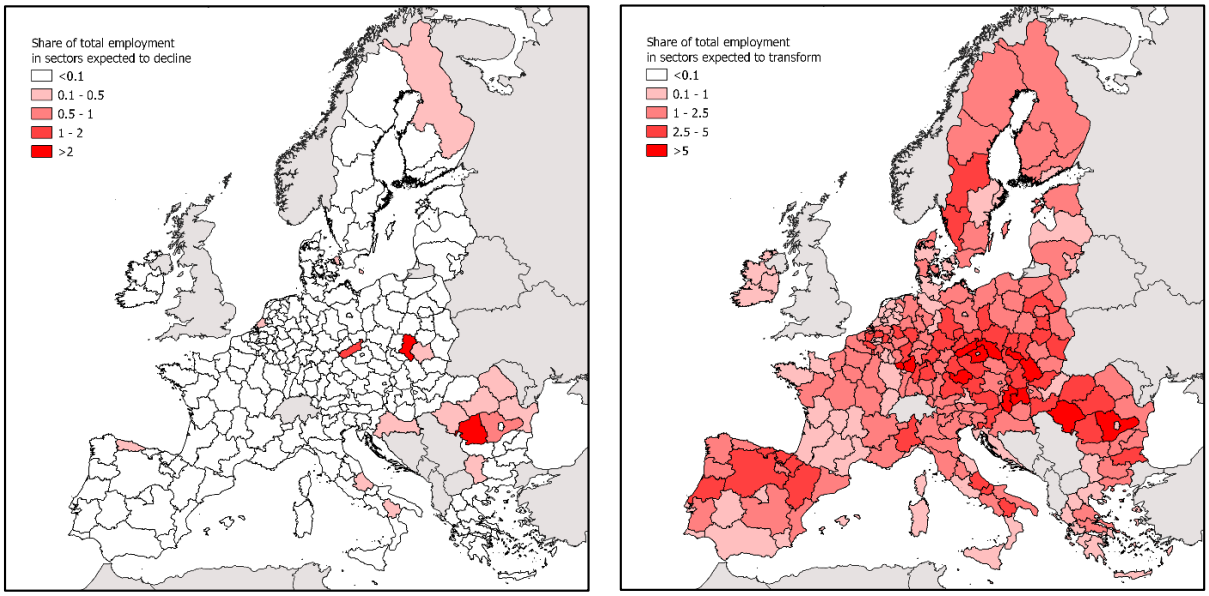
Nevertheless, we can quantify employment in sectors that are 'at risk' as a result of the transition: sectors that are likely to disappear or be profoundly transformed. The European Commission (2018) identified three sectors it expected to decline and four sectors it expected to transform as a result of the transition to a low-carbon economy. The sectors expected to decline are: 1) mining of coal and lignite, 2) extraction of crude petroleum, and 3) natural gas, and mining support service activities. These account respectively for roughly 237 000, 55 000 and 46 000 jobs in the EU (Eurostat SBS). The vast majority, if not all of these jobs will disappear during the transition, putting workers in these sectors at a high risk of unemployment. On the other hand, the sectors expected to transform are: 1) the manufacture of chemicals and chemical products, 2) the manufacture of other non-metallic mineral products, 3) the manufacture of basic metals, and 4) the manufacture of motor vehicles, trailers and semi-trailers. While these sectors employ far more people than the sectors expected to decline – a combined 19 million jobs across Europe (Eurostat SBS) – not all of these jobs will be destroyed. Some will be transformed, allowing workers to transition within the sector they are already employed in, using the skills they already have.

2.1.2 Which regions will be the hardest hit by these transformations?

A key issue is that these declining or transforming sectors are not evenly distributed across European regions. Regions that are heavily reliant on these sectors for economic growth and employment will thus be disproportionately negatively affected by the transition. They will suffer heavier job losses, and lose key drivers of their economic growth, as well as industries that might be an important part of their regional cultural identity. Map 1 shows the regional distribution of employment in these sectors identified by the European Commission.

Map 1: Location of 'at-risk' jobs in the EU

Share of employment in sectors expected to decline (lhs) and expected to transform (rhs)



Source: Bruegel based on EC (2018) and Eurostat SBS.

Note: As defined by the European Commission (2018), the sectors expected to decline are 1) mining of coal and lignite, 2) extraction of crude petroleum and 3) natural gas, and the sectors expected to transform are 1) the manufacture of chemicals and chemical products, 2) the manufacture of other non-metallic mineral products, 3) the manufacture of basic metals and 4) the manufacture of motor vehicles, trailers and semi-trailers.

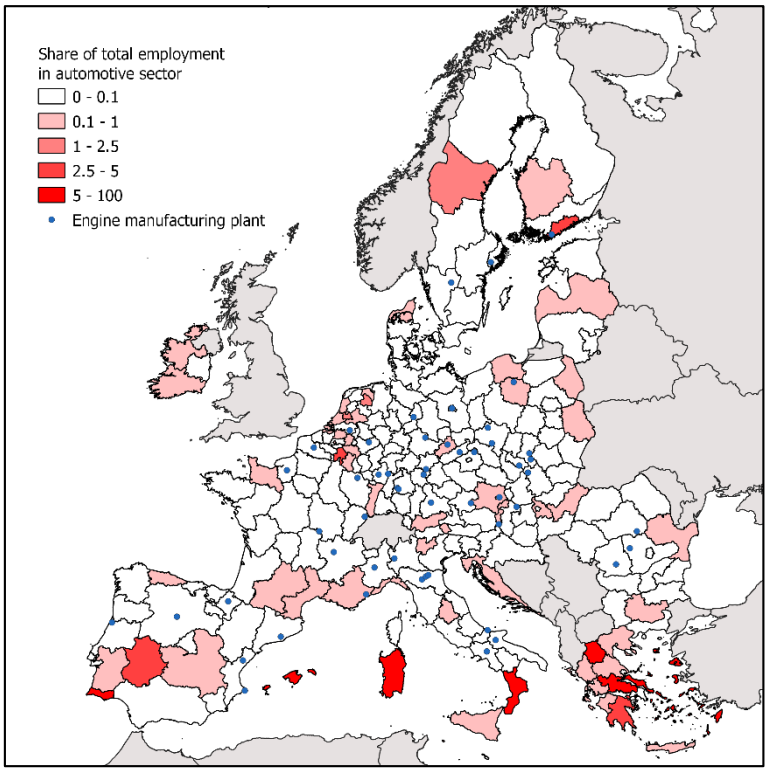
This is especially the case for the coal mining industry, which will have to be fully closed down for the EU to reach its climate objectives. In 2018, there were still 207 coal-fired power plants spread across 21 Member States and 103 NUTS-2 regions, accounting for 15% of Europe's power generation capacity. Additionally, 128 coal mines were still being exploited in 12 Member States and 41 NUTS-2 regions. This industry provides 237 000 jobs, 185 000 of which are in coal mining. An additional 215 000 jobs are indirectly dependent on coal activities. On a country level, Poland faces the greatest risk for job losses, followed by Germany, Romania, Bulgaria and Spain, in this order. On a regional level, the highest proportion of employment in these sectors is found in Silesia (Poland) and in Sud-Vest Oltenia (Romania). Silesia could lose up to 40 000 jobs, which is about half of total employment in the region. Three other regions located in the Czech Republic, Romania and Bulgaria could each lose more than 10 000 jobs in the transition, roughly a third of total employment in each case (Tzimas, 2018)[3].

The automotive industry will also be one of the most heavily affected by the transition, given the significant changes its production must go through to meet climate objectives. Guga and Lefeuvre (2019) estimated that while it might be possible to keep all automobile jobs in the EU, and even create a net gain in employment numbers in this sector, this will be conditional on the EU's capacity to become a net exporter of electric vehicles and maintain local production of batteries. Strong forward planning and major investments will be needed to achieve this, as will support for workers who need to be re-skilled or relocated to keep their jobs.

While this is fairly encouraging, regional distributional effects should not be overlooked. In 14 European regions, the share of automotive employment in the manufacturing sector is above 20%. Five of the regions are in Germany. The rest are in the Czech Republic, Italy, Hungary, Romania, Slovakia, and Sweden. This puts these regions more at risk of losing a portion of these jobs, especially considering battery production plants might not be located in the same regions as the combustion engine production plants that are shut down. Map 2 shows regional shares of employment in the automobile industry, and the location of internal combustion engine (ICE) manufacturing plants in the EU. These plants will either have to change their production or be shut down, as the ICE has no future in a carbon-neutral EU. This leaves regions with an ICE plant more at risk of significant job losses.

[3] These figures are from a 2018 report and therefore include the UK.

Map 2: Employment in automotive manufacturing in the EU



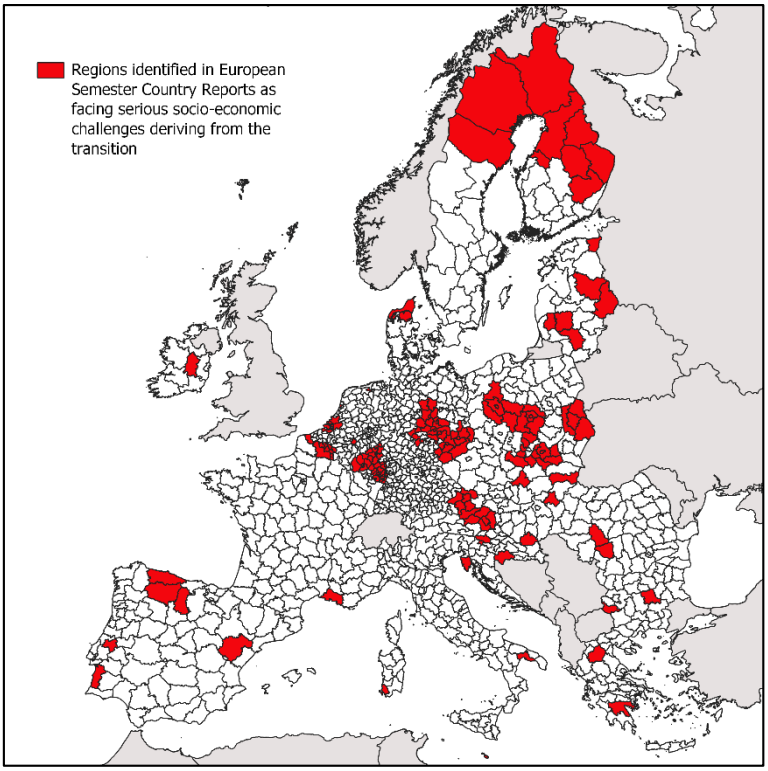
Source: Bruegel based on ACEA[4] and Eurostat SBS

All EU regions face the difficult task of transitioning their economies to carbon neutrality. In the short term, the regions most at-risk of serious socio-economic disruption are the EU's coal and lignite regions, and, more broadly, regions relying on fossil-fuel extraction and production. However, in the medium and longer terms, many more regions will face strikingly similar challenges as the automotive, steel, chemicals, and other sectors transition to low-carbon processes. It is extremely complex to determine exactly which regions will be the hardest hit given the magnitude and breadth of the necessary transformations.

The approaches we have described so far to identify the regions most at risk of serious socio-economic shocks as a result of the transition, have relied mostly on quantitative assessments. The European Semester's country reports provide a more qualitative approach, based on a multitude of criteria and regional information to identify the most vulnerable regions in each country. The criteria used differ for each country: they include statistics such as employment in industries expected to decline, regional development, unemployment rates, youth unemployment rates, and age and gender distribution in the population. Map 3 highlights the regions which were selected through this methodology.

[4] Interactive map: Automobile assemble and engine production plants in Europe. See: https://www.acea.be/statistics/article/automobile-assembly-engine-production-plants-in-europe

Map 3: Regions identified as most 'at risk' in the European Semester's Country Reports



Source: European Semester country reports

What this section underlines are the many determinants that can be used to identify regions most vulnerable to socio-economic fallout as a result of the transition. While there is some overlap between the different measures, the methodology ultimately chosen for transition policies will have an impact on which regions are prioritised over others.

2.1.3 Will certain skill groups be more affected than others in terms of job losses?

Alongside these regional and sectoral effects, transition policies will also have an effect on labour markets by changing the employment opportunities available for different skill levels. There appears to be an increasing skill polarisation between non-green jobs that will disappear in the transition and green jobs that will be created.

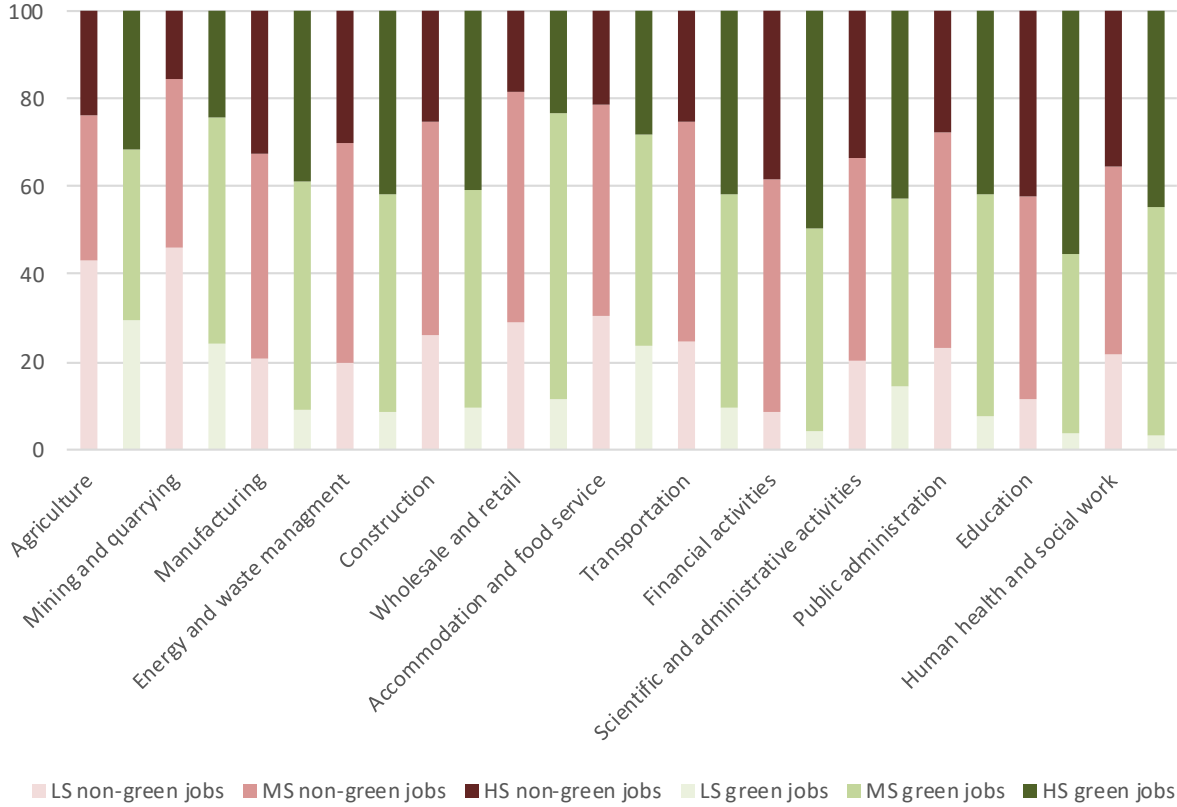
Figure 1 shows the sectors in which there will be the biggest mismatch between the level of skills currently needed in non-green jobs and the level of skills needed in emerging green jobs. These estimates are based on a model developed by Eurofound and presented in Griffin *et al.* (2019).

In all sectors, the proportion of low-skilled positions available will decrease as non-green jobs are replaced by green jobs. On the other hand, the proportion of high and medium-skilled occupations will increase, though to varying degrees depending on the sector. The sectors in which there will be the largest increases in the proportion of high-skilled jobs are construction, transport and public administration. Mining and quarrying, wholesale and retail trade, and human health and social services will face the largest decreases in the proportion of low-skilled jobs available. However, they will also see the largest increases in the proportion of medium-skilled jobs available.

In terms of policy, this means that upskilling/reskilling and social policies will be particularly needed in the sectors where mismatches are greatest. In sectors where low-skill jobs are being replaced

mostly by medium-skill jobs, upskilling/reskilling might be effective, but in sectors where low-skill jobs are being replaced by high-skill jobs, early retirement policies, combined with training measures for young workers, might be more effective.

Figure 1: Skill mismatches between existing non-green jobs and emerging green jobs by sector (%)



Source: Bruegel based on Griffin et al. (2019)

Note: LS, MS and HS respectively stand for Low Skill, Medium Skill and High skill.

Estimates by Griffin *et al.* (2019) show that average skill requirements and education levels are currently already higher for green jobs than they are for non-green jobs, and the gap between them is getting wider. In fact, skills and education requirements for green jobs are increasing faster than average, meaning that reskilling workers that have lost non-green jobs will grow more costly and take an increasingly long time.

However, this might not be the case forever. Griffin *et al* (2019) also indicated that while higher-skilled labour might initially benefit more than lower-skilled labour from the transition, lower-skilled employment opportunities will also likely develop in the later stages of the transition – namely in waste management and sectors related to the circular economy. In the short-term however, there will be a skills mismatch, especially at regional level, which will require active planning and intervention by public authorities.

The most vulnerable territories and populations will be those where several of these distributional effects overlap, i.e. territories that rely heavily on sectors that are expected to lose the most jobs and where there is a large share of unskilled labour. A just transition instrument will need to address these challenges.

2.2 WHAT CAN BE LEARNED FROM OTHER JUST TRANSITION INITIATIVES?

In dealing with these challenges, it is useful to look at past experiences of just transition initiatives, both within EU member states and in other parts of the world. The aim of this section is to review a wide variety of just transition cases and distil best practice guidelines from them. Annex 1 gives a detailed list of all the cases covered in this review, along with a brief description of their main characteristics. In this section, we analyse national, regional, city-wide and company-level initiatives, by reviewing quantitative impact assessments, the work of various expert groups, on-the-ground consultation initiatives, in-depth qualitative case studies and by interviewing stakeholders from the EU Platform for Coal Regions in Transition. The issues we look into are 1) the governance structure of just transition initiatives, 2) what such an initiative should provide for workers and communities in transition, 3) what it implies for local economies and 4) the planning, monitoring and review processes it should be subject to. For each of these topics, relevant examples and references from other just transition initiatives are provided.

2.2.1 How should a just transition initiative be governed?

One of the most recurrent messages in the just transition literature is the importance for policymakers to **engage with local stakeholders before and all throughout the transition** process. Not only does this allow for the creation of tailor-made policies which take local drivers into consideration, it is also a way to build trust between the different actors of the transition. As such, **local or regional authorities should generally be favoured** to develop just transition policies, in close collaboration with affected workers and communities.

Understanding local conditions is key as there may be an interaction between local issues and the challenges of a just transition. For instance, 90% of the workers laid off during coal mine shutdowns in the UK in the 1960s and 1970s were men. Reports seem to indicate that this led to a secondary effect on women's labour markets, which suffered from a crowding out effect as a result of these mass layoffs (Botta, 2019). The gender dimension might be more or less problematic depending on the composition of affected areas' labour markets and should be taken into consideration when shaping just transition policies.

Another example is in Appalachia, one of the regions most affected by the coal phase-out in the US. It is also a region plagued by an opioid epidemic, with a high correlation between areas historically dependent on coal, and areas where the epidemic is the most hard-hitting. The Appalachian Regional Commission (ARC) is the authority in charge of the just transition for coal workers and communities in this region. In its 2018 report, the issue of transitioning and developing the region's workforce includes discussions on the coal phase-out, welfare aid for workers in transition and retraining programmes, but also on health challenges and ways to tackle opioid addiction on a systemic level (ARC, 2018). These issues are indissociable in Appalachia, and the just transition is at their very intersection.

In all of these case studies, the question is then the following: given the weight of local determinants in the just transition process, how can policymakers ensure they have a truly bottom-up approach?

During the policymaking process, this is usually done by creating a commission or a task force whose mandate is to **meet with affected communities** to hear their concerns, better understand the local situation and establish a relationship between them and the agency in charge of the transition. An example of this is the Task Force on just transition for Canadian Coal Power Workers and Communities, one of the first of its kind, mandated by the Government of Canada in April 2018. This task force visited fifteen different communities across Alberta, Saskatchewan, New Brunswick and

Nova Scotia, toured mines and plants, met with workers, held public engagement sessions and finally produced two reports summarising its experience and giving region-specific recommendations to policymakers. A Scottish just transition Commission was also established in January 2019 and is currently going through a similar process in Scotland's most coal-dependent regions to produce its first report in 2021.

Beyond this initial stock-taking, the dialogue between policymakers and local stakeholders should be continually reaffirmed and strengthened. As described in IDDRI's report on implementing coal transitions (Sartor, 2018), the government needs to be able to answer all the questions workers may have about their future, including how it will be ensured that they can find an alternative job or a bridge to retirement, how their livelihood will be guaranteed during the transition, who will pay for these programmes and how, and most importantly, why should they trust the transition authority? One way to provide answers to these questions and accompany workers and communities in the transition is to establish **local transition centres**, equipped with adequate resources and staffed with qualified personnel that understands local conditions. The Canadian just transition Task Force found that in Alberta, where such centres have existed since 2017, they are highly valued by the communities they operate in. They work as an information platform between potential employers and workers, providing the latter with individualised career counselling and training for job searching.

Box 2: Transition centres

In Canada, transition centres are generally funded by public authorities, but staffed by people either from the local community or from the industry being impacted (e.g. coal). They provide a central point of information for workers already under stress due to a possible job loss, providing them with support to access government programmes for social support, to find ways of retraining/reskilling, and to look for other employment opportunities. It is preferable for these centres to open before severe labour market disruptions happen. On average, they stay open for three to five years, or until there is no longer a need for them (Task Force on just transition for Canadian Coal Power Workers and Communities, 2018).

Other policies may of course be implemented to foster cooperation between just transition authorities and local communities, provided they lay the ground for "adequate, informed and ongoing consultation […] with all relevant stakeholders" (ILO, 2015) as well as create opportunities for workers and communities to make the transition their own.

2.2.2 What should a just transition initiative provide for workers and communities in transition?

In 2015, the International Labour Organisation set out 'Guidelines for a just transition towards environmentally sustainable economies and societies for all', in which it called for **active labour market policies** to "*help enterprises and workers in the anticipation of changing labour market demands in the context of the transition*" and **social protection policies** to increase "*resilience and [safeguard] populations against the impacts of economic and environmental vulnerabilities and shocks*". Having effective and well-targeted labour and welfare policies that are mutually reinforcing is the cornerstone of any just transition; the challenge is calibrating them so they adequately support workers and do not reproduce or create any inequalities.

The Canadian Task Force recommends a labour policy package which includes a pension bridging programme for workers close to retirement, income support for transitioning workers until they find another job, the availability of education and skills building services, and aid for re-employment and

mobility. The literature on this topic is quite consistent with these recommendations. A study by the OECD (2012) found that the share of older workers is generally larger in polluting industries than other industries, making it more of a challenge for these workers to transition to other jobs and underlining the need for pension bridging programmes. A more recent study (Botta, 2019) also highlighted the fact that the employment effect of the low-carbon transition is likely to be geographically concentrated, as carbon-intensive sectors like coal mining are centralised and clustered. However, the study also makes the point that the jobs created by the transition will not be located in these same regions. As such, labour mobility packages are crucial to helping transfer workers towards new employment opportunities.

Based on a review of worker training programmes, IDDRI's report recommends that worker transfer programmes and on-the-job retraining be favoured over retraining programmes and that when the latter need to be used, that they target workers which are considered most likely to succeed – i.e. generally younger workers or those with some form of secondary education (Sartor, 2018). Additionally, workers should not just receive income compensation while they retrain and/or look for another job, it is also important that they are able to keep their health and pension benefits (Barrett, 2001). All of these policies provide workers with a strong social safety net, giving them the tools and the backing needed to transition away from their previous employment, into new and potentially greener industries.

An emerging challenge for labour policies in Europe's just transition is job polarisation. According to the European Commission's 2019 report on Employment and Social Developments in Europe, the gap between the skill requirements and education levels in 'green' jobs and in 'non-green' jobs is getting wider at a quickening pace. The problem is quite clear: not only do workers affected by the transition have to be trained and reskilled to work in different or emerging industries, they generally also have to be upskilled to be a part of the new green economy. On top of this, the European regions with the highest proportion of employment in energy-intensive industries and automotive manufacturing are generally also those with the lowest rate of adult training and lifelong learning, making it all the harder for these workers to return to training and education.

To respond to this phenomenon, strong labour and welfare policies should go hand in hand with **publicly available and up-to-date labour data** in all transitioning areas and their neighbouring regions. By having a clear picture of exactly what skills are needed, local retraining programmes and regional mobility packages can be better targeted. Scotland's Partnership for Continuing Employment is a good example of this type of targeted retraining. The programme was established to help reskill and train workers affected by oil and gas facility closures and gave them two training options: the 'individual route' and the 'procured route'. The 'individual route' allowed workers to receive funding for any training they chose, on the condition that they pro-actively contact potential future employers to verify that the training would give them in-demand skills; the 'procured route' funded training for workers based on pre-assessed opportunities and an evaluation of the needs of the local labour market. This type of policy requires investments to build local authorities' capacity for data collection and dissemination as well as collaboration with the private sector, which needs to disclose in-depth data on employment needs and skill requirements.

An interesting case when discussing the availability of labour data is that of Enel, Italy's largest company in the electric sector and a European leader in terms of installed capacity. The company has clearly stated its aim of becoming a world leader in the field of renewable energy and has even committed itself to being climate neutral by 2050 (Enel, 2020). It also has a history of engaging with social partners and trade unions during periods of organisational change to ensure transitions are

not only economically beneficially but also socially just. Enel developed the *Futur-e project* in 2015, which aimed at managing the closure and conversion of 23 thermoelectric plants and one mining site. The strategy was to involve local stakeholders to identify unique, sustainable development opportunities for each individual site, re-use the existing infrastructure as much as possible and retrain and redeploy all employees of the former plant/mine, either to a different unit on the same site or to another location. As of 2019, all workers from affected sites had been relocated on a voluntary basis (Galgóczi, 2019). This outcome was made possible by two factors. First, the company has built a solid system of industrial relations with its highly unionised workforce through regular consultation and negotiation as well as historically non-conflictual relations; second, the retraining and redeployment was successful in large part because the company has open access to extensive information on its workers' skills and characteristics, as well as on its own production needs and employment opportunities. This allowed it to develop something of a perfect internal labour market to respond to the needs of its different units, aided by retraining opportunities and the relocation of some of its workers – which trade unions conceded to being flexible about during negotiations.

The case of Enel also illustrates the significant role which companies can play in this process. Their position and characteristics give them unique ways to facilitate the transition. Beyond what Enel has shown to be possible in terms of internal worker compensation, retraining and redeployment, companies can also implement preferential hiring policies for displaced workers and give out formal certifications to workers they cannot avoid laying off so they have an easier time finding training or their next employment opportunity.

Both the Scottish Partnership for Continuing Employment and Enel's *Futur-e project* underscore the importance of establishing strong labour and welfare policies in collaboration with all social partners, and in conjunction with the development of an in-depth and openly accessible labour market database. Local labour information is a powerful lever to shape effective, targeted welfare and labour policies. The ideal just transition is one which gives each affected worker and community-member an individualised development path towards a sustainable and decent employment, whilst providing strong welfare and labour support all throughout the transition process.

Box 3: How effective are reskilling policies?

A systematic review of retraining programmes globally by Kluve et al. (2016) estimates that only about one third of reskilling programmes have a positive impact on labour market outcomes, both in terms of employment rates and earnings. This low rate of success could be explained by a lack of employment opportunities, a mismatch between the skills being given and the skills needed by local employers, inadequate monitoring and revising of the training programmes, and the absence of complementary job-search services like career counselling or employer-employee matching (Sartor, 2018).

There is some evidence that the most effective retraining programmes are those which are periodically reviewed and revised (Kluve et al., 2016), which target specific workers considered most likely to succeed (LaLonde and Sullivan, 2010) and which respond to specific job offers and skill mismatches in the local labour market (Sartor, 2018).

2.2.3 How can economic policies shape a just transition?

The first and most primordial step for fossil-fuel-dependent economies to decarbonise and diversify is to **stop any new investments in fossil fuel infrastructure**, such as coal mines or coal-powered energy plants. In line with this, **government fossil fuel subsidies**, which are estimated to be

between EUR 39 billion and EUR 200 billion in the EU (Hayer, 2017), **need to be phased out completely** as they provide incentives for further investments in fossil fuels. The more of these types of investments are made, the more chances there are that a "lock-in" situation will come to head, meaning that policymakers and stakeholders actively work against the transition in their region.

The case of Germany's region of Ruhr in the 1960s and 1970s is a good example of a policy lock-in. In the mid-1950s, one in ten of the region's inhabitants was employed in the mining industry, but coal jobs were slashed in half by the mid-1960s due to structural changes. When faced with these significant losses, public policy was initially aimed at supporting the established coal and steel companies and remained that way well into the 1970s. This resulted from a coalition of policymakers, investors, community leaders and workers who all had a vested interest in maintaining the status quo, which had provided them with stable jobs, strong returns on investments and even a sense of identity, pride and community for decades. It is not until the 1980s that the region began to depend less on large corporations and instead started targeting start-ups and technology firms, investing in service industries and networking with universities and research institutes. This was supported by labour and welfare policies which allowed for early retirement, worker retraining and mobility. While this did cushion a significant part of the shock from mine closures and the coal phase-out, some problems remain in the region today, in part due to years of policy lock-in which blocked preventive transition policies; unemployment and poverty rates are still far higher than the national average, there is strong physical and social segregation between poor and rich areas, the region's major cities are in critical financial condition and the Emscher river remains heavily polluted after years of use as an open waste waterway.

While this first step is being taken towards decarbonising a local economy, policymakers should also be thinking of ways to **develop and diversify historically fossil-fuel-dependent economies**, to provide jobs and economic growth to affected areas. In its final report, the German Coal Commission recommends several policy pathways to achieve this: modernising energy infrastructure, accelerating planning processes, investing in transport, digital infrastructure and local research, and developing "model regions" to test industrial processes and systems, which can then be reproduced in other locations if they are successful (Growth, Structural and Jobs Commission, 2019). Similarly, the Canadian Task Force recommends the identification, prioritising, and funding of local infrastructure projects to diversify local economies.

One discussion on this topic is whether regions should "re-specialise" in one industry to replace the one they have lost, or diversify into several other industries, which would each then hire a smaller number of workers. In some cases, specialisation has been very effective, while in others diversification has been more so.

The city of Bilbao, in Spain, and the Lewarde Mining History Centre, in France, tell stories of relatively successful transitions through specialisation in the sectors of culture and tourism. In its transition away from heavy industry in the 1970s, Bilbao's city planners created an urban development corporation that used public resources to put into practice a series of strategic urban renewable operations. This eventually gave the city its well-known cultural projection, thanks to the creation of the Guggenheim Museum and the Euskalduna Conference and Performing Arts Palace. Though the 'Bilbao effect' still sparks debate among urban developers – some consider the city's rejuvenation to be the result of a series of lucky breaks – it illustrates the possibility of a transition away from heavy industry through arts and culture. The Lewarde Mining History Centre is perhaps an even better example of this process. After the mine was shut down in 1971, it was turned into what is now France's largest mining museum and was classified as a World Heritage Site by UNESCO in 2012. Former coal miners work there as tour guides and have been asked to donate their old

mining gear for the exhibits, fostering local ownership of this project. The number of jobs created has been fairly limited, especially compared to past losses, but the museum has provided the region with some economic stimulus.

A less successful economic transition has been that of Genk, in the Limburg region of Belgium. After coal mines massively closed there in the 1960s, Ford established a manufacturing plant which attracted firms upstream and downstream of its value chain and transformed the city into a hub for automobile manufacturing. This fully re-employed Genk's workforce and created strong economic growth for some time. However, in the early 2010s, car manufacturers decided to shut down their Genk facilities for cost reasons, leaving the city in economic disarray once again. Though transitioning through specialisation may be appealing, it also risks backfiring if the newly developed industry is not durable. This is especially true when working towards the decarbonisation of local economies; the industries developed after the phase-out of a carbon-intensive industries need to be both economically and environmentally sustainable.

Assessing which industries and which projects will successfully and lastingly create job opportunities and economic growth in a region can be challenging. Over the course of three years, the ARC made such assessments and awarded $120 million to 149 different projects aimed at helping communities impacted by the coal phaseout diversify and grow their economies as well as build an inclusive and competitive workforce (ARC, 2018). The most successful projects were those with deep ties to their local communities, those which provided significant economic diversification and partnered with local educational institutions and other firms, and those which provided an open and transparent work environment.

What we can learn from all these cases is that there is no one-size-fits-all policy pathway for the decarbonisation, diversification, and development of local economies. The best predictor of a development project's success is the significant involvement of local actors and its potential to be long-lasting, in economic, social, and environmental terms. Ultimately, a just transition means ensuring the decarbonisation, the diversification, and the development of an economy.

Box 4: How can efficient regional revitalisation policies be designed?

There are many paths policymakers can take when designing revitalisation policies for regions in transition. IDDRI's Coal Transitions project identifies some of these, namely related diversification, smart specialisation, strengthening local entrepreneurial networks, improving local infrastructure or soft attractiveness factors for tourism, and establishing public sector activities or nationally relevant innovation or energy projects in the region.

The challenge is that there is no one-size-fits-all revitalisation policy mix which unequivocally ensures a successful regional transition; Tödtling and Trippl (2005) even argue that innovation policies from successful regions have very little relevance for low-performing regions, given that success is generally determined by a region's pre-existing knowledge base and its organisational and governance characteristics. Essentially, some regions lack the institutions and openness to innovation that would allow them to successfully transition, and it is extremely complex to create these characteristics.

We can however learn some lessons from the EU's cohesion policy, which faces the same issues in its aim to support the harmonious development of EU Member States and regions. When evaluating this policy, Darvas et al. (2019) find that regions which performed the best were those with longer-term and more focused projects, with an inter-regional focus, lower national co-financing, more national management, and a higher proportion of private and non-profit participants among the beneficiaries. While revitalisation policies should predominantly be designed according to a region's characteristics, these conclusions may help shape them.

2.2.4 How should a just transition initiative be planned, monitored and reviewed?

The last point which emerges from the literature on just transitions is that public authorities should 1) give a **clear, long-term and binding timeline for the phasing out of their country or region's carbon-intensive sectors**, 2) **adequately monitor and evaluate** their just transition policies as they are implemented, 3) **publicly report** on them and 4) allow for some **mid-course adjustments**, based on factual, scientific assessments of clearly-defined success indicators.

The fundamental argument for a clear, long-term and binding timeline of phaseouts, as set out in the ILO's just transition Guidelines, is that it gives a clear policy signal to investors and stakeholders, giving them time to develop their own adaptation and transition plans. It also allows workers to plan for their next steps in terms of training and employment opportunities. The German Coal Commission recommends giving a timeline for coal phaseouts based on capacity thresholds for energy generation. For Germany, the threshold is set at 30 GW of energy generated from coal-powered plants in 2022, and 17 GW in 2030, with a complete shutdown of coal-powered generation by 2035 or 2038 at the latest. This gives a clear framework under which the just transition can be negotiated and planned. It has allowed the German government to strike an agreement with its coal-dependent regions, pledging EUR 40 billion in compensation and benefits by 2038 for the early shutdown of coal plants and mines (Buck, 2020). The details of this just transition programme have not yet been released, but special attention should be given to it, as it could set a valuable example for other European regions.

As a complement to establishing a phaseout timeline, IDDRI recommends that governments require companies to develop and communicate asset closure and labour management plans in compliance with the national phaseout timeline. This can encourage firms to plan for internal workforce redeployment and retraining strategies, and to engage with social partners on these issues early on.

Establishing binding objectives is also important because it creates a form of backstop against potential policy rollbacks throughout election cycles. Without this, social and labour programmes can be shut down with no warning, leaving workers and communities without funding to help them transition. This happened with the Obama administration's POWER+ Plan, a multi-agency initiative which addressed the decline in the coal sector by funding economic stabilisation projects, social welfare efforts and environmental efforts in affected areas and which was massively scaled down under the Trump administration, and only remains as an ARC programme with likely insufficient funds (Congressional Research Service, 2019).

Finally, just transition programmes need to be regularly and rigorously assessed by independent researchers and adjusted according to the results from these evaluations. There is strong evidence that the most effective training programmes are those which have follow-up systems assessing their performance and which are improved over time (Kluve et al., 2016). Making data on the effectiveness of just transition policies in different European regions publicly accessible would also help with pan-regional knowledge sharing. Overall, clear communication on long-term goals and science-based assessments of just transition programmes will allow for policy improvements and better targeting of funds.

Box 5: The case of Alberta, Canada

Canada's region of Alberta is a particularly interesting case study of a just transition, as it has one of the most comprehensive policy packages and is one of the first in the world to explicitly pursue the goal of an environmentally motivated coal phase-out.

The provincial government of Alberta created a Transition Programme for Coal Workers in 2016, which began operating in January of 2018 and consists of six policies: a grant for coal workers to find another employment; a grant for older workers to have a bridge to retirement; the reimbursement of moving expenses for workers having to move for a new job; tuition vouchers for retraining; the availability of career consultancy and employment services; the provision of lists of qualified facilitators who can be hired to assist employers, workers and unions in creating plans for individual worksites to accompany their workers in transition. In parallel to this, the Government of Alberta also implemented two other policies. First, it reached agreements known as the Off-Coal Agreements with the corporations which owned coal units in the province, pledging to provide them with a pay-out of CAD 1.1 billion to avoid stranded assets. Second, it created a Coal Community Transition Fund of CAD 5 million, which allocated funds to projects that would sustainably develop Alberta's economy in March of 2018.

Overall, Alberta's just transition plan was largely accepted by its population, in part because it involved local stakeholders at every level throughout the policymaking and implementation processes. It allowed for local strategies to be developed and implemented through its local transition centres, signed financial contracts – the Off-Coal Agreements – with local power companies and involved the federal government by meshing local regulation with state regulation – such as with the flexibility on Employment Insurance and the use of Western Economic Diversification Canada programmes. This multi-governance strategy had two major successes: it created backstops – in the form of the Off-Coal Agreements discussed above – preventing future governments from rolling back to less stringent regulation for the coal phase-out and thus established a form of long-term regulatory certainty. This is key to encouraging investors to develop their industries in these transitioning local economies.

Although Alberta is generally given as an exemplary model of a just transition and its programme covers most of the elements recommended in the literature, it has also been addressed some criticism. Some of it concerns the timing of the rollout of the Transition Programme for Coal Workers, which came into operation a full year after the Government of Alberta signed the Off-Coal Agreements. This created some initial discontent and mistrust within coal communities, who felt the local government was putting their interests behind those of large power corporations. Another line of criticism is that neither the Albertan nor the federal government developed a comprehensive green industrial strategy within the just transition plan to help absorb former coal-workers into low-carbon sectors, like renewable energies for instance (Hussey and Jackson, 2019). As a result, workers may be forced to transition from unionised, long-term contracts in the coal sector to un-unionised, short-term contracts in the construction sector.

We have thus identified four key characteristics which are most important for a just transition's success. First, just transitions should be **locally driven** and involve stakeholders at every level and during every step of the process. Second, **targeted welfare and labour policies** should be implemented to support workers and communities in affected areas. Third, local governments should have a **long-term strategy for the decarbonisation, development, and diversification** of its economy. Finally, a comprehensive and long-term **communication and assessment strategy** should also be established.

2.3 HOW SHOULD AN EU-WIDE JUST TRANSITION INSTRUMENT BE STRUCTURED?

Given the challenges an EU just-transition instrument should address and the best practices we have highlighted, we discuss the structure such an instrument should have. A useful conceptual

framework for this is the German Coal Commission's recommendations for Germany's just transition (Box 6). Figure 2 summarises the basic structure and characteristics of the EU-wide just transition structure we recommend.

Box 6: The German Coal Commission's final report

In June 2018, the German federal government established the Commission on Growth, Structural Change and Employment, otherwise known as the Coal Commission. Its final report, adopted in 2019, provides the most developed conceptual and policy structure – so far – of a just transition for coal regions, and as such it deserves particular attention. The Commission defines the aim of a just transition in coal regions as the aim of replacing the gradual loss of value added and employment with new value added and employment, especially in the industrial sector. To do so, the Commission recommends an action plan based on four pillars:

Creating new employment and value added, by developing regions into 'model regions' in which new industrial processes and systems can be tested and further developed. To do so, three actions are suggested: i) modernise regions, replacing old generation assets with renewable generation and storage technologies; ii) accelerate planning processes, investment in transport and digital infrastructure as well as in local research in order to enhance regional competitiveness; iii) establish new federal government offices in these regions.

Indemnify the operation of coal mines with insurance models. This intends to protect regional governments in coal mining regions from the potential bankruptcy of an open-cast mine operator, which would lead to significant public spending for renaturation.

Alleviate hardship for those concerned. To do so, a package of support and compensation measures is proposed, including provisions for retraining, and measures for reallocation to new jobs. In the case of employees aged 58 and up, adjustment funds are to be used to enable early retirement without financial losses. Other provisions include power price compensation for households, engagement in dialogue between regional governments and residents near mines, as well as financial compensation for power plant operators for the early shut-down of capacities in a competitive bidding process.

Monitoring and regular review of the implementation of the measures. To do so, specific criteria should be set, which should then be recorded in progress reports to be presented to the Parliament and to be evaluated by an independent panel of experts. If necessary, adjustments will have to be made in the future.

It should be noted that the process of writing this report was marked by conflict and clashes between stakeholders (Clean Energy Wire, 2018). Once it was published, it was not accepted by all of Germany's states (Clean Energy Wire, 2018) and even two years later, is still sparking debate (Clean Energy Wire, 2020). This reflects the highly contentious nature of these processes, and the time required to reach an agreement between all stakeholders.

Based on the best practices highlighted in section 2.2., we identify **three complementary – and generally mutually-reinforcing – objectives** in just transition strategies: 1) social support, 2) economic revitalisation, and 3) land restoration. These should all be included in the EU's overall just transition strategy, but not necessarily with a common instrument.

1) The **'social support'** objective would ensure adequate support for workers made redundant by the transition, so that they and their communities are not left behind. Active social and labour policies are required to meet this objective. More pragmatically, this includes job-search assistance, income support, pension bridging programmes, mobility packages and, where applicable, training and educational programmes.

2) The **'economic revitalisation'** objective aims at helping territories transition away from their reliance on fossil-fuel industries. Box 4 describes the challenges in setting up an effective revitalisation policy, since there is no one-size-fits-all solution. This objective can be addressed through a public investment strategy and a territorial industrial policy strategy.

3) Finally, the **'land restoration'** objective can be achieved through the provision of assistance for the decontamination, regeneration and repurposing of sites. However, this should not violate the European polluter-pays principle, according to which those who contaminated a site should ensure its clean-up. In practice, this objective could overlap with the other two in some ways; for instance, a project which reclaims and repurposes a former coal mining site could create job opportunities for former coal miners. However, it is a distinct objective in this taxonomy because it should be accomplished independently of social and economic objectives. The primary aim is to remove pollution caused by fossil-fuel extraction and provide a clean and safe environment to the communities living near the site.

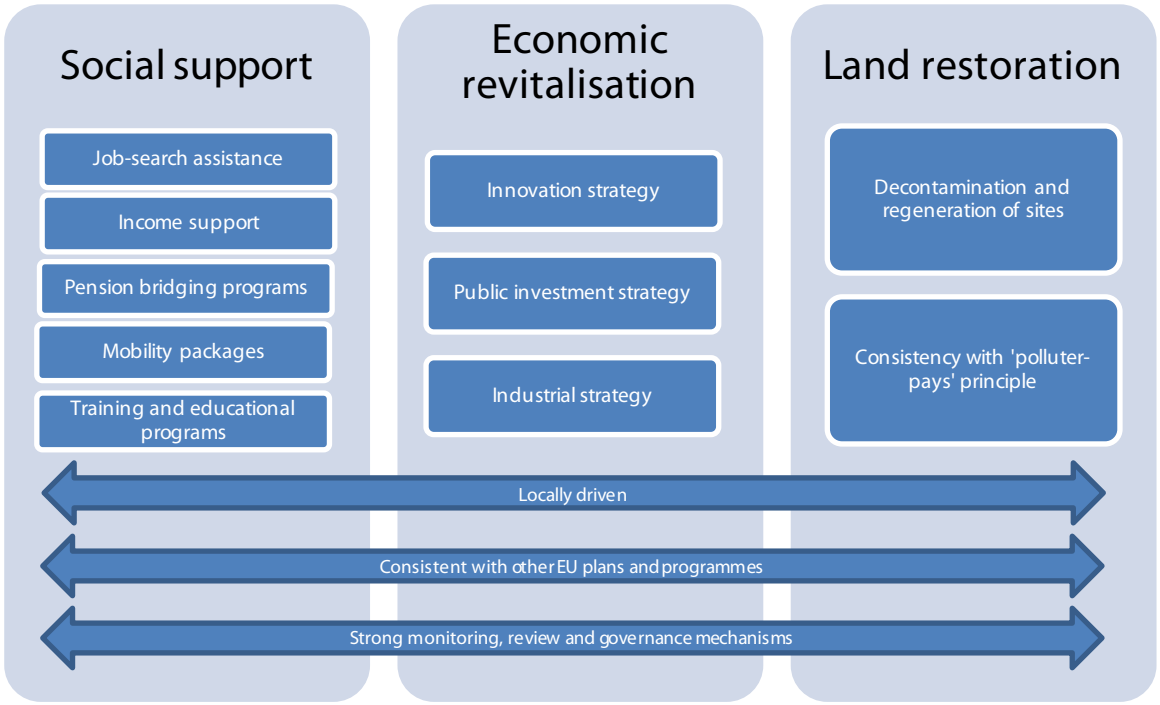
Also based on our takeaways from other initiatives, we identify **three characteristics** for the creation of an efficient just transition policy instrument. The three objectives identified above will be best supported by a policy instrument which is: 1) locally driven, 2) consistent with other EU programmes and policies, and 3) which includes clear phaseout goals and decarbonisation pathways, backed up by strong review, monitoring and governance processes.

1) A just transition initiative should be **locally driven**. This is especially true at the European level, given the extremely diverse characteristics of the EU's transitioning regions. This implies the establishment of mechanisms to ensure strong social dialogue and the involvement of communities living in these territories, both before and during the transition process. Additionally, an EU-wide instrument should allow for high levels of granularity in the distribution of funds, as socio-economic problems might be highly localized – at the level of a small region or even of a city.

2) Such an initiative should be fully **consistent** with other EU programmes and policies. This means avoiding inconsistencies with other programmes. For example, in regions benefiting from EU just transition funds, other EU funds should not be invested in carbon-intensive sectors such as fossil-fuel extraction and production, which would completely undermine the aims of the just transition policy instrument. However, this also means that this new tool should not overlap with existing programmes with similar objectives, namely existing cohesion funds such as the ERDF and ESF+.

3) The whole process should be structured based on clear **phaseout goals** and decarbonisation pathways that are consistent with the objective of climate neutrality by 2050. This requires in-depth, long-term planning at the territorial and national levels, and rigorous and regular monitoring processes with intermediate reviews aimed at enhancing the process over time.

Figure 2: Recommended elements of an EU-wide just transition policy instrument



Source: Bruegel

3. THE EU'S JUST TRANSITION IN PRACTICE

3.1 WHAT CAN WE LEARN FROM THE EU'S PLATFORM FOR COAL REGIONS IN TRANSITION?

The Commission's work to ensure a just transition in all of its territories did not begin with the Just Transition Mechanism 2020 proposal. A Platform for Coal Regions in Transition (henceforth the Platform) was established as a preparatory action to bring together actors from transitioning regions in the EU and provide an institutionalised framework for them to share best practices, projects, and information. In order to learn from this valuable experience, we conducted interviews with the main stakeholders of that initiative. The Platform has been operational since 2017; 6 working group meetings and two annual political dialogues have been held since this date. Public authorities from the local, regional, and national level, NGOs, trade unions, industry, citizen groups and academia are all involved as stakeholders in this Platform on a voluntary basis.

To learn from this valuable experience, we conducted interviews with stakeholders from this Platform. Annex 2 details this process as well as the responses we received. The aim of this section is to summarise some of the key lessons to be taken away from these interviews, with a particular emphasis on how the Commission could improve its approach to the transition in EU regions. We look in particular at three points:

- What stakeholders consider to be the Platform's strong and weak points – this can help highlight policy processes which are helpful to transitioning regions;
- What are the main challenges that stakeholders face in their own regions due to the transition – this can help to identify the key issues the JTF should aim to address;
- What do stakeholders think of the Commission's proposal for a JTF – this is direct feedback from stakeholders who will most likely be applying for this fund.

3.1.1 What do stakeholders consider to be the Platform's strong and weak points?

To begin with, the Platform was welcomed very favourably by all respondents. The initiative was considered to have been very positive in terms of knowledge sharing; stakeholders were able to share and learn about best practices, projects ideas and funding opportunities, as well as get up-to-date information on EU policymaking relating to the transition and the coal phase-out. They also considered that it was a great networking opportunity, so participants could connect with people working on the same topics as them in different countries and regions, but also with EU officials responsible for programmes that could be leveraged for their projects. Some participants noted they particularly appreciated the availability of technical support for their projects from the Commission and the EIB's Joint Assistance to Support Projects in European Regions (JASPERS).

The possibility for stakeholders to give feedback was greatly appreciated, especially since the Platform was very reactive to their needs. An example of this is the establishment of a secretariat, as of early 2019, to respond to participants' requests for a more institutionalised management of the Platform. The secretariat now manages all Platform activities and is run by Ecorys, ICLEI, Climate Strategies Europe and the Wuppertal Institute for Climate, Environment, Energy.

Finally, participants were also positive about the recognition of other initiatives in the EU working towards the transition in different territories, such as the Forum of Just Transition Mayors.

On the other hand, participants felt that some aspects of the Platform could be improved upon. Aside from the Platform's regularly scheduled meetings, in which all stakeholders can take part,

smaller country meetings were also held. Several participants to our interview felt there was not enough clarity or transparency in these meetings, during which some important decisions, like project selection, were taken. Stakeholders which did not belong to a country's administration could not participate in these smaller meetings without an invitation from these administrations. More generally, some participants felt there was not enough of a structured way to involve all stakeholders, and NGOs, trade unions and citizen groups were only involved on an *ad hoc* basis. Some participants would prefer a stronger mechanism to ensure these actors are involved in these discussions.

Another point which was made by several participants was that the Platform lacked an explicit recognition that coal was being phased out in the EU and still involved discussions around clean coal technologies for instance.

A more structural point was also made. Some participants pointed to the fact that the coordination between DG ENER and DG REGI could have been improved, especially at the beginning of the Platform. DG REGI having a lot of experience in effectively working with regional administrations, their participation is crucial to these processes.

3.1.2 What are the main challenges stakeholders must face in their own regions due to the transition?

The most striking lesson from responses we received for this question is that challenges faced by different regions – even those within one country – greatly vary. Nonetheless, some of the themes which were common among several regions were the following:

- **Declining mono-industries**. There is a strong regional clustering of employment in fossil fuel extraction and power generation, which has led some regions to develop almost entirely on the basis of fossil fuel industries. Now that these industries are declining – both due to structural dynamics such as lack of competitivity with alternatives and policies – regions are faced with the immense challenge of having to change deeply rooted socio-economic models. As such, they are facing issues such as long-term depopulation as their populations move to find better opportunities, high rates of structural unemployment, especially among youth, loss of employment opportunities and of wealth.
- **Environmental damage from long-term exploitation of fossil fuels**. On top of having to address socio-economic challenges, these regions also have to deal with the degradation of their land and bodies of water, as well as high levels of air pollution.
- **Cultural shock**. For many of these regions, the industry they developed around provided steady and well-paid jobs to their workers, as well as a sense of identity, community and pride. For some, the transition is particularly difficult as they consider it is taking away this foundational part of their regional identity.
- **Energy security**. In many countries, fossil fuel provides energy at low prices. On the regional level, fossil fuel energy generation is generally directly linked to district heating. For both of these reasons, an immediate shut-down would increase the risks of energy poverty and potentially cause civil unrest.
- **Time and money**. For most of these regions, the transition will require many years and significant funding. The earlier this process is started, the more the transition can be gradual, which will lessen some of the socio-economic shocks it will create.

While these were the most recurrent problems cited by stakeholders, some regions face particular challenges due to language barriers, unsupportive national authorities, gender dynamics and scepticism towards climate change.

3.1.3 What do stakeholders think of the European Commission's proposal for a JTF?

The JTF was recognised as a positive initiative by most stakeholders, mostly in its capacity to help countries and regions plan for a transition. Some respondents were very positive about the proposed JTF regulation's recognition of the European Council's commitment to climate neutrality by 2050 and by the explicit exclusion of fossil fuels in the list of activities eligible for funding. Additionally, the fact the fund included retraining as a major pillar of the eligible activities was appreciated, as retraining measures are necessary to any just transition and represent large costs for regions to take on.

The following elements of the proposed regulation received mixed comments from participants:

- **Territorial Just Transition Plans**. Some respondents were very positive about these Plans, especially because they allowed countries to identify transitioning territories at a very granular level. Additionally, they were seen as a way to give a good planning capacity to the JTF, despite the limited amount of funding allocated for it. The fact that countries jointly identified regions eligible for funding with the Commission was seen by some respondents as a positive compromise for both, but as a lack of trust from EU authorities by others. Indeed, some respondents saw these Plans as quite resource and time-intensive for countries to put together. As a result of this, they considered there to be high levels of conditionality attached the fund, which would likely make it more difficult for countries with less of an administrative capacity to apply for.
- **Pre-allocation formula**. Some respondents noted that the pre-allocation formula did not accurately present the needs of countries for their territorial transition.
- **Scope of intervention**. While some respondents were very positive about the breadth of activities eligible for funding, and even recommended a widening of this list to further give flexibility to regions in their transition strategies, others felt that given the level of funding available, it might be better to narrow the scope of activities.
- **Inclusion of large companies in Territorial Just Transition Plans**. Some respondents felt that large companies should not be included in Territorial Just Transition Plans as companies may not be able to or want to disclose their phase out strategies years in advance. As such, some considered it to be unrealistic and cumbersome to include these in the Plans, given the little time there was before their submission. Other respondents voiced the opinion that large companies should not be eligible for the fund at all, given their significant own resources and access to national programmes and funds.

3.2 BACKGROUND ON THE EUROPEAN COMMISSION'S PROPOSAL

Having acknowledged that supporting energy-intensive regions in their transition to climate neutrality is necessary for the social viability and the political feasibility of the EU's transition, President von der Leyen's Commission's first concrete policy within its European Green Deal framework was for a Just Transition Mechanism (JTM). Published on 14 January 2020, this policy package partly builds on the experience and lessons learnt from the CRiT. Its objective is to provide financial support to territories facing serious socio-economic challenges deriving from the transition towards climate-neutrality, by using EU funds as well as by leveraging funds from the private sector.

To reach the EUR 100 billion of financing for the period 2021-2027 promised by President Von der Leyen, the initiative relies on three main pillars (European Commission, 2020c):

1. The creation of a Just Transition Fund (JTF): the Commission wants to add EUR 7.5 billion of 'fresh money' to the total amount proposed in 2018 for the 2021-2027 Multiannual Financial Framework (MFF). This is supposed to lead to between EUR 30 and 50 billion of additional funding for the regions most affected by the transition.
2. The use of a fraction of the InvestEU financing devoted to climate to mobilise a total of EUR 45 billion of investment in just transition projects between 2021 and 2027.
3. The creation a public sector loan facility at the EIB partly guaranteed by the EU budget to mobilise between EUR 25 to 30 billion of additional public investments in 2021-2027.

At the time of writing, the JTM's first pillar, the Just Transition Fund (JTF), is the Commission's most developed policy in this framework. While our evaluation of the JTM as an EU-wide just transition policy instrument considers the adequacy of all three pillars combined, it is still too early to specifically assess whether the second and third pillar will be effective as there are not yet enough details available. As such, we focus on JTF in our recommendations, without forgetting its role within the larger JTM framework.

The first official proposal for a European Just Transition Fund came from the Parliament's Industry Research and Energy (ITRE) committee in October 2016, as an amendment to the post-2020 reform of the EU Emissions Trading System[5]. ITRE recommended that the fund be financed using 2% of the ETS' auctioning revenue – roughly equivalent to 79 million euros yearly. The proposal set out the fund for "regions which combine a high share of workers in carbon-dependent sectors and a GDP per capita well below the Union average" and targeted it almost exclusively towards active labour and social policies.

This proposal for a European Just Transition Fund was brought up again during negotiations on the post-2020 long-term budget in the Parliament's interim report from the 7th of November 2018[6]. In this new proposal, the fund would no longer be tied to the auctioning of ETS allowances, but instead have its own allocation of EUR 4.8 billion. The Committee of Regions echoed this in their opinion from October 2019, asking for the establishment of a "Fair Energy Transition Fund", with the same allocation, aimed at "mitigat[ing] the social, socio-economic and environmental impact of structural change in European coal regions"[7].

Finally, the Council endorsed the creation of a Just Transition Mechanism in its conclusions from the 12th of December 2019, calling for 100 billion euros of investment to be facilitated through this broader mechanism and aimed at "tailored support for regions and sectors most affected by the transition" [8].

3.3 DETAILS OF THE EUROPEAN COMMISSION'S PROPOSAL

The stated objective of the European Commission's proposal for a Just Transition Fund[9] is to "*alleviate the impact of the transition by financing the diversification and modernisation of the local*

[5] European Parliament. (2017). Report on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments.
[6] European Parliament. (2018). Interim Report on the Multiannual Financial Framework 2021-2027.
[7] European Committee of the Regions. (2019). Opinion on the Socio-Economic Transformation of Europe's coal regions.
[8] European Council. (2019). European Council conclusions.
[9] European Commission. (2020). Proposal for a regulation of the European Parliament and of the Council establishing the Just Transition Fund (COM(2020) 22 final). https://ec.europa.eu/commission/presscorner/detail/en/fs_20_50

economy and by mitigating the negative repercussions on employment". This section briefly describes the proposal as it stands. The following section analyses this proposal and proposes options for amendments.

3.3.1 Where will the money come from?

The European Commission's proposal foresees that the JTF will rely on EUR 7.5 billion of 'fresh money' that is supposed to come on top of the Commission's MFF proposal from May 2018 (European Commission, 2018). The initial EUR 7.5 billion from the Just Transition Fund is expected to be complemented by transfers of funds from other EU programmes and by national co-financing.

To unlock EUR 1 from the JTF, EU countries will have to re-allocate a minimum of EUR 1.5 and a maximum of EUR 3 from their ERDF or ESF+ envelopes to JTF projects (with a limit of 20 percent in each case), and they will also have to directly co-finance projects according to cohesion rules. This is why the Commission foresees that the overall financing capacity of the JTF will be between EUR 30 and EUR 50 billion. It should be noted that funds from the ERDF and the ESF+ will be transferred not from a country's national envelope, but from the envelope corresponding to each region's development category. Cohesion funds are distributed among a country's regions based on their level of development, within three categories: more developed regions, regions in transition, and less developed regions[10]. More developed regions get a smaller share of a country's allocation of cohesion funds than less developed regions. The transfers from the ERDF and ESF+ to the JTF will respect these categories. What this means is that regions categorised as 'developed' in cohesion regulation will only be able to pull ERDF and ESF+ funds allocated to other 'developed' regions within the same country. The same will be true for each of the three categories of regional development.

Table 1 shows the minimum and maximum amounts of ERDF/ESF+ funds (in values and as a percentage of the total) that will be transferred to the JTF according to the Commission's proposal. Table 1 also gives each country's share of the JTF allocation and of the total of ERDF and ESF+ funds.

3.3.2 Where will the funds be spent?

The money will be available to all EU countries. The Commission's proposal (annex 1 of European Commission, 2020b) provides a formula to determine how the funds will be distributed geographically, depending on the following factors, weighted as described:

- The carbon intensity of a country's NUTS2 regions (weighting 49 percent);
- Employment in mining of coal and lignite (weighting 25 percent);
- Employment in industry (weighting 25 percent);
- Production of peat (weighting 0.95 percent);
- Production of oil shale (weighting 0.05 percent).

Countries can be allocated a maximum of EUR 2 billion; any amount exceeding this would be redistributed proportionally to the allocations of all other member states. The regulation also requires the allocation to represent at least EUR 6 per capita (based on the entire population of a

[10] Annex XXII of the Common Provision Regulation proposal for the 2021-2027 MFF states categorises regions according to the following criteria:
- More developed regions: regions whose GDP per capita is above 100% of the average GDP of the EU-27;
- Transition regions: regions whose GDP per capita is between 75% and 100% of the average GDP of the EU-27;
- Less developed regions: regions whose GDP per capita is less than 75% of the average GDP of the EU-27.

member state) over the entire period in each member state. Column 1 of table 1 gives the allocation of the JTF to member states according to this methodology, and column 7 gives the proportion of the total allocation attributed to each country.

3.3.3 What kind of projects will be financed?

The regulation proposal provides details on the type of projects on which the money will be used. Some of it will be used to invest in private projects and in particular in SMEs, but member states will also be able to use the funds to invest in human capital. The JTF will support a total of 11 types of activities which can be regrouped (apart from activity (k) i.e. technical assistance) into our three broad categories:

1. **Economic revitalisation**: (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; (g) investments in enhancing the circular economy, including through waste prevention, reduction, resource efficiency, reuse, repair and recycling;
2. **Social support**: (h) upskilling and reskilling of workers; (i) job-search assistance to jobseekers; (j) active inclusion of jobseekers;
3. **Land restoration**: (f) investments in regeneration and decontamination of sites, land restoration and repurposing projects.

3.3.4 What will be the conditions to access the Just Transition Fund?

In addition to the pre-allocation and the obligations to reallocate ERDF/ESF+ funds and to co-finance projects at national level, there are a number of other conditions for countries to access the JTF. Countries will have to submit 'territorial just-transition plans' to show that the funds are needed and where they will be spent. Countries will also have to demonstrate how they plan to fulfil their national climate objectives, as the proposal also mentions the (rather vague) need to be "consistent with their National Energy and Climate Plans and the EU objective of climate neutrality by 2050" and "steered by Country Specific Recommendations" of the European Semester. The following elements are described as requirements in member states' territorial just-transition plans:

- A timeline of key transition steps at national level;
- A justification for identifying the territories most negatively affected by the transition – these territories can be considered at any level, including NUTS3;
- An assessment of the challenges faced by these territories (estimated job losses, development needs and objectives);
- A description of the expected contribution of the JTF to address these challenges;
- An assessment of the consistency of JTF support with national transition plans;
- A description of the governance set-up for implementation, monitoring and evaluation;
- A description of operations envisaged;

- Where support will be provided to non-SMEs, a list of all the operations and companies that will be included, along with a justification for their inclusion;
- A justification of support provided for investment aimed at achieving reductions in greenhouse gas emissions from particular activities[11];
- Synergies with other EU programmes and pillars of the Just Transition Mechanism, to address identified development needs.

Access to the funds will be conditional on the approval of these plans by the Commission, whose evaluation will be based on all the above elements.

Table 1: JTF allocation and transfers from ERDF and ESF+ funds

	JTF 2021-2027 Allocation EUR million (1)	ESF+ 2021-2027 Allocation EUR million (2)	ERDF 2021-2027 Allocation EUR million (3)	Range of ESF+/ERDF Transfers: including 1.5 to 3 JTF and 20% constraints (4)	Range of ESF+/ERDF Transfers to the JTF in % of total ERDF and ESF+ funds (5)	Share of ESF+/ ERDF funds (6)	Share of JTF funds (7)	JTF bias (8) = (7) – (6)
BE	68	1044	1027	102 - 204	4.9% - 9.8%	0.7%	0.9%	+
BG	458	2292	4998	687 - 1374	9.4% - 18.8%	2.6%	6.1%	+ +
CZ	581	2428	9338	872 - 1743	7.4% - 14.8%	4.2%	7.7%	+ +
DK	35	161	189	53 - 70	15.0% - 20.0%	0.1%	0.5%	+
DE	877	5506	9180	1316 - 2631	9.0% - 17.9%	5.3%	11.7%	+ +
EE	125	437	1465	188 - 375	9.9% - 19.7%	0.7%	1.7%	+
IE	30	514	399	45 - 90	4.9% - 9.9%	0.3%	0.4%	+
EL	294	5232	10222	441 - 882	2.9% - 5.7%	5.5%	3.9%	-
ES	307	10722	22516	461 - 921	1.4% - 2.8%	11.9%	4.1%	- -
FR	402	6383	8566	603 - 1206	4.0% - 8.1%	5.4%	5.4%	+
HR	66	1902	5122	99 - 198	1.4% - 2.8%	2.5%	0.9%	-
IT	364	13319	24321	546 - 1092	1.5% - 2.9%	13.5%	4.9%	- -
CY	36	184	385	54 - 108	9.5% - 19.0%	0.2%	0.5%	+
LV	68	652	2279	102 - 204	3.5% - 7.0%	1.0%	0.9%	-
LT	97	913	2775	146 - 291	3.9% - 7.9%	1.3%	1.3%	-
LU	4	19	19	6 - 7	16.1% - 20.0%	0.0%	0.1%	+
HU	92	4257	10296	138 - 276	0.9% - 1.9%	5.2%	1.2%	- -
MT	8	81	306	12 - 24	3.1% - 6.2%	0.1%	0.1%	-
NL	220	490	597	217 - 217	20.0% - 20.0%	0.4%	2.9%	+
AT	53	453	617	80 - 159	7.4% - 14.9%	0.4%	0.7%	+
PL	2000	12660	40113	3000 - 6000	5.7% - 11.4%	18.9%	26.7%	+ +
PT	79	6725	10273	119 - 237	0.7% - 1.4%	6.1%	1.1%	- -
RO	757	7414	15317	1136 - 2271	5.0% - 10.0%	8.1%	10.1%	+
SI	92	704	1484	138 - 276	6.3% - 12.6%	0.8%	1.2%	+
SK	162	2197	7388	243 - 486	2.5% - 5.1%	3.4%	2.2%	-
FI	165	643	838	248 - 296	16.7% - 20.0%	0.5%	2.2%	+
SE	61	839	995	92 - 183	5.0% - 10.0%	0.7%	0.8%	+
Total	**7 501**	**88 168**	**191 024**	**11139 - 21822**	**4.0% - 7.8%**	**100%**	**100%**	**+**

Source: Bruegel's calculations based on European Court of Auditors (2019), European Commission (2018) and European Commission (2020b).

Note: Amounts in euros are expressed in constant 2018 prices.

[11] The activities are those listed in Annex I of Directive 2003/87/EC.

4. ANALYSIS OF THE JTF PROPOSAL AND OPTIONS FOR AMENDMENTS

This section analyses the European Commission's proposal for a JTF and discusses several options for modifications. The aim is to highlight the key points from the proposed regulation which legislators should have in mind and may want to consider modifying. For each of these points, we will discuss their importance and why they might be worth modifying, provide options for amendments, and present the advantages and disadvantages for each of these options.

4.1 SCOPE AND SIZE OF THE JTF

Commission proposal

- EUR 7.5 billion funding
- Three objectives covered: social support, economic revitalization, land restoration

Amendment options discussed

- Refocus JTF on social support
- Make reskilling/upskilling funding conditional on real labour market needs
- Support activities that develop a region's capacity to collect, harmonise and disseminate labour data
- Include income support measures such as pension bridging programmes and mobility grants
- Restrict land restoration projects to cases where there is no company to pay for them

4.1.1 Why should modifications be considered?

The first element to note is that we could not find any justification behind the EUR 7.5 billion mentioned in the Commission's proposal. There is no estimation of the funding needs of a Just Transition Fund based on its functions. In addition, although at first glance the headline number appears much higher than the EUR 4.8 billion requested by the Parliament in 2018, the scope of the Commission's proposal for a JTF is much broader than the Parliament's initial proposal and includes missions other than just social support for workers who lose their jobs as a result of the transition.

It is also worthwhile considering whether the EUR 7.5 billion proposed really constitute 'fresh money', as claimed by the Commission. In our view, it is naive, or even misleading, to claim that the funds devoted to the JTF will be additional to the EU budget given that the first stage of the MFF negotiations is focused on agreeing on an overall headline number. This means that once an agreement is reached, the JTF will fall under this aggregate number and therefore the amount devoted to the JTF will mechanically reduce the funds devoted to other programmes. It will thus be important to check what other programmes will be affected and if they could not have played a similar role to that of the JTF.

More generally, EUR 7.5 billion is a very small amount of money compared to what is being negotiated for the overall size of the next MFF. The Parliament initially proposed 1.30% of EU GNI – i.e. EUR 1324 billion (in 2018 prices) – while the Commission's proposal is for a commitment ceiling equal to 1.11% of the EU GNI – i.e. EUR 1135 billion (in 2018 prices). The Finnish presidency proposed

a ceiling of 1.07% of EU GNI – i.e. EUR 1087 billion (in 2018 prices) while the 'frugal' four, namely the Netherlands, Denmark, Austria and Sweden, are pushing for no more than 1% of EU GNI – i.e. EUR 1018 billion (in 2018 prices) (European Parliament Research Services, 2019). The amounts being negotiated therefore range several hundreds of billions of euros. Asking whether EUR 7.5 billion constitutes fresh money is not particularly relevant given this context.

As discussed in our first section, a comprehensive just transition strategy should achieve three objectives: social support, economic revitalisation and land restoration. However, given the limited financial resources currently being discussed for the Just Transition Fund, it will not realistically be able to tackle all three components, as we illustrate below. This is especially true if the fund is to be available to all Member States, as currently stated in the proposal.

Although the magnitude of job destruction caused by the transition to a low-carbon economy is particularly complex to estimate (and thus any estimate should be considered with caution), the gross number of jobs at risk because of the transition in the energy sector alone could reach 1.6 million for the period 2021-2027, according to IRENA (2018).

Table 2 shows the funding dedicated to two other just transition programmes for comparison, one in Canada and one in Scotland. Costs vary significantly between both of these programmes, even for similar policies like tuition vouchers. This underlines the fact that the costs incurred by territories to ensure a just transition can greatly vary depending on their local characteristics and needs. To get a lower-bound estimate of the funding required for an EU-wide just transition instrument, we take the Scottish average allocation per recipient, multiply it by two[12] and then multiply the result by the number of jobs at risk in the energy sector estimated in IRENA (2018). This totals roughly EUR 10.8 billion, which is already above the JTF's proposed allocation of EUR 7.5 billion.

While this is only a very rough estimate of the required funding, it is likely on the lower end of what will be needed. Many sectors other than the energy sector will require deep transformations with severe implications for their labour force, and there are many policies other than retraining which are required to achieve a just transition. As such, providing an adequate amount of social support to the most affected citizens will already absorb most, if not all, of the funds devoted to the JTF.

Table 2: Funding for other just transition programmes

Fund	Total allocation	Duration	Allocation per recipient	Use
Alberta Coal Workforce Transition Programme	EUR 27 million	Not specified	Up to 75% of previous earnings On average, around EUR 3,200 monthly	Re-employment and retirement compensation
			Up to EUR 3420	Moving-related expenses
			Up to EUR 8200	Tuition vouchers
Scottish Oil and Gas Transition Training Fund	EUR 14 million	3 years	On average, EUR 3400	Tuition vouchers

Source: Bruegel based on websites of both programmes. Scottish Oil and Gas Transition Training Fund information available at: https://transitiontrainingfund.co.uk/ and Alberta Coal Workforce Transition Programme information available at: https://www.alberta.ca/coal-community-transition-fund.aspx.

[12] We multiply the Scottish average allocation by two because the Scottish programme has a duration of 3 years but the JTF's allocation is for the whole MFF period – i.e. 7 years.

While our preliminary estimates seem to indicate that EUR 7.5 billion will not be enough to adequately support transitioning workers and communities across the EU – even if the JTF is refocused purely on retraining – it is very difficult to give an estimate of how much funding would in fact be needed. As such, the progress of transitioning territories should be closely monitored, and the Council and the Parliament should be ready to increase the JTF's budget should this prove to be necessary – much like what was done for the Youth Employment Initiative in 2016[13].

4.1.2 How could the proposal be amended?

With this level of funding, it might be worth considering refocusing the JTF only on two of the three objectives of a just transition instrument, namely social support – as was originally proposed by the Parliament – and to a lesser extent, land restoration.

To achieve this, the list of eligible interventions under the JTF could be refocused to the following activities: (h) upskilling and reskilling of workers (i) job-search assistance to jobseekers, (j) active inclusion of jobseekers, (f) investments in regeneration and decontamination of sites, land restoration and repurposing projects, while other activities – (a) to (e) and (g) – could be excluded. It should be noted that the activities cited in the proposal which we classify as 'social support' in this taxonomy are in large part focused on retraining measures. As it stands, the proposal does not include other social measures such as income support for workers. We discuss adding such activities to the scope of the JTF further in this section. Some of the stakeholders from the EU's Platform for CRiT we interviewed highlighted the fact that retraining measures were a top priority for transitioning regions and should absolutely be eligible for JTF funding.

This would allow for the JTF's limited budget to be better targeted and potentially more effective and politically visible. In the current proposal, there is no mechanism to ensure that regions do not use all their JTF allocation for only one objective. As the regulation currently stands, a former coal region could decide to use its entire allocation for a revitalisation project which attracts labour from other territories, without providing social support or retraining to former coal workers. There is a risk that retraining projects are put aside in favour of economic revitalisation projects, which might have more of an immediate economic return for regions but will also require large amounts of funding.

On the other hand, if the scope is narrowed to the JTF's retraining objectives, regions will have less flexibility in the projects they may choose to apply for funding. This could hinder their ability to establish a comprehensive strategy for their transition and to tackle all three objectives together. Regions would have the option of using other funds and programmes for their economic revitalisation; however, these other programmes – like InvestEU or the ERDF for instance – do not have the same priorities or criteria as the JTF. As such, it might be harder for regions to establish a comprehensive strategy for a just transition if they have to take into account the requirements of several different programmes.

Some interview respondents expressed the opinion that the JTF's scope of support should be widened to give regions even more flexibility in the choice of projects they undertake for their transition. It was pointed out that the JTF's explicit exclusion of technologies like natural gas could hinder some regions' plans to use these technologies to bridge the gap between traditional coal technologies and renewable energy technologies. A respondent highlighted the fact that there could be more of an emphasis on new technologies in the list of eligible project activities. Another

[13] The Youth Employment Initiative was initially allocated a budget of €6.4 billion in the 2014-2020 MFF, but the Commission increased this budget by €2.4 billion in September 2016 given the persistently high levels of youth unemployment in the EU.

respondent noted that the regulation could be amended for the JTF to support activities addressing the issue of energy poverty, especially in communities that rely on fossil fuel energy generation for residential heating and insulation. One respondent who found that the list of activities supported by the JTF was adequate also stated that the list of activities should be continuously re-evaluated and modified according to the needs of the regions to ensure flexibility.

Some further points are worth highlighting in this discussion. As far as social support is concerned, upskilling and reskilling could be made conditional on the proof that the retraining provided is in alignment with the needs of the regional labour market. This was done with the Scottish Transition Training Fund, which required that applicants only apply for trainings that met real needs in the local labour market. If they did not, their application for funding was not approved. The point of this conditionality is to ensure funds are channelled to retraining programmes that give workers skills that are in demand in their own labour market.

In the same vein of thought, the JTF could support activities that develop a region's capacity to collect, harmonise and disseminate labour data – specifically, data on the skills that are needed and where affected workers could find alternative jobs. This data would allow workers to have a better idea of the training programmes that might be worth going through, or alternatively, of the places where employers are looking for skills they already have.

Finally, the JTF could also include income support for transitioning workers, namely pension bridging grants, or mobility grants for workers that need to move for a new job. Given the extent of the social safety nets in most EU countries – especially in the West – this would only be a complement to national safety nets where necessary. However, this could lead to a perverse incentive for Member States not to invest in their own social support systems if they consider the EU will make up for it. This option should therefore be considered with some degree of caution.

Concerning land restoration projects, their eligibility to JTF funding should be strictly circumscribed to avoid violating the principle of the polluter-pays. If companies are not held accountable for the damage done to the sites they have exploited, they have a perverse incentive not to invest in land regeneration as they shut down their activities. One respondent pointed to the fact that repurposing old mining sites is a very expensive process which does not ensure long-term jobs for local workers, so it might not be the best allocation for a fund aimed at mitigating the negative socio-economic fallout of the transition. As such, the fund could be restricted to cases where there is no company left to pay for land restoration.

Nonetheless, this could pose a problem in cases where companies have not been given a clear shutdown date, or where their shutdown date is in the distant future. Land regeneration, restoration and repurposing are very long processes, which public authorities might want to begin working on before a company fully shuts down. One respondent to our interview gave the example of the industrial site of Dolní Vítkovice, which was shut down in 1998 and reopened 14 years later to entrepreneurs and the general public as an events venue. It later became the second most visited attraction in the Czech Republic, but this entire process took nearly 20 years. While companies should not be exempted from their responsibilities, it might be worth considering allowing funds to go to authorities and local stakeholders wishing to start the process even before a company fully shuts down and takes responsibility for it.

4.2 CONSISTENCY WITH COHESION FUNDS

Commission proposal

- For each EUR 1 from the JTF, EUR 1 to EUR 3 transferred from ERDF and ESF+ which are fully integrated into the JTF envelope
- Territorial Just Transition Plans 'shall be consistent' with:
  - The territorial strategies defined in the Common Provision Regulation,
  - Relevant smart specialisation strategies,
  - National Energy and Climate Plans,
  - European Pillar of Social Rights.
- JTF is under a dedicated priority or programme within the Investment for Jobs and Growth goal of cohesion policy

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Amendment options discussed

- Remove mandatory transfers from ERDF
- Require that the ERDF be used in regions which receive JTF funds
- Include Territorial Just Transition Plans in the Common Provision Regulation, possible as a mandatory territorial strategy

4.2.1 Why should modifications be considered?

While the option of refocusing the JTF on social support measures should be considered, this does not mean that economic revitalisation is not crucial. On the contrary, it is an essential part of any just transition strategy, as was previously discussed. It should be a joint objective with social support. Without adequate economic revitalisation, social support measures may prove not to be useful. With any amount of retraining and income support, if there are no employment opportunities available, workers will not find new jobs. However, given the major investment needs to transition the EU economy to carbon-neutrality – estimated to be between EUR 250 and EUR 300 billion per year (Claeys et al. 2019) – the JTF's EUR 7.5 billion would likely play a marginal, if not negligible, role to fill this gap.

In the current proposal, the JTF essentially sets aside EUR 7.5 billion of cohesion funds and allocates this sum based not just on economic development, but also on carbon intensity[14]. When countries decide how much of their ERDF and ESF+ allocations they want to transfer to the JTF – within the limited range of EUR 1.5 to EUR 3 for each EUR 1 from the JTF – this can be equated to them deciding whether to use the criterion of carbon intensity for more of their cohesion envelope or not. The more money they transfer from the ERDF and the ESF+, the more money will be allocated based on this criterion, rather than GDP per capita.

[14] Economic development still plays a role given adjustment of shares based on GNI per capita, co-financing rates and transfers from ERDF / ESF+ coming only from the same category of regions.

Additionally, if at the end of the MFF negotiations the money for the JTF is not really additional, but instead is taken from other cohesion funds – which is quite probable, as has been discussed – this would translate into a partial reallocation of EUR 7.5 billion from some countries (mainly Italy, Spain, Portugal, and Hungary) to others (mainly Poland, Germany, Czechia and Bulgaria). This can be seen in column 8 of table 1.

As it stands, the list of eligible interventions for the JTF (as defined in article 4 of the proposed regulation) overlaps with cohesion policy objectives and other EU programmes: almost all JTF activities are already covered under the ERDF and the ESF+ specific objectives, as shown in table 3. The JTF's added value with regards to these programmes is that it focuses only on transitioning regions. However, it might be worth considering whether these other programmes could be refocused to accomplish the same objective.

Table 3: Overlap between JTF objectives and existing EU funds and programmes

	JTF	ERDF	ESF+	EAGF and EAFRD	LIFE	CEF Energy	CEF Digital	Digital Europe	EFSI	Youth Guarantee (only for <25 year-olds)	H2020
(a) investments in SMEs		x					x		x		x
(b) investments in new firms		x									
(c) investments in research and innovation		x			x				x		x
(d) investments clean energy		x		x		x			x		
(e) investments in digital sectors		x					x	x	x		
(f) investments in regeneration and decontamination of sites					x				x		
(g) investments in the circular economy		x			x						
(h) upskilling and reskilling of workers		x	x						x	x	
(i) job-search assistance to jobseekers		x	x							x	
(j) active inclusion of jobseekers		x	x							x	
Funding in 2014-2020 MFF (EU27) - EUR billion		**196.6**	**96.2**	**382.9**	**3.2**	**4.2**	**1.0**	**0.2**	**8.5**[15]	**8.8**	**67.1**
Proposed funding in 2021-2027 MFF - EUR billion	**7.5**	**200.6**	**89.7**	**324.3**	**4.8**	**7.7**	**2.7**	**8.2**	**13.1**[16]	**To be integrated into ESF+**	**86.6**

Source: Bruegel based on EPRS (2018) and regulation establishing each specific programme

[15] For EU28
[16] Former EFSI integrated in budget as InvestEU

4.2.2 How could the proposal be amended?

There is fairly limited room for manoeuvre on this particular point, and each option has heavy costs attached to it. One option would be to remove the mandatory transfers from the ERDF. If it is deemed that JTF should be refocused on social support/retraining objectives, these development funds should not be included in the same envelope. Its aim is not the same as the JTF's retraining activities. What this would imply is that the allocation of the ERDF remains as is and is not redistributed among countries based on the criterion of regional carbon intensity – as shown in column 3 of table 1. The advantage of this policy choice is that transitioning regions will focus on their JTF allocation on social support and retraining measures, and in parallel mobilise more funds for economic revitalisation projects using other funds – namely the ERDF. In the current regulation, there is no mechanism to ensure that regions implement both social support policies and economic revitalisation policies; yet, each of these objectives is crucial to the other to ensure a just transition.

One way to ensure that regions implement both social support measures and economic revitalisation measures together would be to modify the Common Provision Regulation (CPR) so that regions that receive JTF funding are prioritized to receive ERDF funding as well. We will not spend much time analysing this option as amending the CPR has quite a significant political cost and thus is unlikely to happen. Nonetheless, perhaps a small modification could be made; adding carbon intensity of the region in the project-selection process could be an option. This would help favour projects in transitioning regions without requiring major changes to be made to the CPR.

Another concern – one which was highlighted by several of the respondents to our interview – is the risk of desertification of regions. If the JTF is refocused on social support, but the political cost of prioritizing JTF regions for ERDF funding is too high, regions may be unable to plan and fund a coherent and comprehensive economic revitalisation strategy. This could lead to workers having to leave the regions where they find no employment opportunities after having been retrained there. This issue of regional desertification is particularly prevalent in Romania for instance.

4.3 PRE-ALLOCATION METHODOLOGY

Commission proposal

- The pre-allocation methodology is based on the following criteria:
  - Greenhouse gases from a country's NUTS2 regions identified as highly carbon intensive (weighting 49 percent),
  - Employment in mining of coal and lignite (weighting 25 percent),
  - Employment in industry in NUTS2 regions identified as highly carbon intensive (weighting 25 percent),
  - Production of peat (weighting 0.95 percent),
  - Production of oil shale (weighting 0.05 percent).
- This pre-allocation is then redistributed among countries based on the following limits:
  - Countries cannot be allocated more than EUR 2 billion; any amount exceeding this is redistributed proportionally to the allocations of all other member states
  - Countries must be allocated at least EUR 6 per capita.

Amendment options discussed

- Remove pre-allocation and allocate funds based on needs
- Simplify allocation to only include industrial employment in high carbon intensity regions
- Simplify allocation to consider average carbon-intensity at the country level
- Add the criterion of ambition of Territorial Just Transition Plan to the pre-allocation formula

4.3.1 Why should modifications be considered?

As it stands, the JTF proposal includes a pre-allocation of funds at the country level which is based in part on the identification of carbon intensive NUTS2 regions, and in part on employment in mining in coal and lignite, employment in industry in these regions, production of peat and production of oil shale. This formula is meant to measure countries' transition needs and distribute funds accordingly.

However, the formula presents some limitations, and might not accurately reflect these needs. We have reproduced the Commission's pre-allocation calculation in this analysis and found several points worth highlighting. Annex 3 details our calculations.

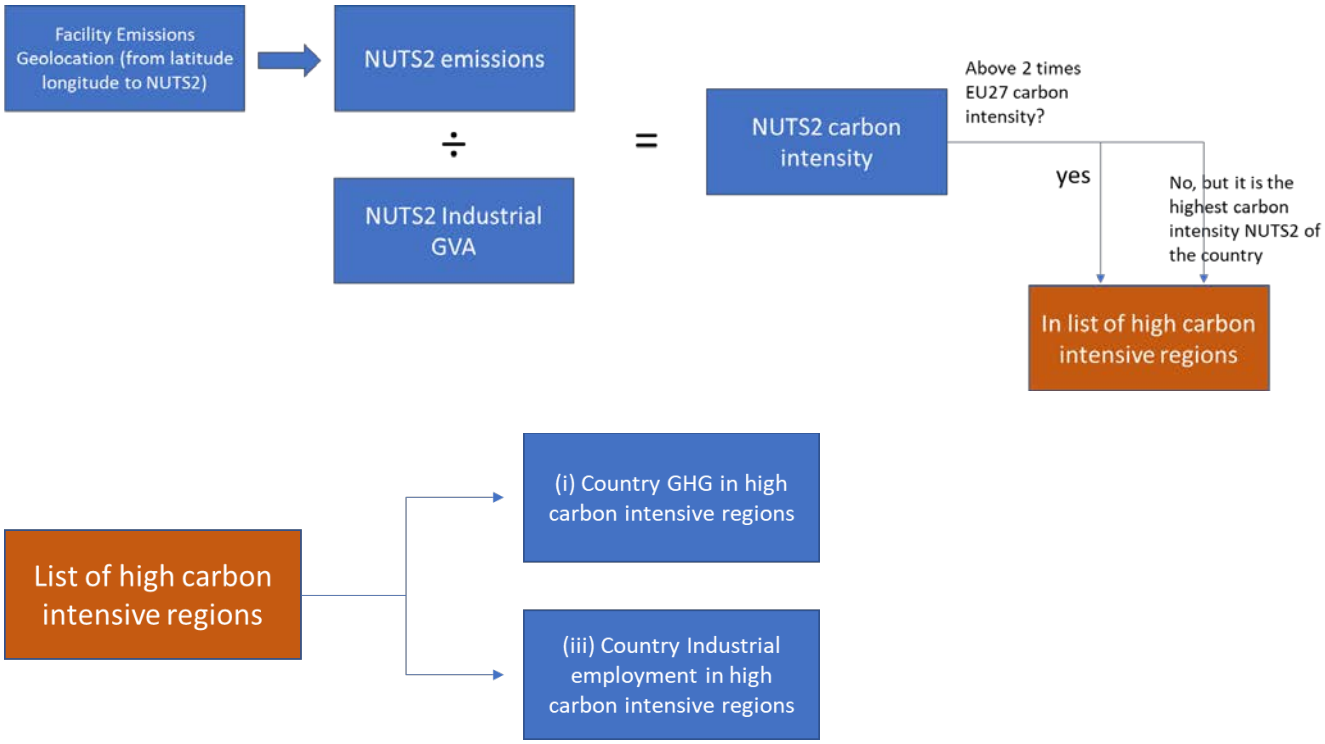
The first is that the results of the Commission's pre-allocation calculations are highly volatile to data which we found to be quite unstable. This is especially the case for NUTS2 greenhouse gas emission data and NUTS2 gross value added (GVA) data.

The first step to reproducing the formula is to determine which NUTS2 regions are 'high carbon intensity' regions. This is done by dividing their greenhouse gas emissions by their industrial GVA and comparing the result to a threshold set at two times the EU average. All NUTS2 regions whose carbon intensity is above this threshold are added to the list of high carbon intensity regions. An exception is made for regions which have the highest carbon intensity of their country and are

located in a country where no region is above this threshold; these are automatically included in the list as well.

Once this list is constructed, greenhouse gas emissions and the industrial employment in these regions are used as parameters in the calculation of a country's pre-allocation. Figure 3 illustrates these two steps. What this means is that a significant part of the pre-allocation calculation is based on the creation of this list.

Figure 3: How do variables impact the final pre-allocation result?



Source: Bruegel

By construction, a threshold is binary; regions are either above or below it. This can be problematic when values for a region are very close to either side of the threshold but contain some margin of error. This can lead to errors in classification for instance if a region whose carbon intensity is just below the threshold has minor errors in its reported GVA which, if corrected, would push it above the threshold.

The issue in this case is that both greenhouse gas emissions and GVA data are subject to non-negligible margins of error and fluctuations. A robust methodology should get similar results despite using different data series for the same measure; this is not the case here.

Table 4 gives the example of Spain to illustrate this point for GVA. As we could not determine which GVA series is being used by the Commission based on the documents made available, column 2 and 3 use Eurostat data for GVA, respectively for January 2016 and March 2016[17], to determine the list of high carbon intensity regions (see Technical Annex for a detailed explanation on the series used and for explanation of reconciliation of results for Spain).

[17] This corresponds to the year of the latest greenhouse gas emissions data which is available.

The result is that using different measures of GVA gives extremely different results in the final pre-allocation result. The reason for this is that the inclusion or exclusion of certain regions in the high carbon intensity list greatly changes the final value used for a country's greenhouse gas emissions and industrial employment – since the methodology only sums values for these from regions which are on the list. We noted here that the inclusion or exclusion of Galicia was dependent on the GVA series which was used because its values were very close to the threshold. This region by itself is one of the drivers of the large differences in results shown in table 4.

Table 4: Volatility of allocation for Spain for different estimates of carbon intensity at NUTS2 level

	EC Estimates (Galicia is high carbon intensity)	Bruegel Estimates (Galicia is not high carbon intensity)	Bruegel Estimates with March GVA series
(i) GHG	42,768	28,501	66,557
(ii) Industrial Employment	276	134.3	707.8
Final Allocation	307 million euros	280 million euros	510 million euros

Source: Bruegel.

Bruegel's full replication of the table in 'JTM and JTF Allocation Table', where the five variables are shown, as well as intermediate results for the allocation formula, can be found at the end of annex 3.

The second points which should be highlighted is that the weights in the pre-allocation methodology do not truly reflect the relative importance of the criterion they are attached to. We conducted a weight sensitivity analysis on the criteria given in the proposed regulation to better understand how each part of the pre-allocation formula has impacted the results of the calculation.

The weights attributed to the different variables should not be conflated with their 'importance' in determining the final pre-allocation. The reason for this is that when the variables chosen are highly correlated, giving weight to one or the other can ultimately be indifferent.

The correlation between greenhouse gas emissions and industrial employment in high-carbon intensity regions, as provided by the EC, is 86.1% - an especially high correlation. Industrial employment is also highly correlated with employment in coal, at 85.9%. Table 5 summarises the correlations between all five of the variables.

Table 5: Correlation between the 5 variables used for allocation of the JTF

	GHG	Industrial Employment	Employment in mining of coal, lignite	Production of Peat	Production of oil shale and sands
GHG	100.0%	86.1%	51.5%	-9.3%	-7.5%
Industrial Employment	**86.1%**	100.0%	**85.9%**	-10.2%	-6.4%
Employment in mining of coal, lignite	51.5%	85.9%	100.0%	-10.3%	-6.6%
Production of Peat	-9.3%	-10.2%	-10.3%	100.0%	-5.3%
Production of oil shale and sands	-7.5%	-6.4%	-6.6%	-5.3%	100.0%

Source: Bruegel

The implication of this is that even if the weighting of the different parameters is changed substantially, there might be only small differences in the final allocation.

Table 6 illustrates this point, showing the final allocation with i) the default weights, ii) with 74% GHG weight and 0% industrial employment weight (remaining weights unchanged), and iii) with 100% weight on industrial employment:

Table 6: Impact on pre-allocation of changing weights (in EUR million)

	(1) Usual weights allocation (Bruegel calculations)[18]	(2) 74% GHG, 0% industrial employment	(3) 100% industrial employment
AT	52.93	52.93	67.36
BE	68.39	66.09	69.94
BG	458.11	453.33	325.62
CY	35.36	35.77	44.65
CZ	578.71	574.86	454.75
DE	890.31	1013.92	781.67
DK	34.69	34.69	34.69
EE	124.88	113.35	183.84
EL	293.89	360.84	142.01
ES	304.20	320.32	318.68
FI	163.73	178.48	141.73
FR	401.51	401.51	401.51
HR	65.02	43.70	139.58
HU	91.08	78.39	150.41
IE	30.89	28.98	38.45
IT	361.57	380.30	422.24
LT	96.07	43.19	262.12
LU	3.61	3.61	3.61
LV	67.40	16.28	221.17
MT	8.29	2.85	30.10
NL	221.48	274.19	165.70
PL	2000.00	2000.00	2000.00
PT	78.70	95.34	61.75
RO	755.41	661.06	623.83
SE	60.72	60.72	60.72
SI	87.23	56.33	167.81
SK	165.83	148.95	186.05

Source: Bruegel

It is important to note other unintuitive effects of weights. Some countries which produce peat nonetheless get a higher allocation with the formula which gives peat a weight equal to zero. This is the case of Estonia and Lithuania for instance. Intuitively, these peat-producing countries should have a bigger allocation when the peat criterion is included, but this is not the case. This illustrates

[18] Note these allocations differ slightly from the allocations provided by the Commission, which might be a result of an issue in interpretation of step 1c) of the allocation method, as described in Annex I of the JTF Regulation. For a full explanation of the issue, see Annex 3 section 2.

a substantial problem in the weighting of the parameters in the pre-allocation formula which does not reflect countries' transition needs.

Another point to make when considering the Commission's pre-allocation criteria is that, as discussed in section 2.1., it is extremely difficult to determine exactly where problems will arise. The profound transformations most industries will have to go through will be felt unevenly across regions, communities, skill groups and countries. The JTF's pre-allocation is based on a small set of criteria, which as we have just shown, could mostly be summarised into one, which do not account for the complexity of the transition to come.

4.3.2 How could the proposal be amended?

Given the high uncertainty surrounding estimates of the regional impacts of the transition, it could have been preferable not to have any *ex ante* geographical pre-allocation of the JTF, but instead to allocate money where problems arise, as is the case for the European Globalisation Adjustment Fund (EGF), described in box 7.

Box 7: The European Globalisation Adjustment Fund

The EGF is an institutional tool which has a fairly long track record and is used in cases similar to those eligible for the JTF. Established in 2006 to support workers who lose their jobs as a result of major structural change, the EGF can be triggered when 500 workers or more are dismissed by a single company, or if a large number of workers are laid off in a particular sector in one or more neighbouring regions. The EGF then provides up to 60 percent of the funding for projects lasting up to two years, to help workers who have lost their jobs find new job or set up their own businesses. EU countries apply for finance from the EGF and national or regional authorities oversee the deployment of project funds.

Originally, the structural changes that were eligible for EGF funding were restricted to those caused by changing world trade patterns resulting from globalisation. However, this has been updated over time. In 2009, the EGF's scope was broadened to also cover people who lost their jobs as a result of the global financial and economic crisis. In 2014, the categories of workers eligible for support were broadened to also include young people not in employment, education or training (NEETs).[19]

The EGF has been adapted over time to respond to new economic and social challenges emerging in the EU. It could thus have been extended to people losing their jobs as a result of the transition process. In fact, in 2017, a coal phaseout project was financed by the EGF to support the Spanish coal mining region of Castilla y León. To get EGF funding, Spain had to establish a link between the redundancies and major structural changes in world trade patterns resulting from globalisation. Spain successfully argued that the European coal industry is increasingly suffering from competition coming from cheaper non-European coal.

However, the JTF is unlikely to modelled on this type of a fund – and there are some disadvantages to amending it in this way. Given the advancement of negotiations on the proposed regulation, the political cost of using such a model would be very high. Additionally, an EGF-type fund would not allow for long-term planning of territorial transitions. As soon as problems arose, regions would apply for funding, without the requirement of thinking more long-term about strategies to shift their economies to carbon neutrality. There would be no incentive for ambitious territorial strategies.

[19] See Claeys and Sapir (2018) for more details on the functioning of the EGF, its evolution since its creation and how it could be improved to better fulfil its objectives.

Without fully doing away with the pre-allocation, which at this point may not be the best option, the methodology could still be significantly simplified. The first option would be to ask the Commission for clarification on this methodology and ensure full replicability of results[20]. This might remove some of the volatility in the estimates if the data sources are clearer and more stable.

Another option would be to only consider one variable: industrial employment in high carbon intensity regions. This would do away with an unnecessarily complex allocation method, which is arguably not achieving the goal of compensating countries for their expected transition efforts. Table 6 above shows that the difference in allocation when using only this criterion versus the JTF's current proposed criteria.

Another option to remove the volatility in these estimates would be to do away with the five criteria and consider national level carbon intensity. Such an approach would simplify even further the formula and decrease volatility substantially, since the process of identifying carbon intensive regions is at its origin. National level estimates are also less prone to substantial statistical revision.

A disadvantage is that such an allocation method does not prioritise the regions most in need. However, recipient regions are also currently not identified through the allocation methodology, but through the just transition plans, provided by the MS.

One criterion which could be considered for pre-allocation is a country's ambition in its Territorial Just Transition Plans. Though this is obviously a subjective measure, it would reward countries that have a clear and ambitious strategy for their transition. One respondent to our interview proposed ambition to be measured based on whether a country's regions have closed a coal mine and/or coal plant in the last 3 years or will close one in the next 3 years.

The current pre-allocation methodology measures the potential for socio-economic disruption in regions due to the transition, but not whether or not this transition is actually being planned for. In this regard, it might be worth considering favouring regions which have already been actively engaged in the EU's Platform for Coal Regions in Transition, as they have begun planning for the transition and developing strategies for it. This is an option which several of our respondents included in their assessment of the JTF, arguing that the JTF's restricted funds should be targeted at regions which have proven their willingness to plan for and work towards a transition and can afford to immediately implement it.

Though this would create positive incentives for the development and ambition of transition strategies, it would also necessarily delay the implementation of the JTF, as this is a softer measure which would require more time and expertise to assess. This could nonetheless be a good way to develop countries' and the EU's ability to measure the ambition of climate policies.

[20] When replicating the EC's pre-allocation results based on the formula given in Annex I of the proposed regulation, several points were unclear. Clarifying these points would be a good option to make the pre-allocation more straightforward and transparent. As detailed in Annex 3 section 1, the elements which could be clarified are the following:

- Information on greenhouse gases:
  - Specific greenhouse gases chosen and their global warming potential (GWP)
  - Exact procedure for geolocation, particularly for cases where the E-PRTR provides conflicting or no information and when NUTS borders have shifted since emissions were reported.
- Information on the exact EUROSTAT series of industrial GVA used for determining carbon intensity
- Information on the exact EUROSTAT series of industrial employment, employment in coal and lignite, peat production and production of oil shales and sands
- Information on the year of total population, used to estimate JTF intensities per capita in step (d) of the Allocation method, as described in Annex I of the JTF Regulation Proposal
- Information on the GNI per capita adjustment step (c)

Respondents to our interview acknowledged the need both for long-term policy planning of a transition and for reactive policies that can help territories face unexpected shocks. It could be worth considering whether the JTF could be used as a hybrid instrument to respond to both of these needs. A mid-way proposal between keeping and removing the pre-allocation methodology could be to only pre-allocate a part of the JTF's envelope, leaving another part available to act as a reactive fund on a needs-basis.

4.4 NUTS2 VS NUTS3-LEVEL DATA

Commission proposal

- Pre-allocation formula is based on NUTS2-level data

Amendment option discussed

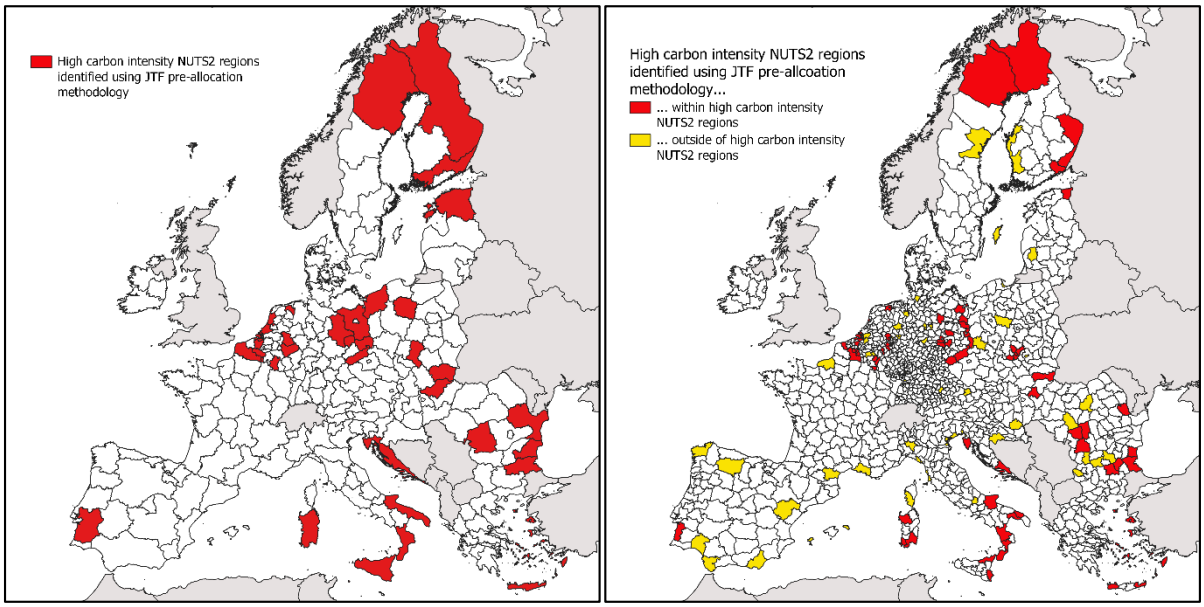
- Change formula to use NUTS3-level data instead of NUTS2

4.4.1 Why should modifications be considered?

Using NUTS2-level data in the pre-allocation formula is inconsistent with the Territorial Just Transition Plans, which identify territories at a NUTS3 or more granular level and determine the ultimate regional allocation of a country's funds. Respondents to our interview appreciated the high level of granularity included in the Territorial Just Transition Plans, which they felt was the most relevant level of analysis to identify carbon intensity problems. NUTS3 regions which are highly carbon intensive and would require funds may not be taken into account if they are located within a broader NUTS2 region which does not have this problem. A respondent from Estonia gave the example of Ida-Virumaa, a North-Eastern NUTS3 region in which the shale industry is almost exclusively located, which is located in a larger NUTS2 region with far less carbon-intensive industry. When looking through a NUTS2 lens, the smaller region's challenges could consequently be minimised.

Maps 4 illustrates the discrepancies when identifying NUTS2 versus NUTS3 high carbon intensity regions. Though our calculations are subject to some uncertainty due to the lack of details in the JTF's allocation method, namely difficulties in geolocation of industrial facilities (see annex 3), they do give an idea of the discrepancy which can occur in the determination of high carbon-intensity regions depending on the level of granularity chosen. In the current Commission's calculation, some highly carbon intensive NUTS3 regions are not accounted for by the JTF allocation formula, simply because they are situated within a NUTS2 region which is not considered highly carbon intensive. This means that the allocation methodology might discriminate against some countries that will receive less money than what they would actually need.

Map 4: NUTS2 versus NUTS3 high carbon intensity regions



Source: Bruegel based on European Commission (2020b), Annex I.

This is also important because the co-financing rate is set according to the level of development of NUTS2 regions in the proposed regulation. This means that NUTS3 territories which are less developed than the NUTS2 regions in which they are located will have a lower rate of co-financing than they would otherwise have if this rate were determined at a NUTS3 level. Thus, the choice of using NUTS2-level data penalises countries which have highly localised problems, as well as NUTS3 regions which are located within NUTS2 regions that are not considered to be highly carbon intensive.

Moreover, the currently foreseen transfers from the ESF+ and the ERDF also depend on the level of development at NUTS2 regions. i.e., a NUTS3 region in need of JTF funding, located in a 'more developed' NUTS2 regions, can only receive a transfer from the ERDF/ESF+ allocation to 'more developed' NUTS2 regions.

The need to be granular has been recognised by the Commission itself, as the regulation proposal states that "in order to ensure the effectiveness of the Just Transition Fund, the support provided needs to be concentrated. The territories identified will therefore correspond to NUTS level 3 regions or could be parts thereof". The Territorial Just Transition Plans that countries have to submit to access the JTF allow for a very high level of granularity – this is a very positive aspect of the JTF regulation. Countries can identify territories even smaller than NUTS3 regions based on the impacts they estimate will be felt as a result of the transition.

However, the logic is not carried through to the pre-allocation methodology. Importantly, the pre-allocation, which identifies high-carbon intensive regions, is not connected to the ultimate list of territories which receive funds from the JTF. Thus, there is an inconsistency between how much countries get – calculated on the basis of the pre-allocation method – and how much countries need – determined at a highly granular level in the Territorial Just Transition Plans.

Looking at Annex D of the European Semester Country Reports illustrates the fact that countries will not obviously identify the same regions which they determine should receive priority funding from the JTF as the pre-allocation methodology does. Map 1 shows the regions identified by the

Commission's methodology while map 3 shows the regions identified by the countries themselves for the European Semester. While there is some overlap between the two, the discrepancies between these maps highlight the fact that the regions identified in the Commission's methodology do not represent the regions which countries themselves think are most 'at-risk' as a result of the transition.

4.4.2 How could the proposal be amended?

The annex to the proposed regulation could be amended to require NUTS3-level data instead of NUTS2-level data when calculating country pre-allocations. This would allow pre-allocation to reflect the countries' transition needs at a more granular level. Geographically smaller areas could be accounted for if they face risks linked to the transition, which would make the pre-allocation more consistent with countries' Territorial Just Transition Plans. These plans can allocate money to territories at a NUTS3 or even more granular level. Linking pre-allocation to the actual allocation of funds would reinforce the political viability of this fund.

A potential drawback for this amendment option is that NUTS3-level data may not be readily available, which implies an additional time lag before implementation to gather and harmonise this data across countries. To adjust the formula at the NUTS3 level, three variables are required at the NUTS3 level: GVA, GHG emissions of industrial facilities and employment in industry. GVA and GHG emissions of industrial facilities are used to calculate the carbon intensity of a region. To determine the extent to which data availability is limited at the NUTS3 level, we investigated available datasets and possible approximations which could be used for each of these three variables.

Eurostat provides GVA at the NUTS3 level in the [nama_10r_3gva] series. However, for industrial employment, the most complete series Bruegel found in EUROSTAT, [nama_10r_3empers], is missing data for France's NUTS3 regions. A more complete database is DG REGIO's ARDECO Employment (Regional Accounts) database, which has data on employment by sector for all countries including France.

GHG emissions from industrial facilities are not available at the NUTS3 level; collecting this data will take some time. In the meantime, it is possible to approximate this data by using the European Environment Agency's European Pollutant Release and Transfer Register (E-PRTR). As described in annex 3, this database includes emissions by industrial facility and each facility's geolocation. Using this data in a spatial analysis allows us to establish a link between the geolocation codes of industrial facilities and NUTS3 regions, based on Eurostat's NUTS3 shapefiles[21].

To understand the impact of this methodology change, we use the aforementioned data series for GVA and employment in industry at the NUTS3 level and approximate GHG emissions from industrial facilities at the NUTS3 level as described to reproduce the EC's pre-allocation formula at the NUTS3 level. Table 7 illustrates the changes this would imply in the final pre-allocation by country.

[21] The full details for these calculations can also be found in annex 3.

Table 7: Difference in allocation between NUTS2 and NUTS3-level data

	Bruegel NUTS3 Allocation (EUR bn)	Bruegel NUTS 2 Allocation (EUR bn)
AT	52.93	65.95
BE	129.32	106.84
BG	564.79	530.54
CY	34.92	36.65
CZ	742.15	644.16
DE	1013.41	1067.31
DK	34.69	34.69
EE	80.36	138.57
EL	300.44	262.13
ES	428.92	279.95
FI	162.07	177.32
FR	401.51	401.51
HR	68.77	63.74
HU	84.41	120.40
IE	28.98	35.30
IT	439.46	405.29
LT	25.59	99.42
LU	3.61	3.61
LV	16.23	66.67
MT	12.87	9.67
NL	208.14	248.84
PL	2000.00	2000.00
PT	127.00	86.59
RO	343.84	340.64
SE	60.72	60.72
SI	40.46	80.60
SK	94.37	132.89

Source: Bruegel based on Eurostat and E-PRTR

5. CONCLUSION

To conclude, it is worth going back to the best practices identified in our study and asking whether the Commission's proposal adequately reflects these as well as to what extent the possible amendments to the legislation discussed in section 4 could improve the Commission's proposal in that direction.

In terms of **governance**, we identified the following best practices from other just transition initiatives:

- Engaging with local stakeholders before and all throughout the transition
- Favouring local and regional authorities

Given that the JTF is an EU-wide policy, the relevant question in terms of governance is whether it establishes an adequate framework for Member States to engage with local stakeholders and include local and regional authorities. Two points are worth noting on this subject:

1. The JTF's Territorial Just Transition Plans are established jointly by Member States and their territories to identify transition needs and strategies, then submitted for approval by the Commission. The engagement of local and regional authorities will depend on Member States' willingness to engage them in the process and on the Commission's severity in evaluating this.
2. The pre-allocation formula in the current proposal does not account for the same level of granularity as the Territorial Just Transition Plans, and therefore does not accurately reflect local funding needs. Therefore, it might be worth considering amending this formula to use NUTS3-level data rather than NUTS2-level data.

Regarding **social support**, a just transition strategy should include targeted labour and welfare policies. Given the JTF's limited financial resources, it could be refocused on these types of policies. An important characteristic of successful labour policies is that they are well targeted; to better ensure this, JTF funding could be made conditional on the identification of real labour market needs in regions establishing retraining programmes. Additionally, the fund could support projects aimed at developing regions' capacity to collect, harmonise and disseminate labour data.

A just transition also implies implementing strong **economic policies** to develop and diversify regional economies that have historically relied on fossil fuels for growth and employment. The current proposed regulation does not ensure that regions put in place both social support policies and economic policies. An option to deal with this could be to remove mandatory transfers from the ERDF to the JTF and adapt the Common Provisions Regulation so that regions accessing JTF funding are also prioritised for ERDF funding and can put in place comprehensive transition strategies.

Finally, a successful just transition should be adequately **planned for, monitored and reviewed**. The Territorial Just Transition Plans and the pre-allocation should ensure adequate planning at the Member State and the regional level. However, it should be noted that these Plans do not require Member States to give clear and long-term fossil fuel phase-out goals, which could hinder efforts to plan for the transition. In the absence of such an obligation, the ambition of a Member State's Territorial Just Transition Plans could be used as an additional criterion in the pre-allocation formula in order to incentivise ambitious goals for the transition. More generally, the formula could be simplified to better reflect the needs of regions willing and ready to transition to a low-carbon economy. In terms of monitoring and review, this will be especially important for the JTF given the uncertainty linked to estimating the socio-economic fallout transition policies will have.

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ANNEXES

ANNEX 1: CASES STUDIED IN SECTION 3.2.

Name	Date	Location	Type of initiative	Description	Assessment
Appalachian Regional Commission	2016-now	Appalachia, United States	Federal fund for economic diversification, land reclamation and workforce re-employment projects in Appalachian coal regions	- Introduced in 2016 by the Obama administration - Pan-agency plan aimed at providing social welfare and economic diversification for coal communities, and tax incentives for the development of carbon capture, utilization and storage technologies - Pledged $55 million to 7 government agencies for the accomplishment of these objectives - Under the Trump administration, the plan has been rolled back and now operates only as a funded programme by the ARC, with a few legacy programmes still existing under different denominations (ACC)	- $600 million in funding requests - $150 million granted between 2016 and 2019 - Leveraged $772 million of private investment - Not enough funding - Policy rollback under Trump administration has weakened initiative - Some local projects have successfully re-employed former coal workers - Too early to know whether these successes will be durable
Enel's Futur-e Programme	2015	Italy	Plan to close and convert 23 thermoelectric plants and one mining site in a sustainable and socially just way.	- Circular economy project - Involve local stakeholders to identify unique, sustainable development opportunities for each individual site - Re-use existing infrastructure as much as possible - Retrain and redeploy all employees of former plant/mine	- As of 2019, all workers from closed sites had been relocated and/or redeployed on a voluntary basis - Pre-existing non-conflictual relations with highly unionized workforce helped develop transition plan jointly - Availability of comprehensive internal database on workforce allowed company to balance redeployment needs and production needs
Lewarde Mining History Centre	1970s	Lewarde, France	Conversion of an old mine into a Mining History Centre	- Partnership between former mining company, regional and national stakeholders for funding of the project - Some former coal miners were employed as tour guides, and some donated mining gear for the exhibition - Classified as a World Heritage Site by UNESCO in 2012	- 150 000 visitors annually - 50% financial self-sufficiency - low job creation but some economic growth derived

Name	Date	Location	Type of initiative	Description	Assessment
Task Force on just transition for Canadian Coal Power Workers and Communities	2018	Alberta, Saskatchewan, New Brunswick and Nova Scotia, Canada	Task Force to meet with workers and communities affected by coal phase-out and give policy recommendations to Government for a just transition strategy	- Visited 15 coal communities and gave the following 10 recommendations: 1. Have a strong evaluation, communication and reporting strategy for the just transition; 2. Include provisions for the just transition in all other legislation and regulation; 3. Fund long-term studies of the impact of the coal phase-out; 4. Fund the establishment and operation of locally-driven transition centres in affected coal areas; 5. Create a pension bridging programme; 6. Improve data collection of coal worker skill profiles, demographics, locations, current and potential positions and make it publicly available; 7. Create a comprehensive funding package for coal workers which includes education, income support, skills building, re-employment and mobility; 8. Fund local infrastructure projects in affected communities; 9. Establish a dedicated, comprehensive, inclusive and flexible just transition funding programme for affected communities; 10. Meet directly with affected communities to learn about their local priorities and to connect them with federal programmes that could support their goals	'- Government of Canada has pledged $35 million but estimated need is in the hundreds of millions of dollars - Gave detailed and region-specific policy recommendations for a locally-driven just transition - Gave insights on health benefits, history of coal in Canada, contribution of coal to Canadian economy, current regulation and phase-out plans in each region, in-depth case studies of various profiles
Genk transition, specialization and diversification	1960s	Genk, Limburg, Belgium	Transition away from coal mining through specialization first, then diversification	- After coal mines were largely shut down in the 1960s, Ford established a manufacturing plant and created a hub for the automobile industry, which fully re-employed workforce - Early 2010s, Ford shuts down plant - Specialization was not durable, and now city is trying to diversify economy in several other industries	- For years, specialization created growth and re-employed workforce - But was not economically sustainable - There is some element of risk in transition to new industries - sometimes, diversification is safer

Name	Date	Location	Type of initiative	Description	Assessment
Ruhr transition	1960s-1970s	Ruhr, Germany	Managing structural change over the course of 50 years to transition coal- and steel-dependent regions	- In the 1960s and 1970s: lock-in, policies were mostly aimed at revitalizing existing industries - But mines and plants were still shutting down. Government provided wage subsidies and early retirement bridges - 1980s: More pro-active industrial policy which aimed at developing renewable energy industry and universities/research centres - Bottom-up development approach with regional planning - Today, region has mostly transitioned away from coal and steel but remains structurally weaker than average in Germany	- Coalition of policymakers, investors, community leaders and workers who had a vested interest in keeping coal and steel industries created a lock-in situation - A part of the shock from mine and plant closures was cushioned by social and labour policies - But region remains poorer than average, with high levels of unemployment and pollution
German Coal Commission	2019	Germany	Commission composed of industry leaders, trade unions, coal region representatives, environmental NGOs, research institutes and individuals from affected communities to produce a plan for a German coal phase out and just transition	- After 8 months of negotiations and several severe cases of disagreement, the final report gave the following recommendations: 1. Establish a clear coal phase-out timeline 2. Support transformation of traditional mining region through regional development 3. Modernize the power system using more renewables 4. Alleviate hardship for those concerned and ensure a just transition 5. Monitor and adjust measures every 3 years	- The outcome of this multi-stakeholder national commission gives strong signals to policymakers and citizens alike - The diverse membership fuelled some public debate instead of pacifying it and somewhat lessened capacity for transformative recommendations in report - Regional transition plans should be prioritized over national plans

Name	Date	Location	Type of initiative	Description	Assessment
Bilbao Strategic Transition	1980s-1990s	Bilbao, Spain	Strategic plan to revitalize Bilbao as its heavy industries were heavily declining due to structural changes	- Creation of an urban development corporation that used public resources for strategic urban development - Construction of Guggenheim Museum and Euskalduna Palace - Large investments in human capital (universities, research centres, ...)	- City successfully projected itself as a cultural attraction thanks to a few important projects - But some consider this to be a series of lucky breaks - Transition lacked an adequate territorial planning framework and had multiple overlapping authorities which created inefficiencies
Transition Programme for Coal Workers	2018	Alberta, Canada	Policy package to accompany coal workers and communities in the coal phase-out	- Bridge to re-employment relief grant - Bridge to retirement relief grant - Aid for mobility - Tuition vouchers for retraining - Career consultancy and help for job searching - Availability of facilitators for site-by-site workforce adjustments - Off-Coal Agreements with power companies that owned local plants and mines - Involvement of federal government programmes and regulation	- Involvement of stakeholders meant the programme was fairly well accepted - Local transition centres were especially important - Created backstops through financial agreements with private energy firms and involvement of federal government - Strong social and welfare policies helped workers transition - But no comprehensive green industrial strategy for the region to help absorb former coal-workers into low-carbon sectors

ANNEX 2: INTERVIEWS OF STAKEHOLDERS FROM THE COAL REGIONS IN TRANSITION PLATFORM

The interviews presented here are for informational purposes only and should not be taken to reflect the views of the organisations to which participants belong.

Selection process

To select participants for these interviews, we contacted the secretariat of the EU Platform for Coal Regions in Transition and provided them the questions and issues we were interested in learning about from participants. Based on this, the secretariat contacted stakeholders it identified as most likely to be interested in commenting on these. In total, 15 people accepted to take part in these interviews.

Once the secretariat received their consent, we contacted these stakeholders directly, providing them a detailed questionnaire which they had the option of answering either in written form or through a telephone or in-person interview. All interviews which were conducted by phone or in person were then transcribed and sent back to participants for a final review. Participants were then given the option of having their contribution anonymised in this publication. One specifically requested that their contribution not be published as an annex, but that it still be included in our summary of contributions – which can be found at the beginning of section 3. Some participants which belonged to the same organisation or agency provided a joint response. It should be noted that this interview process took part during the inception of the COVID-19 crisis (February-March 2020), which meant that two of the people who had initially agreed to the interview were no longer able to participate as they had to focus on the immediate fallout of the crisis.

In total, we received 11 contributions, one of which is not included in this annex.

Questionnaire

The questions asked to participants are detailed below. For each participant, responses are correspondingly numbered.

Question 1: In what capacity have you participated in the Platform for EU Coal Regions in Transition? What would you say are the Platform for Coal Regions in Transition's (CRiT) strong and weak points? Has this initiative helped you in developing projects in your region/country [*choose one based on your expertise*]? In what way?

Question 2: Briefly describe the challenges your region/country [*choose one based on your expertise*] is facing related to the shutdown of its coal mines and/or coal-fired power plants.

This should include answers to the following questions, as well as any other relevant information: which facilities are being shut down? How many people do you estimate risk losing their jobs/have already lost their jobs? Which sections of the population will be/are the most affected? Are there any local factors that make the transition more of a challenge (e.g.: high unemployment rates, lack of other industries in the region, ageing population, depopulation of the region, high levels of pollution in certain areas…)? What do you see as the most important steps to achieving a transition?

Question 3: How is your office/organization/company specifically affected by the shutdown of coal mines and/or coal-fired power plants? Have you put in place/ been involved in any programmes/projects as a response? If yes, briefly describe them.

Question 4: If you are familiar with the use of EU Cohesion Funds in your region/country [*choose one based on your expertise*], describe how you think they could be more effective.

Your answers may include discussions on the following topics or any other you find relevant: What are the difficulties and advantages of shared management? Are there certain financial (e.g. whether grant finance or financial instrument), managerial (e.g. managed centrally or locally) or any operational aspects which have been instrumental for success? Does the co-financing rate matter?

Question 5: Have you heard of the JTF? If yes, what is your opinion on the proposal as it stands?

Question 6: Do you think the JTF can and should play a role in incentivizing regions to think long-term about their transition strategies or that it should instead be used as a reactive fund to address socio-economic shocks caused by the transition?

Question 7: What do you think of the Just Transition Fund addressing social support (e.g., re-skilling measures), economic revitalization (e.g., investments in SMEs and digitalization) and land restoration (e.g., repurposing of old mining sites)? Do you think the scope of eligible projects should be narrowed, or on the contrary, are there additional objectives you think it should aim to fulfil?

Question 8: What would your region/country [choose one based on your expertise] specifically need from such a fund? I.e. Which types of projects/social support should be funded? How much funding do you estimate would be needed in your region/country [choose one based on your expertise]?

Question 9: From an administrative standpoint, how should the fund ideally be structured in your view? I.e. which level of administration should get the funding and decide on projects to be implemented? Which criteria should be included/excluded when choosing a region that should get funding?

Question 10: What kind of support would you expect/need for your office/organization /company? What elements do you think would be the most important for it to be successful, effective and fair?

RESPONDENT 1
Region: Europe

Question 1

The Platform has very much improved since its conception in December 2017. However, the strong points are still outweighed by a number of weak points that undermine the Platform's capacity to drive transition and, in the worst instances facilitate continued delay in the transition. Some good points are not strong enough to highlight explicitly as strengths, although it is worth noting the positive progress being made by the provision of secretariat support.

The strong points of the Platform are:

- Its **openness during the meetings to input from all stakeholders**, particularly in the context of the breakout groups
- The ability of stakeholders to feedback on the platform and suggest sessions for future platform meetings – but note this is undermined by the weaker point on processes within countries linked to the platform

The weaker points:

- **The lack of an explicit recognition that coal is being phased-out and the continued discussion around clean coal technologies** (which remain in the terms of reference) hold back progress in discussions. Clean coal technologies are a myth: no use of coal, with or without abatement, will be consistent with avoiding catastrophic climate change (which in turn impacts proportionally most the poorest in society) and keeping global temperature rise below 1.5°C.
  As a result, some regions place hope in simply transforming their use of coal. Moreover, the continued tolerance of discussion of clean coal technologies (even if in the minority), contradicts the momentum of finance and support away from fossil fuel support, demonstrated by the landmark energy lending policy decision from the European Investment Bank to finish financing for fossil energy projects by the end of 2021 and the exclusion of fossil fuels from cohesion policy funds, including the new Just Transition Fund. Sticking with coal risks leaving regions increasingly ruled out of investment opportunities.
- **A major weakness of the coal platform lies in the processes within countries**. The country team meetings, which aim to develop strategies for transition in regions and to select projects are set up by the national government either on a country-level or within transition regions. In practice, the lack of a clear structure and terms of reference for such meetings means communication to stakeholders is sometimes limited and the process is opaque to all those not directly involved.
  Selected project lists are rarely available for reasons of 'business confidentiality' and the selection criteria are uncertain. Once 'selected' they are helped to find European funding. This may change with the advent of dedicated Secretariat Technical Assistance to Regions in transition (START) support, but it is too early to say.
- **Lack of transparency and information availability**

The driving force behind the weaknesses is the hesitation from the Commission to recognise explicitly that the transition involves the phasing-out of fossil fuels, including a rapid phase out of coal. This itself is a result of the **Commission's unwillingness to threaten the 'energy sovereignty'** of Member States as written in the TFEU, but it also derives from a **lack of direct management of funds by the Commission given to regions in transition** – meaning the Platform and the

Commission can only assist Member States voluntarily engaging in the transition. Those that do not ask for help, do not receive it. This disenfranchises regions of the capacity to take the lead and plan their just transitions and can limit progress due to domestic policies where discussion of coal phase out at the national level is a taboo (such as in Poland and Bulgaria). Moreover, as Member States decide on structures - and project selection criteria are decided in the country team meetings (to which stakeholders are invited by the Member State) - processes lack transparency and therefore scrutiny.

Question 2

The biggest challenges in regions often derive from 3 principle areas:

- The challenges of a monoindustrial economy already in decline: depopulation, ageing, structural unemployment etc. As well as the impact on culture.
- The environmental damage from long-term resource exploitation, which itself is a barrier to future investment
- Politics: the lack of desire to recognise the phase out or end of coal/the fossil fuel industry is imminent, preventing planning and exacerbating the first two challenge areas. Setting a clear timeline provides certainty to investors; avoiding the creation of stranded assets and lowering the overall costs of the transition.

Drawing from WWF's EUKI-funded just transition in Southern and Eastern Europe policy paper, the unwillingness of national authorities to set a phase out date for coal and the influence of invested interests can block transformation of regions. The recommendations from the four case studies included point to 5 headline, general policy recommendations to ensure a just transition:

1. Set a phase-out date for coal as early as possible, followed by an agreed and consensual, timeline-based transition strategy
2. Ensure timelines and strategies are based on high-quality, quantitative analysis, guided by a commitment to sustainability
3. Ensure adequate, targeted financial and policy support for the transition using EU as well as national funds
4. Aim for real economic diversification
5. Engage all stakeholder in an ongoing process, especially at local level

Each region has specific challenges however and it is also worth pointing to areas such as those in South Western Bulgaria (Pernik and Bobov dol in Kyustendil District), where the lack of action in the Western Balkans can simply lead to pollution being exported across the border.

Question 3

[anonymised]

Question 4

Direct management of the funds would be most effective, as funds could be directly targeted to regions in need of them, cutting the intermediaries. This was called for in a recent letter by 15 mayors of large European cities, as well as by other municipalities, such as during a WWF event on just transition in February.

Question 5

We cautiously welcome the new proposal but point out that there is considerable room for improvement in key areas. It is a step in the right direction, but the co-legislators must now ensure

there is sufficient ambition and that the mechanism is watertight to any fossil fuel investment. It is good to see:

- ✓ Inclusion of the requirement for territorial just transition Plans at NUTS 3 level. This is a real step forward, but such plans should be consistent with climate neutrality, exclude fossil fuel investments and include a timeline for fossil fuel phase-out.
- ✓ Recognition of the European Council's commitment to climate neutrality by 2050 in the recitals of the Regulation and in the scope (Article 1)
- ✓ Exclusion of fossil fuels (but only from the fund – gas can explicitly be permitted under the InvestEU Pillar)
- ✓ Regions eligible for the fund should be decided on jointly by the Commission and Member States. This is a new process and we urge the Commission to ensure it is transparent.

In order to deliver a true just transition, however:

- **Territorial just transition plans to be underpinned by higher ambition and include timelines for fossil fuel phase-out**
  Phase-out dates for coal before 2030 in coal regions are essential and all plans should include and a timeline for the phase out of other fossil fuels and the transformation of carbon intensive industries must also be included.
- **A commitment to phase out and ambitious timelines for fossil fuel phase-out should be recognised in the allocation criteria for the fund**
  While the fund should be open to all member states and all regions which face particularly challenging transitions should be eligible, some regions are aiming at faster transitions. This should be encouraged and supported, to raise and support ambition.
- **Transparency and the engagement of all stakeholders must be at the heart of the Mechanism**
  Planning and implementation must involve all stakeholders, including local community representatives and civil society, taking into account the risks posed by conflicts of interest. Support for this process must go further than that provided under current Cohesion Policy provisions. WWF recommends the Seven Golden Rules for just transition Planning as a basis for designing formal structures
- **Fossil fuel investments must be excluded from <u>all three</u> pillars of the Mechanism**
  The just transition will not be achieved if regions are left lagging behind with fossil technology. WWF welcomes the explicit exclusion of fossil fuel investments from the proposed just transition fund. Sustainable economic diversification must be at the heart of the fund.

We welcome that the funding will be additional to the 25% climate mainstreaming target in the EU budget.

Question 6

The Just Transition Fund should facilitate and push regions to support and motivate regions to implement a just transition. An unplanned transition is most likely an unjust transition. Therefore the most valuable part of the fund is the territorial just transition plans, provided they are detailed,

consistent with achieving climate neutrality in line with EU and Paris Agreement goals, essential for accessing the fund and are developed with meaningful engagement of all

stakeholders and a leading role for local municipalities.

The European Globalisation Adjustment Fund is for reactivity. It should complement but not replace long-term planning. A just transition requires long-term planning (otherwise investments stop when cash injections stop and the region declines).

Question 7

It is crucial to remember that the just transition fund and the mechanism as a whole are not the sole sources of support for just transition – either at EU level or when national and other sources of finance are taken into account.

The cohesion policy funds (ERDF) and ESF+ play a key role in providing social support and in economic revitalisation.

The Just Transition Fund should focus on addressing the key issues associated with a just transition, including energy poverty and should only support investments that are truly sustainable. It should work in conjunction with other, existing funds. As before, the most important part of this fund is the inclusion of territorial just transition plans – which should be guided by sustainability concerns and must themselves exclude fossil fuel investment to be effective – and which can include all necessary components and measures for the just transition.

Whether large investments should be supported by the fund should be very carefully scrutinised and in no cases should funds go to fossil fuel installations – including for emissions performance improvements unless these are consistent with net zero emissions. Most such investments into large companies or infrastructure could be better achieved through private financing, supported by green bonds etc. In contrast, the Just Transition Fund, which provides grants, might bets focus on communities and addressing energy poverty; for instance, in residential heating and insulation.

Question 8

N/A.

However it is worth underlining again that this is not the only fund available for the transition. There are other EU funds which can be used, but also many national funds – including in countries which receive a large amount of cohesion funding. WWF's recent Poles Apart paper shows that between 2005 and 2016, Poland invested €18.8 billion into the coal industry, whilst only €5.42 billion was invested in renewable energies. The transformation of the power system versus business as usual is estimated to cost a maximum of €18 billion more to 2050, but direct energy savings could amount to 55 billion and a further €200 billion in avoided damage and health costs.

When calculating the cost of the transition, energy cost savings and avoided damage should be taken into account, as well as use of existing public funds.

Question 9

just transition takes place at the local level and requires bespoke solutions, set into the wider context. As such, it should be distributed and programmed at the NUTS3 level (or in some cases, at even more granular levels). Territories should be able to set phase-out dates for coal independently of their national governments and should have the lead in planning, in order to both avoid political game-playing on funding, but also to improve efficiency and 'cut the middle man'.

Question 10

To be effective and fair, support should take into account the scale of the challenge, but also the ambition presented by the region/country. For instance, it should be taken into account that Greece has announced a phase out date for coal use (lignite) by 2028, where in Western Macedonia this accounts for 5522 jobs where the unemployment rate is already 27%; while in Germany, the 2038 date is unambitious and presents only a small change from business as usual for the first 10 years in terms of closures.

RESPONDENTS 2

Name: Maria Belarmina Diaz Aguado and Javier Vila Ferrero

Organization: Regional government of Principado de Asturias

Position: DG Energy, Mining and Repurposing// DG European Affairs

Country: Spain

Region: Asturias

Question 1

I have joined the "EU Coal regions in transition platform" from its kick-off meeting in Strasbourg on December, 11th, 2017 and I have attended all the meetings ever since in Brussels (except the meeting in July 2019, due to a period of transition in the regional Government) as well as the 2nd Annual Political Dialogue in Gorlitz. Also, I have held bilateral meetings with the European Commission and ECORYS, in Brussels, Madrid and Oviedo. I have participated in several panels and round tables in the different meetings celebrated until the moment. In the different meetings which I have attended, other members of the regional Government have also assisted: two different Regional Ministers of Industry have also participated in this initiative, as well as the Director General of European Affairs.

The strong points of the platform is that is has helped to bring together different regions of Europe with similar problems, which are about to face a hard transition. It has served as a good tool to exchange experiences and good practices and to do networking. Initially, the platform was formed by the 41 regions in coal transition in Europe, and afterwards approximately 20 pilot regions with economies heavily dependent on coal were selected to support their transition. From my point of view, the idea of the platform is brilliant and this selection of pilot regions is also positive, in order to concentrate the efforts where they are required, at regional level.

The weak points could be above all, the fact that no action with tangible results has taken place until the moment, not even for these pilot regions. The regions need prompt actions and we also need help for this transition. There has been great disappointment, deception, with the Just Transition Fund indicators and with the inclusion of all the countries in the EU, without considering the transition regions: neither their degree of affection, speed and impact of the energy transition; nor their degree of involvement in the platform, nor their commitment to develop a transition to cleaner and greener energy systems.

This initiative has helped to prepare regional working groups, both based in public and private partnership and also with transversal cooperation among different departments of the regional government. In these working groups, with a bottom-up strategy also integrated in the simultaneous design of a regional strategy, we have succeeded to identify and propose to the EU new projects. But we still lack of the tools to help us with the mechanisms for funding of these projects. Not only the

mechanism for funding, but also European funds for these projects, which are obviously needed to ensure a just transition.

Question 2

The Principality of Asturias has a strong industrial base, which we must not renounce and which we must reinforce in line with European objectives. Statistically, the industry's weight in 2016 was 21% of regional GDP, exceeding the threshold figure of 20% set as a statistical limit to define an industrial region. To illustrate the importance of the industrial and energy sector, we can simply explain that Asturias represents 4.2% of Spanish electricity demand for less than 2% of its GDP. In this context, Asturias has been a coal region since 1593, when King Philip II gave the first license for a coal mine, and we had over 50.000 miners in the 70's. Also, the industry in Asturias (with steel, zinc, aluminum and cement production, as well as chemical, fertilizers, etc.) is intensive in energy consumption (thus requiring security and quality of supply) and high pollutant. Industry is also facing its own transition towards a greener economy.

In the framework of Decision 2010/787, six coal mines have ceased their coal mining activity on 31th December 2018 and only one mine currently remains open, which a scheduled closure date in 2021. So there are only 1000 coal miners in the region. The impact in our region is greater, due to the accelerated closure of coal fired power plants: Coal-fired power generation capacity is being run down rapidly. 2 coal plants will close in 2020, a third one will reconvert to 1/3 of its power (and a different fuel), so that by 2021 there will be a maximum of 2 coal-fired generation units in operation or available for operation (this means 40% if the current coal-fired installed power). These remaining units are to be closed by 2030 at the latest. However, earlier closure is possible and one of them may not reach 2025. It should be noted that coal power is almost 50% of the total available power in Asturias.

Most of the coal miners have already lost their jobs in the decade 2007-2017, so the impact of the latest closures in 2018 is not so great in number (1500 jobs) but it is unmeasurable in qualitative impact. The same happens with coal plants, with approximately 1500 jobs in risk. But these two activities are the motor and only good quality employment of certain municipalities in Asturias, especially in the poorly connected South West. Thus, the loss of mine related activity can hardly be recovered in other sectors, in areas with additional problems: loss of population and aging of the remaining ones. These areas have contributed to position Asturias as the second region in Spain with the oldest population.

Europe must now show the commitment not to leave any region, any council, any citizen behind, in order to tackle with the uncertainty and the distrust of these territories.

The main challenges are:

- change in the socioeconomic model.
- industrial relocations
- loss of employment and wealth for the affected territories, which in the case of Asturias could be aggravated by environmental losses linked to depopulation.
- Previous unfortunate experiences
- Energy security and quality of supply

We seek a transition that is harmonious with technological evolution, and balanced in its objectives for technical, economic, environmental and social sustainability. For this transition, we have some strengths:

- A deeply rooted mining and industrial culture. Consequently, human capital with high level of experience and qualification.
- A strong sector of service industries, engineering and industrial tractor companies, which form a diversified industrial fabric with a national and international vocation,.
- Availability of raw materials, especially metals (steel, aluminium and zinc).
- A powerful network of infrastructures that facilitate internal and external communication, which include: an international airport and two ports, closed to mining areas.
- Institutions and research organizations, such as the University of Oviedo, a network of technology centres specialized in matters related to RIS3 and other training or R&D institutions, such as the well-known National Carbon Institute, CSIC-INCAR, where funds could be allocated.
- Clusters specialized in materials, energy and environment.
- Assets linked to mining activity.
- A protected natural environment with numerous resources and extensive possibilities for sustainable exploitation.
- A central metropolitan area that facilitates the implementation of projects, including mining areas in a radio of 20 km. Potential for sustainable mobility

Question 3

Our region is being hardly affected by the shutdown of coal mines and of coal-fired power plants. Thus, the regional Government is also being affected by these closures.

We are struggling to position Asturias during this important period, when all the strategies, enabling conditions and funding measures are being discussed in the EU, so that the specific difficulties and capabilities are taken into account.

Inside the "EU Coal regions in transition platform" we are working in close cooperation with the Secretariat and we are receiving assistance from them through the Secretariat Technical Assistance for Regions in Transition (START). Also, we have been selected for the Structural Reform Support Programme (SRSP) of the DG REFORM and we are working on the preliminary documents.

At regional level, we are working our own strategy for transition and we have also formed a Committee on the Impacts of the Transition in Asturias, formed by representatives of the National, Regional and local authorities together with representatives of the entrepreneurs and the unions.

Question 4

The Asturian Region has a vast experience in managing and implementing different types of cohesion funds, all of them under shared management procedures. For the last period, the biggest amounts are dedicated to EAFRD, ERDF and ESF.

The main difficulties related to the implementation of this funds are linked to budget constraints and excessive bureaucracy:

1. Budget constraints come from the regulation of macroeconomic conditionalities, settled in the Pact of Stability, where Member States, and therefore Regions, have three main limitations: public spending, deficit and debt. Structural Funds are pre-assigned funds, meaning that the MS and regions must first allocate the projects in their own budget, implement them and pay them, and only afterwards they receive the co-financed part from the EU. An extraordinary positive measure to facilitate the implementation of the structural funds would be to consider the funds out of the macroeconomic conditionalities, so MS and regions would be able to increase their own debt to be able to implement the funds, which afterwards will be recovered by the EU payment.
2. Bureaucracy linked to the implementation of the funds, accountability, traceability and so on is beyond the average capacity of the public administration. While everybody agrees that every single public euro must be spent according to open, efficient, objective and accountable criteria, a sound effort should be done to simplify at the maximum extent possible the bureaucracy of the system.

Regarding the co-financing rate, it is obviously a huge concern for all the MS and regions with higher economic constraints. A low co-financing rate might certainly be the reason for not being able to implement certain projects if the public budget is limited and must be used to more pressing needs, namely health care, social assistance, critic infrastructures and so on.

Question 5

We were expecting this JTF as a very important initiative and we were confident that it would be a mechanism for just transition in those regions that are already suffering the impact of this transition and which envisage hard times in the following years. We can only be deceived and disappointed after we have analyzed the draft, mainly for the following reasons:

- It has been designed under a "one size fits all approach", including in the distribution countries which are not under transition at current times. Some of these countries will hypothetically receive more money than Spain, without being under coal, energy and industrial transition.

- The allocation of the JTF among different countries was settled based on three main criteria: reduction of greenhouse gas emissions, employment in the coal mining and employment in coal based industries. After those indicators, two corrections were applied, one regarding GDP -which we consider very light- and a limitation from above and from bellow. The top limitation considers a 2.000M € as a maximum that a MS might receive. The lower limitation guarantees a minimum of 6€ per person in each MS, counting the total amount of the population of the country, and not the amount of the population living in the affected regions. Due to this correction, the initial criteria of GHG emissions and employment have been fully distorted leading to a wrong allocation of funds, where countries like France and Italy, having very few regions affected, receive much more funds than for example Spain, which has much more regions affected. The situation is not only unfair but also illogical, as it allocates the money targeting a different criteria than the main purpose of the Fund. This mistake has been highly uncovered since the EC published the first data of the European Semester, identifying all the regions in EU that might be beneficiaries of the JTF. It is still unclear why the JTF distribution among MS was proposed before the regions were properly identified.

- On the other hand, general unemployment -and specially youth unemployment- has not been considered as a criteria for the allocation of the Fund among the MS, which is certainly not understandable, considering the insistence of the Commission statements about leaving no one behind. It is obvious that those regions with higher unemployment ratios will have much more difficulties to implement the transition, and therefore it seems logical to allocate a bigger amount of funds to them.
- Complementary, the correction by GDP has not been sound enough, and is not properly aligned with cohesion policies, which states that poorer regions should be benefited by higher amounts of funds, as their capacities are much more limited in order to implement an effective transition.

Question 6

I think it should be used as a reactive fund to address socio-economic shocks caused by the transition, and it should also consider timing and commitment with transition. This means that, for a 2021-27 multiannual financial framework (MFF) this fund should now focus in that group of countries affording an immediate transition and with higher commitments of decarbonization, leaving a second phase for the party of countries which will start a later transition. Thus, the success of the former would be an example and a mirror for the later, and this success could contribute to stimulate and accelerate future transitions in hesitant regions.

Question 7

The scope of eligible projects is good, but still I think that the repurposing of old mining sites is very intensive in money and the results don't ensure long-term jobs. I would mainly focus in economic revitalization and activities creating long-term employment.

Also, big companies must be included as they can become the drivers of transition in the regions where they are located. All types of companies could contribute to the just transition and they should be eligible, and therefore State Aid rules should be more flexible in these regions.

Question 8

Our region would specifically need money, which should be advanced.

The projects to be funded should be those creating employment, mainly in energy and industrial activity. Also projects capable of fixing population in the coal councils and with environmental added value. For example, energy storage, sustainable mobility, district heating, energy efficiency, efficiency in industry, renewable energy (offshore wind power, biomass, geothermal energy), circular economy, etc.

Funds and funding must be well-targeted, effective instruments and must also value the involvement of the regions. Also, we think that this fund should be capable of funding big projects, since small amounts could be financed at regional /national level.

Question 9

Regional administration at the level of NUTs3 should be considered in other to distribute the funds among different regions in each MS. However, in order to facilitate the implementation, it seems that NUTs2 level might be the best approach, aligned with the criteria of other structural funds, and therefore taking advantage of the experience by the public administration of MS and regions in managing those funds. Even if the bureaucracy would be simplified, a high level of expertise of managing EU structural funds will be still required in order to guarantee the implementation.

We fully agree with the criteria stablished by the EC in the European Semester initial reports, considering only those regions that have coal mines or coal fire plants currently active.

A criteria to be included should be to have a closure of coal mine and/or coal plant in the last 3 years and next 3 years, in order to prove a full commitment with the aim of the fund.

Question 10

The support from the platform is being really important and effective, with close cooperation.

We would now need clear criteria for the distribution inside countries, and criteria for project eligibility, in order to pre-select our better projects and be more competitive.

The support from the DG Reform through the SRSP is as well highly appreciated as it can provide a full perspective of global market demands, and deep analysis of the regions assets, helping them to identify the best policies to implement for the short, medium and longterm policies.

Exchange of best practices among regions is a must. It is highly needed that every region can benefit from the knowledge and experience of the other regions, creating a network that will find and share the most effective solutions.

RESPONDENT 3
Country: Germany

Region: Lusatia (Brandenburg/Free State of Saxony)

Question 1

Region Lausitz participated in all working group meetings and Annual Political Dialogues of the Platform so far.

A strong point is that the platform helps to get actors who are in charge of helping develop the coal phase out within their regions of coal regions all over Europe together to get to know each other and learn from their experiences and good and bad practices.

A weak point is; that during the working group meetings there was not enough time and space for smaller group meetings to give opportunity to discuss specific topics in detail so far.

The initiative has not yet helped develop projects; but we got actors from the regions' companies in touch with others from the other Coal Regions in Transition to match projects and getting them into developing further common projects.

The platform helps to find common arguments, why phasing out coal in a just way is a European challenge and the regions have to work together across borders. It helps for a better understanding, that we can transport into the region.

Question 2

The area that will be most severely affected by the phasing-out of coal mining for electricity generation and the structural transition to a climate neutral and circular economy is the Lausitzer Revier, which is located in Eastern Germany. It is comprised of seven regions (Elbe-Elster, Oberspreewald-Lausitz, Dahme-Spreewald, Spree-Neiße, and Cottbus situated in the Land Brandenburg, as well as Bautzen and Görlitz situated in the Land Saxony). In these regions, around 8,300 people are directly employed in lignite mining. 1.24% of the region's employed population (4,900 people in 2016) could be indirectly affected by the structural change.

Question 3

The Free State of Saxony and the Land Brandenburg have set up a common project called "Zukunftswerkstatt Lausitz" which Wirtschaftsregion Lausitz is in charge for. It helps the region to develop a bottom up strategy to face structural development during the time of coal phase out to be prepared for the future. The project runs since 2018 and will be finalized by this autumn.

Question 4

The EU Cohesion Funds - in theory - provide a lot of money for Lusatia. But the biggest problem, caused by brain drain during the last time is a big lack of capacity to develop projects that are adding value for the region. Especially when it comes to R&D projects we can see only little effects of Cohesion Funds which is also caused by a lack of capacity. The region is currently not able to absorb the provided money. One challenge is to enhance capacity building during the next time.

Question 5

Yes I have heard of the JTF and a I was involved in the discussion process since the first proposal by EP in 2018. My opinion is: Regions, that have to change their economy system caused by mainly external reasons (e. g. policy decisions on EU-Level) have to be supported to find a just and good way to overcome the biggest challenges they are facing. That means, regions who are mostly effected to reach European Green Deal goals; so the coal regions in transition, need to be supported in a special way - with fresh an "easy money" so that EU can make sure enhancing acceptance among civil society for reaching their goals. Otherwise those regions will be left behind and populism and the imagination of losses will be strengthened.

Question 6

I think it can and should be a mixture of both. There will be regions that have to react very soon because they are facing an internal shock caused by the external policy decisions. Others are phasing out coal as a longer term challenge and will be able to think about their strategy. Those need to get the civil society into the process of developing well accepted phase out strategies and from my experience - this takes a plenty of time! So in conclusion JTF should at least be a flexible instrument.

Question 7

From my point of view it´s most important to support economic revitalization and social support as well as capacity building (additional objective) in the regions. When it comes to land restoration: In Germany coal mining companies are in charge for land restoration and we have a lot of experience with land restoration and we know, that this is very expensive. By opening the JTF for not only concepting but also actual restoring itself, the provided money will be sold within a short period of time. So this objective does not seem eligible for Lausitz region.

Question 8

Based on my experience it seems to be necessary to fund projects that add value to the regional economic system and to the social life within the region do develop them as "places to be" for young people and workers as well as company owners/start up founders. Such can be enhanced by strengthening capacity building e.g. in local authorities or business enterprises to help to develop eligible projects.

Question 9

The fund should spread out on a regional level. Every region (in case of Lusatia: Brandenburg and Saxony - NUTS-2) should set up the administration in a flexible way (for other coal regions a NUTS-3

Level can even be better) depending on the regions´ specific needs but taking into account regional coal phase out specific programmes/strategies on a regional (in case of Lusatia district-Level), coal regions level. Shared administration on a state level is neither necessary nor appropriate.

Question 10

For Wirtschaftsregion Lausitz it will be helpful to discuss the effectiveness and needs from the JTF during working groups of Coal Regions in Transition Platform during the upcoming period. It will be an ongoing process and we all will have to think and rethink and discuss effectiveness and upcoming problems during CRITP meetings. So one support can be to establish CRITP during the next years as Platform for the Coal Regions.

Further exchange, a close, regional view and getting civil society into the process to enhance acceptance seem to be most important to make the transition process successful effective and fair.

RESPONDENT 4
Name: Karel Tichý

Organization: Ministry of Regional Development

Country: Czech Republic

Question 1

The Ministry of Regional Development coordinates participation of the Czech Republic and its coal regions in transition (NUTS2 North-West = Karlovy Vary Region and Ústí Region and NUTS2 Moravian-Silesian = Moravian-Silesian Region) in the CRIT Platform and through its RE:START Division has been an active participant in all sessions realized up to date. We find the platform useful especially for having the opportunity to obtain the most current information regarding the coal phase-out policy framework from the level of European Commission representatives. Its importance come up also from the fact that the CRIT Platform serves as place for exchange of experience between coal regions and we appreciate it as a place where regions can establish or deepen their cooperation and / or get professional assistance for their transformation / transition processes as well as the developing of specific transformation / transition projects.

Question 2

In Czech Republic, there are 6 open pit mines and 3 deep mines in operation in 3 coal regions on the level of 2 NUTS2 regions and 13 coal-power plants in 5 NUTS2 regions. Around 18,000 people work directly in coal mining activities. The transition process is expected to affect local communities dependent on the coal mining and coal-fired energy sector, which employ over 21,000 people and account for over 19,000 indirect jobs in the country (there are over 10,000 indirect jobs in coal-related activities in NUTS2 North-West, around 4,000 in NUTS2 Moravian-Silesian and over 5,000 in other Czech regions). All the 3 coal regions are structurally affected regions, that are facing the problems with high unemployment rate risks, long-term depopulation, high levels of air pollution, and overall low rate of cohesion. In order to deal with the issues systematically and strategically, the RE:START Strategy (The Government Strategy for Economic restructuring of the Ústí, Moravian-Silesian and Karlovy Vary Regions) has been drafted and approved by the Government at the end of 2015. It is a part of the Regional Development Strategy of the Czech Republic and responds to the long-term poor economic performance and social situation in three coal regions. The implemented measures have not been responding only to the downturn in mining but they are addressing socio-economic development as a whole including attraction of new investments, support to education, research etc. The strategic framework of the RE:START Strategy is currently being updated to enable its objectives

to be more closely linked to phase-out challenges and energetics transformation. The core of the implementation of the RE:START Strategy shall be embedded in development and implementation of large strategic projects that bring opportunities for people affected by the shutdown of coal mines as well as for the whole economic diversification of the regions.

Question 3

The Ministry of Regional Development as a central government authority is not affected directly by the shutdown of coal mines and/or coal-fired power plants, but – with respect to its role in the state administration – is one of the most important bodies to govern and facilitate the development activities related to all the regions of Czech Republic, incl. the coal regions in transition. The ministry is an important member of the Czech Coal Commission - an advisory body to the Czech government whose task is to recommend when and under what circumstances the Czech Republic should cease to mine coal and produce energy by burning coal. Ministry of Regional Development is leading a working subgroup of this commission that is to identify the social and economic impacts of the decline in coal mining in the affected regions. This task will be closely linked to the above mentioned existing Government Strategy called RE:START, which is implemented through so-called action plans containing 97 measures supporting areas such as business development, research and innovation, human resources, social stabilization, transport infrastructure or the environment.

Question 4

The Ministry of Regional Development has the competence of the National Coordination Authority (NCA), which means it is the central methodological and coordinating body for the implementation of programmes co-financed by the European Union funds in the Czech Republic. There are a number of aspects that influence the success of ESIF implementation and are continuously communicated through this body to the European Commission, which is the central partner of the NCA on the implementation of cohesion policy in Czech Republic. Continuous, intensive communication with stakeholders from coal regions directly involved in transition processes and related projects can be considered essential for the successful implementation of cohesion policy in favor of transforming coal regions (this also applies to JTF). This is also true in terms of supporting the existence of relevant absorption capacity in the regions. The level of co-financing is directly related to the absorption capacity in the regions - it is clear that in the structurally affected / coal regions of the Czech Republic the transformation potential of JTF could be jeopardized if the level of co-financing required for the implementation of projects by potential beneficiaries should increase and if the rules turn too complicated.

Question 5

The Ministry of Regional Development is well aware of the proposed JTF Regulation and in cooperation with other ministries was part of the team preparing the Framework position of the Czech Republic to the proposal of JTF Regulation. The Framework position contains important recommendations for the adjustment of the regulation, e.g.:

State Aid rules

State support rules must not undermine efforts to achieve carbon neutrality by 2050. It is desirable to change these rules so that the support for interventions to achieve these objectives, including JTF funding, has the greatest impact on the territories and Member States concerned.

Support for large companies

Unleashing and clarifying the conditions allowing to support large companies. Territorial just transition plans would not need to list envisaged supported large enterprises, given that the plans are to be approved as part of a programme or priority implementing JTF. This EC requirement is considered as a micro-management and interference with Member State competences in shared management and subsidiarity.

Territorial just transition plans

The plans should only be approved after the operational programme(s) relevant for the implementation of JTF in Czech Republic itself has been approved. The question is why these territorial just transition plans would have to be approved by the EC at all. This is particularly the case where a specific priority would be focused on JTF as part of an operational programme. If the plans would be approved at the same time as the operational programme, the implementation could be significantly delayed. The time is really of essence considering the fact that we are now in 1Q 2020.

Question 6

At the moment the whole transformation process connected with coal phase-out is at the beginning in most of the European countries – with respect to this fact we suppose the JTF will play mainly a role as a tool for the proactive thinking of regions in developing projects that will help them to form and manage the transition processes. In certain specific situations, JTF can have also important reactive role – especially in case of regions, which will be trying to address the transition needs, which will (unexpectedly) emerge as the whole transition processes will be evolving.

Question 7

The proposed scale of supported activities seems sufficient; however, the supported activities should be continuously evaluated and subsequently modified according to the needs of transforming regions. In the long-term perspective it may simply prove essential to support activities that are not part of the proposed regulation and the JTF will need to be revised. We are now leading intense discussions on the readiness and impact of projects that would deliver the desired changes.

Question 8

The range of activities proposed for support from the JTF level is relatively broad and we are now verifying whether such a scale of support can enable the implementation of a number of significant transformation projects in the coal regions of Czech Republic, e.g. in terms of environment where adaption measures could also be useful. In this respect, we consider as important to clarify the potential overlaps that might arise in the relation of JTF to the content of activities, which will be supported through the "standard" operational programmes in the next programming period so that targeting of resources is as strong as possible.

Question 9

The optimal implementation mechanism for using the JTF support in Czech Republic is now being evaluated and at this moment it is premature to present specific standpoints as there are a number of options.

Support from JTF should be directed primarily to the coal regions most affected by the transition to a low-carbon economy – above all with respect to (expected) impacts on the (un)employment, economic performance of regions etc.

Question 10

From the point of view of Ministry of Regional Development and its position in the policy framework for implementation of cohesion policy of European Union in the Czech Republic the continuous communication and cooperation with the European Commission is crucial also when it comes to the JTF. On top of that it must be recognized that situation in each MS may differ, which makes us believe that a higher level of overall flexibility will bring benefits to all stakeholders, including the EC. This is the basic precondition for successful implementation of JTF, regardless the specific implementation mechanism of JTF will be chosen.

RESPONDENT 5
Country: Czech Republic

Question 1

[anonymised]

The Platform is a very welcome and useful initiative. In fact, it was the regions most affected by the phaseout who led the way for the Czech Republic's participation in the Platform. These regions are the ones which have to tackle the issue of the coal phaseout directly, so they saw the Platform as a great opportunity to share knowledge with other regions facing the same challenge, and to get better information on and access to EU funding and programmes.

Strong points of the Platform: Provides thorough information on the issue of coal phase-out and important networking opportunities for regions to connect with territories and administrations dealing with the same kinds of problems.

Weak points of the Platform: There could have been better coordination between DG ENER and DG REGI, especially at the beginning. DG REGI has a lot of information and know-how on effectively working with regional administrations, which is extremely useful for this project. As such, they could have been far more involved in the Platform to help with issues of governance, and especially shared governance between national authorities and regional authorities.

Question 2

The Czech Republic is the third most affected country in the EU by the phaseout of coal; it has the third highest employment in coal and coal-related sectors as well as production of coal in the EU. However, it is not as big as e.g. similarly affected Poland or Germany, so a big effort had to be made for the Czech Republic's challenging situation to be acknowledged at the European level.

There are three NUTSIII regions which are particularly affected by the coal phaseout in Czechia – Karlovarský, Ústecký and Moravskoslezský. These regions are also among those that are the least developed in the country and that have the highest need of investments in social inclusion. In Karlovarský Region as the only region in Czechia indicators even show that the level of development is degrading over time. Some problems include the environmental degradation caused by decades of mining activity and the low levels of education of the population.

Western coal regions in Czechia, i.e. Karlovarský and Ústecký Regions where lignite is mined, still feel the legacy of post-WWII institutions change and dynamics. During the war, there was a large German minority in these regions, which moved away and resettled in Germany or Austria after the end of the war. As a result, many new people moved to these Western regions. This broke the connection to the land that may have been felt by the populations and decreased the sense of ownership in the region. The Western regions with the most coal activity are the regions of Ústecký and Karlovarský. They have mostly lignite mining.

Moravskoslezský Region in the North-East is different. It has been an important industrial region for over 200 years, with a strong tradition in hard coal mining and connection between the people and the land. It is a cultural and social "melting pot" of Czechia, with minorities from Poland and Ukraine, but also Germany, Greece and Italy. These people moved in decades ago to profit from the development of the industry and coal mining there. It seems it is easier for these people to invest in efforts to rebrand their region considering their strong sense of ownership and pride towards their region.

Question 3

The Czech Republic has developed and adopted a new development strategy called RE:START aimed at the three underdeveloped regions which are at the same time the coal regions. It was approved by the government in 2013 and since then financed mostly by national funds and partially – in a scattered way – by EU funds.

The initiative was initially driven by the country's three least developed and most affected regions mentioned above. A cross-sectoral and regional issue had to be tackled in a coordinated manner, for which a cross-agency body was created, bringing together the Ministry for Industry and Trade, the Ministry of the Environment and the Ministry for Regional Development. The objective is to increase coordination and networking between these ministries for them to work towards the goal of a coal phaseout.

The strategy outlines what should happen in the three regions identified above. Their needs are different, not just because of their different cultural, social and economic characteristics, but also because lignite (surface mining) and hard coal (underground mining) mining cannot be treated in the same way. While projects are different in these regions, the approach is nonetheless similar.

The priorities outlined in the strategy are the following:

- Entrepreneurship and innovation (economy)
- Direct foreign investments
- Research and development
- Human capital: create better jobs, provide long-term education to tackle issue of low-skilled workforce and increase motivation and entrepreneurial skills
- Social stabilization: decrease social differences between regions and the rest of the country, increase diversity and attractivity of housing, increase ownership of land and patriotism, develop infrastructure and public administration to connect regions to capital
- Environment

With the start of the CCIRIT Platform and Green Deal initiative at the EU level the RE:START strategy became very well embedded in the overall national and European policy frameworks for the EU Funds, both on the national and the EU level. The regions described are also reflected in the measures of the National Energy and Climate Plan and by the Commission in the European Semester's Country Report Annex D. The regions under RE:START will be those eligible for JTF support as well.

Question 4

Shared management on which Cohesion Policy interventions operate is a very good way to achieve real change on the ground level. Though there might be some inefficiencies due to the mistakes which are made, the advantage of involving people at the local level is much greater. It should also

be underlined that there is always a cost to learning, which is part of the process. Central management cannot ensure on-the-ground results and involvement of local actors. A very small percentage of cohesion money may be lost due to mistakes, but there shouldn't be such a big fear of misuse of funds, when the vast majority are used efficiently at the national, regional and local level. There should be higher levels of trust between the Commission and the national and regional authorities that these funds will be adequately used.

Shared management involves a whole chain of people, all from the EU to the very local level. This provides the most amount of knowledge and information to adequately use funds. It is important to understand the culture and society of individual Member States. At the Commission level, this knowledge is concentrated in DG REGIO.

On the question of the long response period required by shared management, this is quite normal considering that strategies and projects must be adapted to the specificities of national rules and are prepared for a long time period.

For the question of more efficiency of Cohesion Policy, less rules in implementation and simplification would certainly relieve many Managing Authorities. Excessive stress on the money sometimes leads to too many controls, and with the system of national audits they often multiply. It is burdensome for the beneficiaries. On top of that, controllers and auditors sometimes lack practical experience with the projects. As such, the controls may be counterproductive in case they are only unintended errors, as they may damage the image of the EU.

Question 5

The JTF is not proposed as a large part of cohesion policy – it only represents about 3% of overall cohesion policy allocation for the next MFF and in the Czech Republic as well – but all lights are on it. As a result, a new regulation was drafted, even though the current proposal comes with similar investments as in European Regional and Development Fund and the European Social Fund (with some exceptions) (hereinafter ERDF and ESF). But it also brings quite high levels of conditionality. Accessing the fund will potentially be quite complicated and resource-intensive for Member States. If there is no trust between the Commission and local authorities over the use of these funds, and high levels of conditionality attached to it, the fund will likely not be effective.

For instance, the Territorial Just Transition Plans are quite burdensome to put together, especially the list of all the big companies that will have access to the fund as the Plan requests their listing to the level of operations / projects or the projects to eliminate greenhouse emissions listed also in Directive 2003/87/EC. Not only do companies not obviously know what projects and strategies they will have in several years, they may also not be willing to disclose them for strategic reasons. The question is then whether the amount of money that countries can access will balance the effort that has to be invested to make these Territorial Just Transition Plans.

It would be helpful to remove some obstacles and conditions currently in the regulation, and strengthen the trust between European, national and regional authorities that the affected regions and national governments know what should be the best for them and how to transform the region.

Another issue stems from the fact that the JTF pulls from ERDF and ESF to multiply the resources. This means that regions not eligible for the JTF will have less share on ERDF and ESF available to them, which could prove to be tension-rising and counterproductive among the regions. While concentrating resources is understandable, if the EU really wants to make a change, it should devote more money to just transition which should come outside the Cohesion Policy allocation, to help the affected territories.

Question 6

If it became a reactive fund, the JTF would have to be handled outside of cohesion policy. The fund is not fit for this and should be regarded more as a long-term instrument. In any case, the EGF will be able to tackle ad hoc issues of climate change transformation for the next MFF (2021-2027).

Question 7

The scope should definitely not be narrowed but instead should allow regions the flexibility of implementing whichever strategy is most adapted to their specific conditions and strategies. In article 4, the term 'exclusively' should be removed, and the text should be more open to the regeneration of land degraded by mining activities. As of now, this is conditional to the 'polluter-pays' principle, but it is very difficult to determine compliance to this in practice. Phaseout out will take a long time, but land should be restored and revitalized starting now. Regions should be able to start the restoration process – which is very long – before the private company decides to do so, at a point which might be too late.

For instance, the industrial site of Dolní Vítkovice (DOV), which included a coal mine and a metallurgy factory for production of raw steel, was officially shut down in 1998. It is close to a city centre of Ostrava, capital of Moravskoslezský Region, and owned by a private company. Before any reconversion projects could be put into place, an agreement had to be reached between the region and the private developer. Three options were considered: simply shut down the site and pull down the factory and the buildings, turn it into a museum, or develop it in a smart way. The third option was chosen, and with the help of one of the most famous architect in the Czech Republic, the old mine and industrial factory was turned into an events venue, a tourist attraction and an entrepreneurial site. In 2012, it opened for entrepreneurs and public, and since then it became the second most visited place in the Czech Republic after the Prague Castle. While this was undoubtedly a success, it took a full 20 years for the conversion to be completed, ability of the region and the developer to cooperate and also sources had to be pooled from private, national and European funds.

On the government's side, it is very difficult to set a clear date for the phaseout of coal because it might increase energy poverty in the country and also endanger energy safety of the country. Companies will likely not be motivated by the small amount of money in the JTF to seriously considering shutting down their mining operations, so there will be a strong need for soft negotiation on this front.

Question 8

The JRC's study on clean energy potential in EU coal regions[22] identified the three Czech coal regions as some of those with the lowest potential for reconversion towards renewable energies. Geographically, there is no sea, little wind and far less sun than in Southern European countries. This is why it is important for the country to rely on nuclear power.

Additionally, energy distribution is very concentrated in the Czech Republic, so any change would be very costly.

Specific support for e.g. compensating the closing down companies due to speeded transformation might be considered, too.

[22] https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/clean-energy-technologies-coal-regions

As regards costs until 2050, Czechia is still in the process of assessing economic impact of the transformation. Rough estimates speak about twice as severe impact as is the average of the EU expected costs measured in GDP.

Question 9

See response to question 4 for discussion on shared management.

In Czechia management of the fund will be done nationally, while preparation of the Plan and its implementation will be a common national and regional task.

Question 10

N.A.

Additional comments:

If it is properly used, cohesion policy for JTF can be quite an efficient instrument, especially considering that countries and regions already have experience using these funds. For JTF, regions should be given a lot of flexibility in the ways through which they can achieve a transition. Not all regions can become research and university hubs; instead, they each have specificities that should be respected. As such, any transition funds should support a wide variety of activities, including tourism, culture, recreational activities, and services, implemented in a concentrated and strategic, but tailor-made manner.

RESPONDENT 6
Country: Poland

Region: Silesia

Question 1

The Silesian Voivodeship has been involved in activities under the CRiT Platform since its establishment in December 2017, as one of the pilot regions and the largest mining region of the EU.

Silesian region has participated in all meetings of the Working Groups so far and in bilateral meetings with representatives of the European Commission. Silesia also presented selected regional projects submitted as Platform pilot projects and Silesian experience in cooperation with social partners at the Working Groups forum. Silesia benefited from the support of DG REGIO experts and the JASPERS initiative in issuing opinions and suggestions on pilot projects. In the spring of 2019, Silesia was selected as one of the 7 European regions to be supported by the Secretariat of the Platform (START initiative), in the development of further transformation projects in the region. The Platform's strength is the opportunity to exchange knowledge and experience between diverse coal regions in the EU, including the incubation of international and cross-border projects, as well as expert support in the transformation process. A weakness is the lack of own funds for financing / co-financing transformation projects and cooperation projects and Platform's formal legitimacy, e.g. in the decision-making process regarding the selection of projects for support under different programmes financed by EC.

Question 2

The Marshal's Office of Silesia is not directly involved in the implementation of energy policy and commodity resources policy, because it is a governmental competence. There are no official plans for further closing mines in Silesia. About 75.5 thousand people are employed in mining in the Silesian Voivodeship (the EC indicates 78 thousand people in 18 mines). Currently, 14 unprofitable

plants / operations are being finalized in liquidation, in which coal mining has been completed or will soon end and for which liquidation the European Commission has agreed to allocate public aid (2016, 2018). The process of decommissioning the plants / shafts is to be systematic and will be completed by the end of 2023. Miners are mostly to be relocated to other plants.

The exact plans of the government regarding closure of mines and layoffs are not known, they will probably be linked to the outcome of the arrangements regarding the pace and tools for implementing the European Green Deal in Poland. The official government document of January 23, 2018 (Programme for the hard coal mining sector in Poland adopted by the Council of Ministers) does not currently provide for the closure of mines.

Referring to the work of independent experts, e.g. the Institute for Structural Research from 2018, half of the miners in Poland are people under 39 years of age (49%). A large representation are people between 40 and 49 years of age (33%); 90% of people employed in mining are men who are often the main / sole breadwinners of the families. Links to the Institute for Structural Research studies:

https://ibs.org.pl/app/uploads/2018/10/IBS_Research_Report_04_2018.pdf

https://ibs.org.pl/app/uploads/2019/05/IBS_Research_Report_02_2019.pdf (only in Polish)

Transformational challenges concern not only miners but also about 200.000 people working in branches supporting mining. As Silesian Marshal Office's analysis shows almost the entire central and southwestern part of the Silesia region may be affected by jobs lost in mining sector. Moreover, as previous experience shows (case of Bytom for example) the municipalities in which mines were / are closed face the problems of environment degradation, infrastructure decapitalization, mining damage, social structures erosion, depopulation and migrations. Silesian Marshal Office's research shows that by 2030 the estimated decline in population of Silesia will be - 5.7%, including mining municipalities: -8.5% and non-mining municipalities: -2.7%.

Although the Silesian Voivodeship is a relatively economically strong region, it is more and more clearly visible in the GDP statistics that it needs significant additional support. Silesian economic growth dynamics is getting weaker every year, the costs and benefits of transformation are not evenly distributed within the region.

The structure of Silesian economy is rather diversified. In 2017, mining accounted for around 7% of GDP generated in the region, industry for 35.5% of GDP and services accounted for 56.8% of GDP. Silesia is the second biggest energy consumer in Poland (16,3%) and the share of RES energy production is the lowest in the country (3,1%). Because power generation in Poland is so strongly dependent on conventional energy sources, in particular hard coal, the cost of decarbonisation of power industry may have a negative impact on the other industry branches in Silesia.

The unemployment rate in the region is rather low (4.3%) but Silesia is characterized by low economic activity of the population. In 2018, the number of the economically inactive people in the region amounted to 1.7 million, which gave the country's highest percentage of the economically inactive population aged 15 and more (44%). The vast majority of the economically inactive, as much as 71.9%, were people aged 50+. Moreover, in the region there is a strong depopulation and migration outflow of the population, one of the highest in the country (third highest decrease in percentages, first in absolute terms) and an aging population. In addition, the Silesian Voivodeship is characterized by one of the largest streams of population outflow from cities to rural areas.

Region is struggling with the largest air pollution in the country - as many as 13 communes from the region are on the lists of the World Health Organization with the highest air pollution in the EU. As

shown by the European Index of Social Development, developed by European Commission, Silesia is only 250th in the quality of life ranking (out of 272 EU regions, the worst result in the country). There is a high risk of that in the future, relatively high economic development will not be able to compensate for the low quality of life, which will translate into the intensification of existing depopulation phenomena.

The steps that need to be taken are:

- develop complex, yet realistic and adequate to the JTF objectives territorial just transformation plan;
- ensure multi-level and multi-sectoral dialogue and cooperation from the European Union's level to the local level;
- adopt legal tools and facilities that will ensure the maximum effect of JTF intervention, i.e. simplified and flexible European and national regulations which will make the investment process faster and easier, e.g. additional state aid to make investments in post-mining an attractive option for entrepreneurs; regulations that will streamline and improve investment processes in the post-mining areas, e.g. in renewable energy sources; regulations that will clear the ownership of land;
- involve citizens in transition process i.e. educational, informational and awareness-raising activities and local investments involving region's inhabitants to prepare people for inevitable changes;
- ensure the complementarity and full availability (information activities, attractive, complex offer, project pipeline activities) of the Just Transformation Mechanism financing for coal regions (Invest EU, EBI financing);
- adopt flexible Cohesion Policy rules, so that it can respond to the specific needs and problems of mining regions.

Question 3

Marshal Office of the Silesian Voivodeship is responsible for planning and implementation of regional development policy. The national policy concerning energy and climate directly affects regional policy. The regional self-government concentrates on a long-term structural policy on regional economy and regional society, so its main task is to anticipate and prepare the region for the transition challenges and to help municipalities and people cope with the negative effects of transition in a long run. The challenge for Silesia in not just coal-mines shutdown but energy system transformation that will affect the competitiveness of regional industry and energy prices for people and public entities.

Regional development policy is strongly dependent on the Cohesion Policy finance. Regional self-government od Silesia manages the biggest regional operational programme in EU amounted to 3.5 billion euro. More than ¼ of the programme allocation has been dedicated to low-emission economy transformation.

In July 2019 the Managing Board of the Silesian Voivodeship adopted the Action Plan for Transformation of Silesia, which is the base and starting point for further transition activities. In March 2019, a Regional Team for the EC' Coal Regions in Transition (CRiT) initiative was established, among which the regional self-government cooperates with national government, local self-governments, non-governmental organizations, social and economic partners, trade unions. Marshal Office of the

Silesian Voivodeship in a beneficiary, co-beneficiary or animator of 14 regional pilot projects dedicated to economic, social and environmental transformation. The region redirected 120 million euro of regional operational programme allocation to transformation projects till now.

Question 4

Marshal Office of the Silesian Voivodeship is an experienced Managing Authority of Cohesion Policy Programmes. Within 13 years the regional self-government has managed or co-managed the programmes amounted to 6 billion euro, funded from both ERDF and ESF money. The region has the proper institutional capacity, competences and cooperation frameworks needed to manage the transformation process. The advantages of regional fund management include: good recognition of local and regional conditions and specificity, long-term development policy framework, well developed, long-term cooperation framework with local self-governments within territorial instruments (Integrated Territorial Instruments), well developed cooperation with social and business partners, regional resources to combine with European and national ones i.e. newly funded Regional Development Fund. The difficulties include: limited range of elasticity regarding managing European and national budget money, overregulated reprogramming process, limited impact on creating regulatory and strategic conditions for results achievement (case of ex-ante conditionalities within Cohesion Policy 2014-2020). Funds that are centrally managed are far from people affected and far from municipalities affected. There is a risk of a more sectoral approach instead of a complex one, as well as limited ownership and responsibility for results achievement [process run from above instead of a bottom-up approach].

Silesian regional operational programme uses mostly grants as a support measure, but financial instruments are being used to support SME's competitiveness, energy effectiveness of SME's, revitalization and starting businesses. It is important to maintain grants as a main tool for supporting public investments especially in degraded, problematic areas also using higher than average co-financing rates. For enterprises is it important to use higher rates of state aid to incentivize investing in the post-mining / post-industrial areas, as well as national or regional guarantees for companies investing in degraded areas.

Question 5

Marshal Office of the Silesian Voivodeship is very hopeful about the JTF regulation and its impact on boosting the process of transformation of Silesia and mitigating the social and economic consequences of transformation process. The main concerns relate to the following issues:

The catalogue of intervention areas should be open and more flexible to better suit the specificity of the region, it should be possible to name in a territorial just transformation plan some additional interventions to address the specific challenges of the region;

there should be no obligation to provide in just transformation plans comprehensive lists of large enterprises or operations which may potentially get support, as such a requirement could cause delays in adopting plans and create unnecessary administrative burdens for managing authorities;

Member States should be given more flexibility in deciding on the amounts to be transferred from the ERDF and the ESF+ to the JTF; this would also limit any redemptions in the event of low absorption capacity in areas most affected by transformation;

- just transformation plans should have regional character and the commitments set out therein should be reasonable, achievable and adequate to the programming level (the declaration / reference to climate neutrality seems to be of different level and area of

commitments than the scope and purpose of the JTF, which concerns social and economic mitigation of transformation;

- provision should be made for the possibility of a smooth and quick transfer of other funds to JTF during the perspective without excessive procedures and administrative burden;
- allocation and transfers of JTF should be included in the thematic concentration among Cohesion Policy;

The implementation rules should be simplified and more favorable in regard to n+3 rule, higher co-financing rate for investment in post-mining areas;

EU state aid rules must allow more flexibility in the event that eligible regions in transition want to attract private investment.

Question 6

In particular, Just Transformation Fund should encourage long-term planning of the transformation process, but it should be simple and flexible enough to enable addressing more immediate actions.

Question 7

Just Transformation Fund should address social, economic and environmental challenges of the mining regions adequately to the present situation of the region and its challenges in the short, mid-term and long-term perspective. It is important to have a more open catalogue of intervention in the JTF regulation and to narrow it down or widen it in the territorial just transformation plan according to the progress assessment in 2021-2027 (2030) perspective.

The EU coal regions are often at the different levels of transformation and have different challenges. In Silesia many miners (33%) are more than 40 years old and have low or medium education which may implicate their limited willingness to re-skill or upgrade their education. Also the national policy towards closing mines is unclear. Therefore, it would be necessary to plan other social measures like compensatory subsidies, retirement guarantees and others. It is worth to consider more complex support for mining families (part time jobs for wives, scholarships for children).

In regard to economic transformation it is important to invest also in innovation and technology transfer, public-private cooperation on economic activation of degraded areas, as well as acceleration of innovativeness of local companies.

Concerning the land restoration it is a very narrowed environmental intervention. In Silesia there is a huge area of degraded land as well as many devastated buildings in the city centers. Therefore, far more complex social and physical revitalization of urban areas, district and quarters is needed.

Question 8

The Marshal Office of the Silesian Voivodeship is at a preliminary stage of pointing the directions of transformation till 2030. We have just developed the draft of the new, actualized Regional Development Strategy. Also, we are working on the preliminary draft of the future Regional Operational Programme. The present Action Plan for Transformation in Silesia points out three objectives: I. High quality of life in the region; II. Competitiveness of the economy based on modern environmental technologies; III. Development of creative industries and free time industries. The Marshal Office is also in the process of actualization of the Silesian Smart Specialization Strategy. The Just Transformation Fund proposal forces us to adopt a certain perspective of thinking about the future intervention in the years 2021-2027. The preliminary scope of intervention according to our diagnosis and experience may include:

- comprehensive support for the development of new companies generating valuable jobs "from idea to industry";
- comprehensive support for the development of existing companies generating valuable jobs: investments, consulting, training, internships, promotion;
- comprehensive support for innovation transfer entities (technology parks, innovation accelerators);
- comprehensive economic support for municipalities undergoing transformation (business infrastructure, advanced consulting services, promotion);
- comprehensive environmental support for municipalities undergoing transformation (support for the use of post-industrial areas for nature purposes, construction of blue-green infrastructure and increase of biodiversity, improvement of energy efficiency and increase of renewable energy share, development of the circular economy, reclamation, remediation of degraded areas);
- comprehensive social support of transforming municipalities (development of dedicated support instruments for the professional orientation of miners, development of the demanding education system for miners, support for increasing the quality and accessibility of social and educational services addressed to mining families, strengthening socio-economic integration addressed to mining families).

The final scope of intervention will be described in the territorial just transformation plan.

Question 9

In the opinion of the Marshal Office of the Silesian Voivodeship, the Just Transition Fund should be managed at the regional level to be close to people affected by the consequences of transformation. The planning process of transformation should be incorporated in a more complex process of planning of the regional development policy of the region. The regional self-government is a natural partner for local governments, companies and social organizations in the region.

Silesian Marshal Office has wide experience in programming and implementing the two-fund programme (ERDF, ESF in the 2014-2020 perspective) that enables the use of the current institutional potential and a smooth transition to the three-fund programme (ERDF, EFS+, JTF in the 2021-2027 perspective) without the need for a cost-intensive and long-lasting construction process and new accreditation management system.

Regionalizing JTF significantly facilitates complementarity with the ERDF and ESF+, as well as demarcation of support and non-overlap of public interventions; it also allows for efficient and parallel mobilization of funds (which is important in the context of the n + 2 rule, "leveraging" JTF funds by ERDF and ESF+).

Criteria (adequate to the scope of JTF) that should be included when choosing a region for intervention:

- The number of jobs in coal mining;
- Number of active mines;
- Entrepreneurship rate;
- The area of devastated, underused land (mining heaps).

Question 10

The elements important for the successful, effective and fair transformation include:

- Ensuring the formal inclusion of the regional level in the management of JTF;
- Ensuring the bottom-up and tailor-made approach to the transformation process and sound social dialogue;
- Expecting ambitious yet reasonable, adequate and achievable just transformation plan;
- Facilitating interregional cooperation and sharing experiences between coal regions;
- Enabling to adjust the scope of intervention to the specificity of the region (balance between addressing economic, social and environmental challenges, the actual costs of the investment process, the age and qualifications of people affected, the overall population and demographic situation, the present social situation including social exclusion rates, the revitalization needs, the overall economy situation and structure);
- Ensuring complex and complimentary support to maximize the JTF results (financial, legal, managerial measures like: direct funds for projects, additional incentives like higher co-financing / state aid rates, government guarantees for investors, simplification and acceleration of the investment process in the low-emission economy transition, better management & policymaking on local level);
- Advisory, expert support from Just Transition Platform, EC, JASPERS initiative, OECD, World Bank.

RESPONDENT 7
Country: Romania

Question 1

The Platform initiative is welcome as a mean of assessing the coal regions' potential of developing economic alternatives more suitable and sustainable than the radical mine closer and social protection for the mine workers and local citizens.

Romania has already launched a pilot project for Jiu Valley (Hunedoara County) and will also introduce into the Platform the coal mining region from Oltenia (Gorj, Mehedinți and Vâlcea Counties).

Strengths:

Real problems and concerns are made visible and less likely to be further ignored;

Best practices are made available for all concerning actors;

Facilitates the exchange of ideas and learning from others experience;

Funding solutions are becoming more visible.

Weaknesses:

The initiative failed to be truly owned by the Romanian government. After 2 years of meetings and talking, the Platform initiative is still just a theory in Romania;

Richer and healthier countries will benefit more. The problems in coal regions all over Europe may be similar, but they are addressed differently depending on the financial capabilities of the specific country.

It did help, but not as much as I would have hoped. The Jiu Valley region is monoindustrial and lacks attractiveness. We are currently working with a consultant on a strategy for developing the area based on the local authorities and citizens' vision but, in my opinion, it would have help if the central government came with an integrated strategy.

It's a fact that Romania is still far behind the other European countries and I think the best solution for my country would be to dream big and focus on modern technology in an effort to annihilate the existing gap. But this would require a bold vision, specialists and lots of money.

Question 2

The coal regions are mainly mono-industrial regions. Coal extraction has been the main economic activity, the rest being close related to it. Entire regions developed because of it and they started to shrink also because of it.

In Jiu Valley, after 1989 the mine workers numbers decreased from 54.000 employees to 3.000, mainly because the hard coal was extracted from underground at great costs, both human (accidents) and financial.

Between 2000-2016, there was an average population of 530,601 inhabitants with stable settlements in Hunedoara County. 30% of the Hunedoara County population lives in Jiu Valley.

In Oltenia region, in coal related (mining and energy) activities we are currently talking about 13000 employees. The market share for the coal based energy produced in Oltenia region is of 25% (35% during cold or dry seasons).

The unemployment rate is over 5%, but there is also a category of people unaccounted for which are probably working abroad. The horizontal effect is unneglectable too.

All the factors you mentioned apply in those coal regions and, in my opinion, in order to have a successful transition we need to create sustainable economic alternatives, to ensure worker training for quality jobs and growing entrepreneurial skills.

Question 3

Coal mine closure is a complex process that begun in Romania in the year 1997 mainly because of the economic inefficiency.

Many mines were closed in Jiu Valley, Oltenia, Prahova coal basins. The companies being state owned, the closure work was financed from the state budget through the line ministry. The mine closure measures included the right to compensation for salary following collective redundancy, training programmes and other social protection measures for the former employees.

Even so, the reintegration of the laid-off personnel was unsuccessful because of the failure to create new economic activities able to absorb the available work force.

Currently, in Jiu Valley 5 coal mines are in more or less advanced closure process under the provisions of 787/2010/UE decision concerning the closure of uncompetitive hard-coal mines.

Question 4

I am not very familiar with this subject, but, in my opinion, in order for those to be efficient, they must envision the creation of new industries and, consequently, new jobs. We should not focus on services. In poor regions, there are very few affordable services and HORECA is not going to be an option in unattractive industrial regions with high unemployment rates.

Also, it is common knowledge that the absorption rate of EU funds is low in RO mainly due to the complicated process and high rate of co-financing.

Question 5

Yes. JTF must be understood as an opportunity for economic development of the regions affected by the ambitious targets of the Green Deal concerning climate neutrality.

Question 6

It definitely should play an important role with its 3 pillar of financing in stimulating the regions to think long term integrated strategies of economic development, industrial and professional reconversion.

Question 7

I think the prioritization must be:

- Economy reinvention/revitalization through investments in industry, infrastructure, small and medium businesses and digitalization;

- Competent training of the available work force as to facilitate their absorption in new technology activities;

- Restoring to its original state of the land affected by coal mining and energy industry.

Each of those measures could be done by using structural funds, operational environmental programmes, and available human capital.

JTF financing mechanisms must be associated with the financing axes of the structural funds.

For a real impact, the focus must be on new and advanced technologies, bold enough to reintroduce our country on the competitive industry map (hydrogen hub or energy storage).

Question 8

First of all, my country needs a vision and a strategy.

The strategy must be well oriented on the specific capabilities and economic and industrial trends. The future lies into green industries so the direction is set. There is much to be done in terms of energy efficiency so financing investments projects in the energy system and infrastructure (transport and distribution grids) is a must.

But, as I already said, to overcome the current technological gap, we should focus on innovative technologies.

The financing required for the coal phase out is yet to be determined. The national energy system still relies on fossils fueled power plants and there must be set transitory measures to be implemented in the transition process.

Question 9

The Government and regional authorities must set the medium and long term development strategies at national and regional levels. The financing and specific implementation could be done at a regional level but with strict supervision of performance indicators at central level.

The regions that should be included in the financing programmes must be:

- Coal mining regions;

- Regions with coal fueled operating power plants.

The selection criteria must take into consideration the following:

- Monoindustrial specificity;
- Regional GDP (the lower, the bigger the need);
- Depopulation hazard;
- Pollution indicators…

Question 10

We need technical assistance in thinking and financing the National Transition Plans, in identifying the best economic alternatives based on regions specificity and potential.

The Ministry of European Funds was designated as authority responsible with JTF, under the coordination of the Government Secretary General and, in my opinion, must be closely guided in best using the available financing mechanisms.

RESPONDENTS 8

Name: Corinna Zierold and Benjamin Denis

Organization: IndustriALL

Position: Policy Advisors

Country: Europe

Disclaimer: These are preliminary answers and not an official position from IndustriALL.

Question 1

IndustriALL has participated in the Platform in collaboration with ETUC as a sectoral trade union federation. It was one of the few trade unions that represented in the Platform.

The Platform is appreciated by members of IndustriALL as it has gotten many different stakeholders into one room to talk about the just transition. Created and launched in 2016, the Platform was a response to the demands that trade unions had been making for years to include a social dimension in the climate and decarbonization debate. In some coal and fossil-fuel reliant regions, decarbonization is not even a topic of discussion, so there is no policy planning or anticipation of the transition. There was a lack of institutionalized space where different stakeholders could get involved and discuss this topic. The Platform is therefore a very welcome response to this.

However, the Platform somewhat lacks transparency in the way it functions. There are two lanes in the Platform: first, 2-3 bigger working group meetings per year, that include all stakeholders; and second, there are smaller country teams which include national authorities that have an interest in participating.

The most important decisions are made in this second lane. However, it is also where the process is the least transparent. National authorities get to decide whether or not to involve other stakeholders, so trade unions were not automatically included in these smaller working groups. Additionally, some local trade unions were not particularly keen on participating in the process, which also limited the involvement of local social partners in the country teams.

Question 2

ETUC conducted a project in 7 regions reliant on carbon-intensive industries (Antwerp, Asturias, North-Rhine Westphalia, Silesia, Stara Zagora, Yorkshire and the Humber, and Norrbotten). They

interviewed local stakeholders in each of these regions to understand their positions on the issue of a transition to a low-carbon economy. What they found is there is a strong lack of involvement of local trade unions in decarbonization and environmental issues in some of these regions.

One particularly striking case is that of the region of Stara Zagora in Bulgaria, which is far away from all of the main touristic regions in Bulgaria and has only industry: a very large opencast lignite minefield, with 3 coal-based power plants. The region is also characterized by negative demographic trends. The mines are one of the very few assets available in the region creating job opportunities, as well as providing the rest of the country with cheap electricity.

These case studies underline the importance of involving local stakeholders to understand what a transition actually implies on a local level and the multiple challenges that can exist in a region.

Countries are asking where the money and the investments will come from for their regions to transition, and what consequences they will face in terms of employment and electricity prices. The 2014 riots in Bulgaria, caused by a sudden increase in electricity prices, show the larger social impacts that the transition may have. These need to be taken into consideration in the regulation for a just transition.

IndustriALL lead a project studying transitions in south-eastern European countries (Bulgaria and Romania). Basic problems reside in the rule of law and countries' capacity to design industrial policy, with actual means to back it up. In some of these countries, the shadow economy is still quite big. Both this and the lack of industrial planning create uncertainty which stands in the way of attracting new investments into the country. This adds itself to the problem of structural change (transition to low-carbon economy) and demographic change (young people are going to find jobs in other countries.

Question 3

N/A

Question 4

N/A

Question 5

IndustriALL has only had preliminary discussions with its members on this subject. First, there is a strong feeling that this is a positive step forward; the fact that the JTM is the first proposal to be published in the GND framework seems to be an acknowledgement of the EU's role in mitigating the potentially negative impacts of the transition.

However, there are some points to be highlighted which members are dubious about:

1) The negotiations for the next MFF have not been finalized, so there is no assurance that the € 7.5 billion will really be fresh money. Although this proposed budget is more than what the Parliament had initially proposed for the JTF, it won't be enough to address the entire scope of the JTF. In the Parliament's proposal, only EU coal regions were eligible for funds, while in the Commission's proposal, the criteria for regions to be eligible is much wider ("carbon intensity"). This means far more regions can access these funds, but it is too small to address all their needs and realistically support them in achieving a transition to carbon neutrality.

2) When looking at the broader structure of the JTM, the two other pillars (InvestEU and the EIB loan facility) are more forecasts than political pledges, since they are mainly designed to leverage private money and investments.

3) The scope of the JTF is still a bit unclear at this stage. Some members are wondering whether it really makes sense to have the JTF fund industrial projects like modernizing steel plants (which, for instance, would require almost all the annual funding in pillar 1 for one plant) when other funds (e.g.: modernization fund) are available to do this and it clearly is not enough for all carbon-intensive regions that need to transition.

4) On the question of making access to the JTF conditional on a clear commitment by countries to climate neutrality goals → If the aim is to trigger decarbonization changes in regions highly reliant on polluting activities, it is better to secure a maximum amount of money and work on the qualitative aspect of projects through technical assessments. Regions might have different levels of ambition than the national governments and macro conditionality just adds another layer that puts regions further away from the governance of the fund. However, to avoid a blank check effect, there needs to be ambitious selection criteria for projects in the JTF regulation.

Question 6

JTF has an anticipatory approach, the question is how to bridge the gap between the funds made available and the needs of transitioning regions. Two important aspects to achieve this will be the technical assistance made available by the EIB and other authorities and raising awareness and sharing best practices through the Platform.

The Territorial Just Transition Plans will have a crucial role to play in designing low-carbon industrial strategies for these regions, but they will only be as ambitious as Member States and regional authorities make them. Nothing serious will happen if they do not work seriously to engage with local stakeholders.

An additional point is that social dialogue should play a strong role in creating the Territorial Just Transition Plans. Companies are the ones faced with stranded assets and workers are those will lose their jobs, so it is important that social dialogue is institutionalized in the structure of the JTF.

Question 7

All three pillars are important, but they would require much more money than what is available in the JTF as the proposal stands. Just for social support (which should be expanded to include income support and pension bridging), € 7.5 billion is simply not enough to support all transitioning regions in the EU.

Regarding land restoration, companies are responsible for the pollution and damage they have created. The JTF should not exempt them from this responsibility but should be used in the case where there is no company that can be traced back or if this process is too long.

In terms of geographical scope and scope of support, there is some ambiguity in the document as a result of the political compromise which has been reached between coal-producing member states and non-coal-producing member states. In the preamble, the focus is only on coal regions, but in the allocation methodology, this is not the case. Instead, the criterium is "high carbon intensiveness". This ambiguity results in a broad scope of activities eligible for the fund and very broad criteria for regions to be eligible, which makes it difficult to understand what exactly the added value of the JTF is compared to other existing funds and programmes.

Two approaches can be proposed at this stage: 1) either narrow the list of activities so that they are mostly focused on investments in energy (transition from fossil fuels to renewables); 2) leave the decision of economic diversification to the regions themselves, allowing them to choose the activities which want to finance.

Question 8

There are two discussions here. One is the responsibility of the company, which depends on EU and national law, in how much they should pay should there be significant restructuring need, and the other is how much public support should be provided for this restructuring.

The JTF should not be used to exempt companies from the responsibility they have.

Question 9

N/A

Question 10

N/A

Additional comments:

Annex I of proposed regulation has a series of indicators and criteria. The choice of these over others is not very clear. E.g.: In most of the regulation, regions are considered at the NUTS3 level but in the pre-allocation methodology, regions are considered at the NUTS2 region. This is problematic in NUTS3 regions that are highly carbon intensive but are not located in highly carbon intensive NUTS2 regions. This is the case in parts of Northern Spain for instance.

It also seems that some important elements are missing in the list of criteria for region selection:

- The share of coal and lignite in a country's energy production. While jobs and employment are an important issue, it should also be considered that sectors downstream of energy production could suffer from increases in energy prices as a result of the end of the production of cheap energy from coal.
- The number of jobs in the energy sector itself.
- The level of energy poverty. Regions which are most highly dependent on coal are generally those that are most struck by energy poverty.

RESPONDENT 9
Name: Nikos Mantzaris

Organization: The Green Tank

Position: Senior Policy Analyst

Country: Greece

Region: Athens-based focusing on Western Macedonia and Megalopolis

Question 1

I have participated in almost all working group meetings as a civil society stakeholder both in my old capacity as the Leader of the Climate & Energy Policy Sector in WWF Greece, as well as in my new capacity as the Senior Policy Analyst in the Green Tank.

The platform has definitely improved since its inception. In the strong points I would include:

The willingness of its leader Klaus-Dieter Borchardt and other key personnel to listen to all stakeholders. It is a positive trend that he has been scheduling meetings with NGO representatives during many of the Working Group meetings. This is a practice that should definitely continue.

The de facto limitation of sessions and talks related to the prolongation of the coal-based electricity mode through the support of the so-called "clean" coal technologies. It was a positive development that Working Group 2 was renamed from "**Eco-innovation and advanced coal technologies**" to "**Energy system transformation and clean air**" between the 1st and 2nd working group meetings in 2018.

The improved programming which now takes place ahead of time, thus allowing stakeholders to provide input into the sessions. The establishment of the Secretariat has definitely contributed in this direction.

The recognition of other parallel initiatives to enhance Just Transition in Europe such as the Forum of Just Transition mayors currently consisting of 54 mayors from 10 European Countries including Montenegro and Bosnia Herzegovina.

However, there are still several weak features:

Lack of transparency in several aspects of the operation of the CRiT platform such as in the: a) projects that have been chosen so far for funding in each of the 18 pilot regions b) guidelines provided by the European Commission to the regions for selecting projects. The Coal Regions in Transition platform has been operating for 2 years and is not yet known specifically how it has helped the 18 pilot regions in selecting projects, transforming their economies, and creating sustainable jobs and regional GDP.

Inability of the European Commission to impose more transparent and more participatory processes within the pilot regions and the Member States in terms of developing transition strategies and selecting appropriate projects. In particular, the participation of NGOs, trade unions and local communities in lignite/coal villages in country teams has been completely ad hoc do far. Without the structured and active participation of all relevant stakeholders in the country teams, the transition process is in danger of failing.

Muddy messaging around the eligibility of projects related to the coal industry. Although Carbon Capture and Storage and Utilization have not been topics of discussions and sessions in the more recent Working Group meetings, there is no explicit exclusion of such projects from the transition plans of the 18 pilot regions. This lack of clear messaging from the European Commission in turn inhibits progress at the local level as country teams seek of ways to prolong the lifetime of the coal-based electricity model. Thus the urgently needed design of the shift towards sustainable economic activities, which will support local economies and preserve social cohesion for the years to come, becomes delayed.

Question 2

There were approximately 7,175 people working in the lignite industry in Greece at the end of 2019 (both mines and lignite plants). However, one should also add almost the same number of unemployed workers who have been laid off in the last 3-4 years from the lignite industry due to the rapid decline of lignite's share in Greece's electricity mix. In addition, due to the huge dependence of the local economy -especially in Western Macedonia- from the lignite activities (the industry and power production sectors together account for one third of the regional economy of Western Macedonia), other sectors related to lignite will also be influenced by the retirement of lignite plants. According to unofficial estimates, there are 20.000-25.000 jobs directly or indirectly linked to lignite in Western Macedonia and 2.500 more in Megalopolis, which constitute a very significant part of the total working force in the two regions.

The situation is further exacerbated by the fact that Western Macedonia is already leading Greek regions in unemployment rates. Moreover, with a 27% overall unemployment rate in 2018 (22.5% for men and 32.9% for women), the region of Western Macedonia ranks 3rd amongst NUTS 2 regions in the EU. Long-term unemployment (≥12 months) made up 19.3% amongst the region's active population in 2018 (2nd amongst regions in the EU), while unemployment amongst young people (up to 24 years old) was 62% in 2018, placing Western Macedonia 3rd amongst all EU regions.

The biggest challenge for the transition in Greece is **time**. The decision of the Greek government to retire all existing lignite plants by 2023 and leave just one (currently under construction) operating between 2023 and 2028, constitutes a major challenge for the local communities and societies. This is exacerbated by the l**ack of coherent territorial plans** for the two regions or a **robust governance structure**, just a few months before the shut-down of the first lignite plant in Amyntaio. To further worsen the situation, there currently exists **no dialogue between the social partners** influenced by the phase out decision and **no consultation process** for the development of the territorial transition plans. The **lack of steady public financing** for the next decade poses another major challenge which is intensified by the **limited funds made available to Greece through the Just Transition Mechanism** that was recently proposed by the European Commission as part of the European Green Deal and the next Multiannual Financial Framework 2021-2027.

As far as the next steps are concerned, I recommend the following:

PPC (the Public Power Corporation) needs to get involved in the just transition process since it owns the land that will be used for the development of economic activities. The Greek State should work closely with the regional and municipal authorities in Western Macedonia to create the necessary conditions and financial incentives, which will bring healthy industries to the region to propose activities that will benefit the PPC as well as shift of the regional economy towards sustainability.

It is of paramount importance for all stakeholders involved in the just transition process, both at national and regional level, to agree on **one transition plan** prioritising a set of sustainable economic activities for the next 10-15 years. Having this plan, a set of criteria for selecting appropriate projects under these activities must be identified and agreed upon.

The development and successful implementation of a concrete transition plan will require a more **transparent and participatory process** than the *ad hoc* approach followed so far. All groups of stakeholders should participate and have a clear role in the decision-making and project selection processes. A **Just Transition Committee** should be formed by the central government with the participation of representatives from several relevant ministries, regional and municipal authorities, representatives of lignite villages, local stakeholders, trade unions, NGOs and the PPC. The committee should agree on a specific master plan by mid-2020 with technical assistance from the World Bank team.

In terms of funding, the government should commit for the entire period 2020-2030 to channel a **fixed share of the public revenue from EU ETS auctioning** towards the lignite regions in Greece. Moreover, the **criteria used to allocate funds to MS via the Just Transition Fund should be changed** in order to reflect the **urgency of the transition** in coal/lignite mining regions based on the commitments by MS in their NECPs, as well as the **magnitude of the challenge** and the extent of the dependence of the local economies on the lignite/coal-related activities. The 5 criteria recommended by the European Commission do not reflect any of the two and as a result the allocation of funds among MS is unfair.

Question 3

The Green Tank has been supporting the mayors of all 5 "lignite" municipalities in Greece since the new mayors came into power (September 2019), whereas I have been working very closely with the former mayors since 2015. In fact, on February 2020 and on behalf of all 5 mayors I presented to Executive Vice President of the European Commission F. Timmermans a letter describing the urgency of the situation they are facing as well as the shortcomings of the new Just Transition Mechanism the European Commission presented on January 14, 2020. Moreover, the Green Tank has visited several times both Western Macedonia and Megalopolis very recently and provided information, exchanged views and ideas not just with the mayors but with many local stakeholders regarding the transition challenges of the two regions. We are also planning on supporting the mayors and the governor of Western Macedonia in the upcoming Working Group meeting of the Coal Regions in Transition platform.

Question 4

The absorption of EU funds in the region of Western Macedonia is currently very low: 19,5% as of 31.12.2019 but I am not familiar with the specific problems leading to these low absorption rates. Therefore I am unable to make specific recommendations in that regard.

Question 5

We are following closely the negotiations surrounding the new Just Transition Mechanism and Just Transition Fund in particular. We think that there are several positive features but also several major drawbacks.

Positive:

The prerequisite of territorial just transition plans in line with the NECP

The lack of financial support towards fossil fuel projects via the JTF

Embedding the 2050 climate neutrality goal for 2050

Negative:

No clear language regarding phasing out coal and lignite earlier on in order to achieve the climate neutrality goal by 2050

Support for fossil gas projects geared towards district heating in transition regions through the Invest EU pillar of the Just Transition Mechanism. This way, the JTM promotes the shift of the transition regions from one fossil fuel to another, whereas renewables and energy efficiency can also address the heating problem in these regions

Unjust allocation of funds between Member States due to the selection of inappropriate criteria.

Question 6

I don't think that these two are or should be mutually exclusive in order for the transition to be truly just. While all transition plans should be long term, emphasis should be placed and funds should be made available in order to alleviate the immediate consequences associated with the rapid decline of coal and lignite in the EU.

Question 7

Reskilling and upskilling should be among the top priorities of the Just Transition Fund. The financial support for the development of alternative, sustainable economic activities should be the main

priority. Funding for land restoration projects should be extensively scrutinized though, since land restoration is an obligation of the mining companies and rightfully so. In cases where the new use of the land dictates more expensive restoration processes, joint funding with the new land owners should be pursued first and the JTF should be used only for leveraging.

Question 8

For both Western Macedonia and Megalopolis, priority should be given to the following categories of projects:

Energy efficiency especially in buildings, since the current building stock in Western Macedonia is of very low energy efficiency, and hence investment in this sector could lead to enormous savings while also generating a significant number of jobs and regional GDP.

Renewables installed in former mines, especially through energy communities since this would maximize the benefits for the local communities.

Conversion of lignite plants to energy storage facilities for electricity produced by renewables, through the molten salt technology. This would exploit the existing grid infrastructure, is a mature technology, has a short construction period, will provide Greece with much needed energy storage capacity and will keep jobs in the energy sector in the lignite regions.

Agriculture (aromatic plants and saffron in W. Macedonia in particular)

Exploitation of the rich industrial heritage of the regions

Circular economy

Reskilling and upskilling of workers

For Western Macedonia there is a study of 2016 which estimated that with investments of the order of €2,4 billion in 12 sustainable economic activities, approximately 11.500 jobs could be created as well as double the regional GDP that will be lost due to the retirement of existing lignite plants.

However, the challenge for the 2 Greek regions does not only exist in the amount of required funds but also in the low rate of maturing projects capable of absorbing available funds. The corresponding rate for W. Macedonia for the current programming period is below 20% (on 31.12.2019).

Question 9

The Member State should get the funding but the projects which should be implemented should be decided in close collaboration with the 5 mayors of the lignite regions and the 2 governors and after extensive consultation with NGOs, trade unions, local professional organizations, local universities and lignite communities.

The criteria should account for a) the urgency and speed of the decarbonization process as reflected in official documents such as the NECP and b) the difficulty of the transition and the dependence of the local economy on the lignite/coal mining activity.

Clearly coal and lignite mining regions should take the bulk of the fund.

Question 10

We neither expect nor seek any financial support from the just transition fund for our organization regarding Just Transition work. We would only need access to information and the ability to participate/contribute in the transition process at the regional, national and EU levels as it pertains to selecting projects, developing a transition plan, and monitoring/governing its implementation.

In order for the transition to be successful, it needs to be fair. In order to be fair, it needs to be sustainable, participatory and supported by the appropriate level of funds.

RESPONDENT 10
Country: Estonia

Question 1

The strong points in my mind are the welcoming atmosphere for all stakeholders and the broad range of subjects and regions covered in the meetings. Also, the secretariat is very cooperative, as we managed to invite a representative to present in one of our local round tables in December 2019.

As for weak points, perhaps the completely voluntary nature of the platform itself, which allows Estonian government to postpone joining the initiative – it seems that the official stance still seems to be to try and distance Estonia from any sort of real commitment to a fossil fuel phase out or transition. Also, lack of communication with the member states in between platform meetings could be an issue – we have heard from local officials that the ministries once sent a representative to the platform, who came back and voiced opinions that Estonia has nothing to gain from participating in the interchanges taking place at the platform events. It would be good not having to rely only on a few opinions in such important matters but assessing the information more directly from the platform communications.

Regarding developing regional projects, Estonia is still very much in the beginning. We had a lot of help by inviting a representative from the secretariat to present the European Commission views in one of our local stakeholder round tables in December 2019. This showed clearly that the EC does indeed care for the future of the region in question and locals could directly ask questions from the representative, minimizing the seeming distance between North-East Estonia and Brussels.

Question 2

In Estonia, the main fossil fuel is oil shale. Due to its high carbon intensity, the sharp CO2 quota jump in 2019 had already forcefully shut down most of the shale electricity capacity, with 300 people losing their jobs and a further 1000 being put on paid leave. The high CO2 quota impacts the power plants. Another big industry is the production of shale oil which is still running due to lower CO2 emissions on Estonian soil (emissions being exported abroad). The whole shale sector employs around 6000 people directly.

Challenging factors in the region: lack of other industries in the region; depopulation; district heating being tied directly to the shale industry; language barrier (most workers speak Russian, while the official language in the country is Estonian); proximity to Russia (making wind farms problematic as a possible alternative energy industry); high level of doubt among locals about climate actions; distrust of top-down governmental plans; denial of climate policies by the decision makers; the lure of the growing shale oil industry (ability to hide emissions in exports, while still undermining global climate goals); continuing shale mining that depletes the ground water.

Most important steps from the NGO perspective: announcing an ambitious phase-out year, giving the business sector and local communities a clear sign about the future; ensuring participation of local stakeholders in constructing a territorial just transition plan; commissioning reports on alternative economic opportunities; providing adequate EU and national finances for the transition projects.

Question 3

Together with other environmental NGOs we are implementing an EUKI project to facilitate dialogue about just transition in Estonia. We have organized multiple stakeholder round tables, do heavy media work on the subject, raise the capacity of other local NGOs and build relevant networks between organizations. We also have a new Climate KIC proposal waiting a final decision to develop concrete alternative plans for the specific region. We see ourselves as kick-starting the process, while ideally the ministries should take over the process as it gains more traction in the coming years.

Question 4

Several environmental NGOs recently sent a joint letter to relevant ministries on the new CF planning. Broadly we advocated for the importance of renewable energy transition, energy efficiency and a just transition for the region. Renewable energy investments in Estonia so far have focused solely on biomass and co-production power plants, while wind, solar and grid investments that are key to the transition have been neglected. In the period 2014-2020, Estonia used only 10% of the ERDF and CF funds on GHG reduction, energy efficiency, RES, electricity infrastructure, science and innovation. We proposed this allocation to jump to at least 40%. Local management could be more productive than central, and co-financing rate matters a lot in Estonia.

Question 5

We are following the JTF developments closely. So far it seems that the Estonian ministries were hoping that the fund will solve all problems related to the shale region, while the industry has publicly denounced the proposed JFT allocation sum for Estonia as "a joke", even though we get the most per capita. We are happy that the fund focuses on NUTS3 level, meaning that the money really has to go to the specific region in question. We are worried about the possibility that under the guise of "GHG reduction", ramping up shale oil production could still somehow be possible either directly financed by the JTF or from the related co-financing. We would like the territorial JT plans to demand a concrete and complete shale phase out date, as this has been shown in other countries to be a crucial step in beginning the irreversible transition process. We welcome the fast pace that the territorial JT plans must be submitted to the commission, but at the same time we worry that being in such a hurry, the ministries might find it difficult (or convenient) to not engage enough with local stakeholders.

Question 6

In Estonia we have called for long-term planning of the shale region for decades, in order to avoid a sudden collapse of the industry. With mostly opposite action over the years (i.e. building new oil shale power plants) and rising CO2 prices the region is now unfortunately in crisis. So, while ideally the fund would be perfect for long term planning, in Estonia it might me more of a damage control mechanism in the short term. We are trying to use the JTF regulation as a proof to convince the government that their current plan of establishing yet more shale oil plants and also an oil pre-refinery is extremely risky given the EUs climate policies. Instead the JTF should be used for economic diversification, reskilling and other investments recommended by the European Semester Winter Package Annex D list. Even the local unions are calling for "climate-proof" solutions, and we believe JTF should enable these.

Question 7

We welcome social support, SME investments, land restoration and rewilding initiatives. Our region also already has an industrial tourism cluster, a movie fund and other cultural projects gaining

traction, so supporting these initiatives should also be a possibility. But we also see that the shale industry wishes to market itself as green business, so eligibility should clearly exclude investments related to production of fossil fuels. We are also weary of investments in general research and innovation, because we see a threat of funneling these funds into attempts to costly extend the shale industry by trying to implement some sort of carbon capture scheme. The scope of research topics should be narrower, targeting for example energy efficiency, energy sufficiency, intermittent energy storage solutions, smart grids, and in Estonian case also distributed radars to solve the wind energy problems.

Question 8

Based on a recent seminar in the region, local stakeholder proposed following ideas: better public transport connections with the capital city; investments in public education and local university branches; building renewable energy capacities; alternative mineral mining research; better financing instruments for businesses; developing the agroindustry. These investments could total in around 1bn euro, but this is a very rough estimate.

Question 9

We see that the national level decision makers are still in denial that any sort of transition should happen at all. The local level officials are more acutely aware of the impacts on the ground that are being felt already, so they are the ones who should be empowered the most. But the phase out date for shale should be set by the government. There is a paradox that the locals distrust the national government because of continuous inaction, yet they expect the government to now fix the whole situation. The best answer is to administer the funds in a participatory manner. In Estonia the NUTS3 level makes complete sense when talking about the just transition, because the shale industry is located in only one region (North-East Estonia – Ida-Virumaa).

Question 10

We would need help with conveying the messages that small member states such as Estonia should be the leaders in the climate race, as we are nimble and can experiment with regulations much faster than larger countries. JTF could help by introducing some "rewards" for countries that are more ambitious than required by current NDCs. Also we need clear exclusion of all fossil fuel production, specifically shale oil in our case. The submitted territorial plans should be scrutinized heavily by the EC in order to ensure an effective and fair transition – it should be clear that countries actually need to think up realistic and climate-proof plans for the future, and not just simply copy-paste old development plans into the new template (something that Estonia mostly did with the recent National Energy and Climate Plans).

ANNEX 3: REPLICATION OF PRE-ALLOCATION FORMULA - DETAILS

Formula replication: accepting raw data as given

We first replicated the EC's pre-allocation results using the data available in the 'EC JTM and JTF Allocation Table'[23]. This resulted only in minor differences between the EC's results and our own. In the two first steps of the pre-allocation calculation – i.e. (a) and (b) in Annex I of the JTF proposed regulation – our results were the same as those given by the EC.

However, step (c) introduced some differences in results. Applying the GNI adjustment as described in the regulation resulted in a negative allocation for Luxembourg which caused the sum of all allocations to be slightly below the expected €7.5 billion. To deal with these 'missing' funds, we set Luxembourg's allocation to zero and redistributed the additional funds to all countries, proportionally to the shares found in step (b) – excluding Poland which was already at the maximum possible allocation.

Formally, we readapted the shares from step (b) using the following formula, based on the JTF proposed Regulation and the 'Allocation method for the Just Transition Fund' document provided by the EC[24]:

$$share_{c)i} = share_{b)i} \times ((\frac{GNIPC_i}{GNIPC_{EU27}} - 1) \times -1.5 \ + 1)$$

Where i is a country,

$GNIPC_i$ is the average 2015-2017 GNI per capita of EUROSTAT series [nama_10_pp] at current prices, purchasing power standard (PPS, EU27 from 2020) per capita, for country i,

$GNIPC_{EU27}$ is the same as above, but for 'European Union - 27 countries (from 2020)'

$share_{c)i}$ is the share after GNI adjustment, step (c) of annex I,

$share_{b)i}$ is the share before GNI adjustment, step (c) of annex I, but after step (b), which establishes a cap at 2billion euros for each MS allocation.

In the table below, we show the allocations we found for step (c), both before and after setting Luxembourg to zero. As can be seen the preliminary result does not add up to €7.5 billion, while the final result – with adjustment for Luxembourg – does.

[23] Available at the following link: https://ec.europa.eu/commission/presscorner/api/files/attachment/860491/JTM%20and%20JTF%20Allocation%20Table.pdf.pdf

[24] In the Regulation, 'the Member State shares resulting from the application of point (b) are adjusted negatively or positively by a coefficient of 1.5 times of the difference by which that Member State's GNI per capita (measured in purchasing power parities) for the period 2015-2017 exceeds or falls below the average GNI per capita of the EU-27 Member States (average expressed as 100%)'.

Table: Results found at step (c) of pre-allocation calculation, before and after adjustment for Luxembourg

Country	Preliminary (c) result	Final (c) after adjustment
AT	33.25	33.92
BE	62.76	63.82
BG	472.85	475.89
CY	36.39	36.73
CZ	595.67	601.17
DE	907.14	924.88
DK	10.72	10.96
EE	128.65	129.73
EL	302.93	305.30
ES	312.80	316.01
FI	167.76	170.08
FR	273.51	277.11
HR	67.06	67.54
HU	93.90	94.61
IE	31.08	32.09
IT	371.49	375.61
LT	98.98	99.80
LU	-	0.18
LV	69.50	70.02
MT	8.53	8.61
NL	225.41	230.07
PL	2 000.00	2000.00
PT	81.07	81.75
RO	779.22	784.74
SE	45.62	46.49
SI	89.81	90.62
SK	170.88	172.27
TOTAL	**7 436.98**	**7500.00**

Overall, Bruegel and EC's calculations differ only slightly at each step of the calculation, as shown in the next table:

Table: Bruegel's replication of allocation methodology keeping data as given

	b) EC shares	b) Bruegel shares	c) EC shares	c) Bruegel shares	d) EC shares	d) Bruegel shares	d) EC allocations, final	d) Bruegel allocations, final
AT	0.8%	0.8%	0.4%	0.5%	0.7%	0.7%	52.9	52.9
BE	1.2%	1.2%	0.9%	0.9%	0.9%	0.9%	68.4	68.4
BG	3.5%	3.5%	6.3%	6.3%	6.1%	6.1%	458.2	458.1
CY	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	35.8	35.4
CZ	6.3%	6.4%	8.0%	8.0%	7.7%	7.7%	580.8	578.7
DE	20.7%	20.6%	12.1%	12.3%	11.7%	11.9%	876.6	890.3
DK	0.3%	0.3%	0.1%	0.1%	0.5%	0.5%	34.7	34.7
EE	1.3%	1.3%	1.7%	1.7%	1.7%	1.7%	125.2	124.9
EL	2.7%	2.8%	4.1%	4.1%	3.9%	3.9%	293.6	293.9
ES	3.8%	3.7%	4.3%	4.2%	4.1%	4.1%	307.4	304.2
FI	2.7%	2.7%	2.3%	2.3%	2.2%	2.2%	164.8	163.7
FR	4.2%	4.2%	3.7%	3.7%	5.4%	5.4%	401.6	401.5
HR	0.6%	0.6%	0.9%	0.9%	0.9%	0.9%	65.8	65.0
HU	0.8%	0.8%	1.3%	1.3%	1.2%	1.2%	92.4	91.1
IE	1.2%	1.2%	0.4%	0.4%	0.4%	0.4%	29.9	30.9
IT	4.8%	4.8%	5.0%	5.0%	4.9%	4.82%	364.3	361.6
LT	0.9%	1.0%	1.3%	1.3%	1.3%	1.3%	96.7	96.1
LU	0.2%	0.2%	0.0%	0.0%	0.05%	0.05%	3.6	3.6
LV	0.6%	0.6%	0.9%	0.9%	0.9%	0.9%	67.8	67.4
MT	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	8.2	8.3
NL	5.4%	5.4%	3.1%	3.1%	2.9%	2.953%	220.5	221.5
PL	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	2000	2000.0
PT	0.8%	0.8%	1.1%	1.1%	1.1%	1.049%	79.2	78.7
RO	6.4%	6.4%	10.5%	10.5%	10.1%	10.1%	757.1	755.4
SE	1.0%	1.0%	0.6%	0.6%	0.8%	0.8%	60.7	60.7
SI	1.0%	0.9%	1.3%	1.2%	1.2%	1.2%	91.5	87.2
SK	1.6%	1.6%	2.2%	2.3%	2.2%	2.2%	162.4	165.8

Full replication: re-evaluating raw data

After replicating results using the European Commission's reported data, we repeated the same exercise using raw data for all of the inputs in the formula. This section details the source for each of the data series we used and the way they were processed.

a. Estimation of greenhouse-gas emissions of industrial facilities in high carbon intensity NUTS2 regions

Datasets used

The allocation method document specifies industrial emissions were extracted from the European Pollutant Release and Transfer Register (E-PRTR) of the European Environment Agency and refer to 2016.

A full document on the allocation method ought to identify the exact datasets used and possibly the code, including any data cleaning undertaken. Our replication of EC results is based on the publicly available datasets on the E-PRTR[25].

Greenhouse gases chosen

The publicly available information does not explain what greenhouse gases have been considered, nor how have they been aggregated. It is standard to convert greenhouse gases to CO2-equivalent values based on their 100-year Global Warming Potential (GWP), as detailed in the United Nations' (UN) Intergovernmental Panel on Climate Change (IPCC) Assessment Reports.

We contacted the JTF's press contact, who explained that only three greenhouse gases (GHG) were considered for the calculation of equivalized emissions: CO2, methane, and nitrous oxide. Their GWP was based on the IPCC's 5th Assessment Report at 1,28 for methane and 265 for nitrous oxide. To replicate EC results, we have followed the same procedure.

The E-PRTR datasets provide information on other GHG, namely, sulphur hexafluoride, hydro-fluorocarbons and perfluorocarbons. The choice to restrict analysis to three gases, though not unreasonable, is not inconsequential, and should be explained.

NUTS location

The E-PRTR dataset provides two different NUTS variables, one based on geocoding performed by the EEA ('NUTSRegionGeoCode') and a second one based on the reports of the facilities ('NUTSRegionSourceCode').

The two variables are incomplete and provide in several instances, for the same emissions, different NUTS location. It is thus unclear which geolocation should be used to calculate emissions by region – the choice of one or the other will change final results. According to the EEA, differences in geolocation might be related to the fact that some NUTS regions use the exact location of the GHG release (e.g. where the chimney of an industrial facility is located) while others may use the location of the office responsible for the release (i.e. the administrative headquarters of an industrial facility). There is no publicly available information on how such cases were taken into account by the EC. The case of Greece is telling: both variables are complete, but give different results depending on which one is chosen.

[25] Specifically, we have used E-PRTR database version 18 (the use of version 17 yield no meaningful differences, since we are focused on year 2016). The dataset of interest is the Pollutant release, ('dbo.PUBLISH_POLLUTANTRELEASE'). For additional information on facilities and on reporting year, 'dbo.PUBLISH

Importantly, both variables are in NUTS2006[26], which implies that, for countries who have undergone border shifts, new information on NUTS must be generated, based on the latitude and longitude of emissions[27]. We have calculated emissions using both E-PRTR variables, as well as using our internal geolocation. Our internal geolocation has a margin of error for industrial facilities which are located close to NUTS borders. To minimise these errors, we have used several methods for geolocation which consistently generated the same results[28]. After careful analysis, we believe the reason for mistakes is a lack of accuracy in borders provided in the EUROSTAT shapefiles[29].

Thus, our main results rely on the E-PRTR variables. We gave priority to the most complete variable of the two and checked manually through Google and made a visual comparison whenever the two variables gave conflicting results or incomplete information. For NUTS regions which shifted borders between 2006 and 2016, we resorted to our internal geolocation. If two regions were merged into one, there is no need to resort to geolocation. The table below and its notes give information on these different calculations.

[26] The variable 'NUTSRegionGeoCode' is fully in NUTS2006; 'NUTSRegionSourceCode' has some exceptions.

[27] Other, less exact, procedures, would entail the use of 2006 GVA: in practice, doing calculations on the basis of outdated NUTS regions. Another less than exact approach is converting NUTS 2006 emissions to NUTS 2016 on the basis of regional surface. It is not clear what procedure the EC undertook.

[28] We thank Enrico Bergamini for his fundamental input and work.

[29] Available at https://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/administrative-units-statistical-units/nuts

Table: GHG estimates for high carbon intensity regions using different geolocation variables

	E-PRTR GeoCode	E-PRTR SourceCode	Bruegel geolocation	Bruegel final estimate	EC estimate
AT	13675	13527	13675	13675	6445
BE	22331	13301	22331	22331	15512
BG	23160	23160	23160	23160	23160
CY	4714	1406	3361	4714	4714
CZ	45627	45627	45627	45627	45627
DE	borders shifted	borders shifted	264342	251114	251158
DK	2325	incomplete	2325	2325	2325
EE	14004	14004	14004	14004	12950
EL	33637	37515	36218	33637	35367
ES	28470	28501	66071	28501	42768
FI	borders shifted	borders shifted	28885	29368	29368
FR	27988	27988	27988	27988	51454
HR	incomplete	4503	4503	4503	4503
HU	8543	8543	8543	8543	8543
IE	borders shifted	borders shifted	5971	5971	5971
IT	58525	59491	59554	60501	59472
LT	borders shifted	borders shifted	5037	5037	5037
LU	1419	1419	828	1419	1419
LV	1751	1751	1751	1751	1751
MT	124	124	124	124	124
NL	77609	77609	77609	77609	77609
PL	borders shifted	borders shifted	153024	153135	153192
PT	11415	11415	11415	11415	11415
RO	incomplete	22340	22340	22340	22340
SE	incomplete	13210	11673	13210	13210
SI	borders shifted	borders shifted	4743	4743	4743
SK	11076	11076	11076	11076	11076

Note: Whenever the Bruegel final estimate does not match estimates from E-PRTR or from our geolocation, a mixed approach was taken, e.g., partial geolocation for border shifts or manual checks. Germany: DED4 and DED5, new NUTS regions, were determined based on Bruegel geolocation. Finland: Bruegel geolocation for FI1B and FI1C created from FI18. Ireland: Bruegel geolocation, with manual inputs for missing. Italy: E-PRTR geocode with unknowns geolocated manually. Poland: PL12 is a new region, for which Bruegel geolocation was used. One industrial facility was manually geolocated.

Box: Bruegel and European Commission reconciliation – the case of Poland

In the case of Poland, Bruegel results can be reconciled with EC results. Two polish industrial facilities for which the E-PRTR does not provide geolocation data have coordinates which place them in Czechia. If these two facilities are allocated to the closest polish NUTS2, results match those reported by the EC. However, it is not clear to us this is the correct approach, particularly for one of the facilities which is considerably far from the polish border, leading us to believe it is not a data error. We have thus only attributed one of these facilities to Poland.

An additional issue relates to offshore platforms, to which no NUTS region is associated. Off-shore platforms must also be phased out, and there will be associated job losses, impacting regions where

there is indirect employment and where workers reside. In practice, these emissions currently go uncounted in Bruegel estimates. We did not find any instance where this was the driver of differences between our values and the EC's.

GVA series

The allocation method document specifies that data for industrial gross added value comes from EUROSTAT and refers to 2016 values. For full replication, it would be helpful to know what exact EUROSTAT series was used, exactly which sectors were defined as 'industry', what units were used (current prices, constant prices, purchasing power standards (PPS)), and, importantly, when the data was last updated.

We have used NUTS2 industrial GVA based on NACE sectors B-E – 'Industry (except construction)', series nama_10r_3gva, in million euros, downloaded on 12/02/2020. This data was last updated 17/12/2019.

Box: Bruegel and European Commission reconciliation – the case of Spain

Using our own estimates of NUTS2 carbon-intensity, the total Spain GHG emissions in high carbon intensity regions is 28,501 as opposed to the EC reported value of 42,768 (and industrial employment is 134.3 as opposed to the EC's reported 276).

We would obtain the same results as the EC for GHG in Spain if the region ES11 (Galicia) was identified as having high carbon intensity. According to Bruegel's calculations, the carbon intensity of this region is 1,391,880, which is below the threshold of twice the EU27's average carbon intensity, which we estimate to be 1,414,540. Since GHG per region matches the EC's values, this difference can only be due to the denominator, which is GVA, or to the threshold of EU27 carbon intensity.

We believe GVA is most likely the cause for this discrepancy, given its measures can vary greatly from one data update to the next. GVA series can thus be quite volatile. To give an example of how this can impact our results, we used an updated version (from 05/03/2020) of the same EUROSTAT GVA series for Spain, and our results for Spain's industrial greenhouse gas emissions changed from 28,501 to 66,557.

b. Industrial employment in high carbon intensity NUTS2 regions

Part of the discrepancies in the values of industrial employment originate from the differences in identification of high carbon intensity regions, as previously explained.

However, there might also be discrepancies in the series itself. We use EUROSTAT's [lfst_r_lfe2en2] series, thousands employment in B-E - Industry (except construction), aged 15 to 64. We use data from the year 2018, since this is the year used for employment in coal and lignite per the 'Allocation method for the just transition' document, though no specific year information has been found.

Countries with only one NUTS2 region, such as Luxembourg or Latvia, should have the same level of industrial employment. The fact they do not implies we might be using a different series:

Table: Industrial employment estimates for two countries with only one NUTS2 region

	Bruegel	European Commission
LU	14	36
LV	136.4	141

c. Employment in mining of coal and lignite

The document 'Allocation method for the Just Transition Fund' mentions the use of EUROSTAT data and year 2018 for employment in coal and lignite. We use EUROSTAT's [sbs_na_ind_r] series, number of persons employed in Mining of coal and lignite, last updated on 07/02/2020 and extracted on 12/02/2020.

The values obtained are however different:

	Bruegel	European Commission
AT	0	0
BE	0	0
BG	9.7	15
CY	0	0
CZ	14.2	24
DE	16.2	17
DK	N/A	0
EE	N/A	0
EL	0.3	4
ES	0.7	3
FI	N/A	0
FR	N/A	0
HR	0	0
HU	0.2	0
IE	N/A	0
IT	0	0
LT	0	0
LU	0	0
LV	0	0
MT	0	0
NL	0	0
PL	89.6	139
PT	0	0
RO	0.6	36
SE	0	0
SI	N/A	2
SK	N/A	5

d. Production of peat and oil shale and sands

The data found on EUROSTAT matches the variables reported by the EC exactly.

Full replication

						Share in total (%)								
	GHG	Industrial employment	Emp. In coal/lignite mining	Peat	Oil shale	GHG	Industrial employment	Employment in coal/lignite mining	Peat Production	Production of oil shale and sands	Initial after capping	After GNI/head adjustment	Final share after adjusting for aid intensity	**Allocation**	Aid intensity
AT	13.68	182.2	0	0	0.0	1.6	2.4	0.0	0.0	0.0	1.5	0.9	0.9	**66.0**	7.5
BE	22.33	197	0	0	0.0	2.5	2.6	0.0	0.0	0.0	2.1	1.5	1.4	**106.8**	9.4
BG	23.16	190.4	9.7	0	0.0	2.6	2.5	7.4	0.0	0.0	4.1	7.6	7.1	**530.5**	75.3
CY	4.71	32.4	0	0	0.0	0.5	0.4	0.0	0.0	0.0	0.4	0.5	0.5	**36.7**	42.4
CZ	45.63	374.2	14.2	0	0.0	5.2	5.0	10.8	0.0	0.0	7.1	9.2	8.6	**644.2**	60.7
DE	251.11	1374.6	16.2	0	0.0	28.6	18.4	12.3	0.0	0.0	23.6	15.2	14.2	**1067.3**	12.9
DK	2.33	42.8	N/A	0	0.0	0.3	0.6	0.0	0.0	0.0	0.3	0.2	0.5	**34.7**	6.0
EE	14.00	133.2	N/A	0.008	4.1	1.6	1.8	0.0	0.5	100.0	1.4	2.0	1.8	**138.6**	105
EL	33.64	99.2	0.3	0	0.0	3.8	1.3	0.2	0.0	0.0	2.5	3.7	3.5	**262.1**	24.4
ES	28.50	132.8	0.7	0	0.0	3.2	1.8	0.5	0.0	0.0	2.3	2.8	3.7	**280.0**	6.0
FI	29.37	166	N/A	0.73	0.0	3.3	2.2	0.0	45.6	0.0	2.9	2.5	2.4	**177.3**	32.2
FR	27.99	243.6	N/A	0	0.0	3.2	3.3	0.0	0.0	0.0	2.6	2.4	5.4	**401.5**	6.0
HR	4.50	76.4	0	0	0.0	0.5	1.0	0.0	0.0	0.0	0.6	0.9	0.8	**63.7**	15.5
HU	8.54	148.2	0.2	0	0.0	1.0	2.0	0.2	0.0	0.0	1.1	1.7	1.6	**120.4**	12.3
IE	5.97	104.3	N/A	0.744	0.0	0.7	1.4	0.0	46.4	0.0	1.2	0.5	0.5	**35.3**	7.3
IT	60.50	443.4	0	0	0.0	6.9	5.9	0.0	0.0	0.0	5.3	5.8	5.4	**405.3**	6.7
LT	5.04	184.4	0	0.007	0.0	0.6	2.5	0.0	0.4	0.0	1.0	1.4	1.3	**99.4**	35.4
LU	1.42	14	0	0	0.0	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	**3.6**	6.0
LV	1.75	136.4	0	0.0004	0.0	0.2	1.8	0.0	0.0	0.0	0.6	1.0	0.9	**66.7**	34.5
MT	0.12	28.9	0	0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.1	0.1	**9.7**	20.3
NL	77.61	296	0	0	0.0	8.8	4.0	0.0	0.0	0.0	5.8	3.5	3.3	**248.8**	14.5
PL	153.13	2058	89.6	0	0.0	17.4	27.5	68.2	0.0	0.0	26.7	26.7	26.7	**2000.0**	52.7
PT	11.42	48.2	0	0	0.0	1.3	0.6	0.0	0.0	0.0	0.9	1.2	1.2	**86.6**	8.4
RO	22.34	391.2	0.6	0.0015	0.0	2.5	5.2	0.4	0.1	0.0	2.9	4.9	4.5	**340.6**	17.4
SE	13.21	51	0	0.1126	0.0	1.5	0.7	0.0	7.0	0.0	1.1	0.7	0.8	**60.7**	6.0
SI	4.74	158.8	N/A	0	0.0	0.5	2.1	0.0	0.0	0.0	0.9	1.1	1.1	**80.6**	39.0
SK	11.08	170.5	N/A	0	0.0	1.3	2.3	0.0	0.0	0.0	1.3	1.9	1.8	**132.9**	24.4

On 14 January 2020, the European Commission published its proposal for a Just Transition Mechanism, intended to provide support to territories facing serious socioeconomic challenges related to the transition towards climate neutrality. This report provides a comprehensive analysis of how the EU can best ensure a 'just transition' in all its territories and for all its citizens with the tools at its disposal. It provides an overview and a critical assessment of the Commission's proposal, and suggests possible amendments based on best practices from other just-transition initiatives.

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