

Just and robust transitions to net zero

A framework to guide national policy





Report contributors and acknowledgements

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Introduction

A just and robust transition to net zero

The transition to net zero greenhouse gas emissions needs to be socially just and politically robust if it is to succeed. Many countries have enshrined net zero targets in law or made pledges in executive policy. Achieving these goals entails rapid and deep structural economic change. Ensuring justice in how this is achieved and building and sustaining political support requires inclusive strategies and policies to maximise benefits, minimise costs, and distribute these benefits and costs fairly.

The context and need for this report

Governments' international commitments demand a just and robust transition. In 2015, the Paris Agreement emphasised “the imperatives of a just transition of the workforce and the creation of decent work and quality jobs per nationally defined development priorities” and that same year the International Labour Organization (ILO) published *Guidelines for a just transition towards environmentally sustainable economies and societies for all*.¹ In 2023, ILO member states passed a resolution reinforcing this agenda.² The Agenda 2030 for Sustainable Development and the Sustainable Development Goals (SDGs), adopted by all member states of the United Nations, also represent a commitment to, and guiding framework for, a just transition.

This report presents a framework to guide national policymakers to prepare a coherent programme for a just and robust transition to net zero emissions, with a principal focus on Europe. Theoretically grounded and practically oriented, the report collects resources on national policy and law applicable to specific sectors and to the whole economy, and synthesises examples of best practice highlighted by leading research. As well as providing guidance to governments, it also aims to help non-governmental organisations (NGOs), labour unions, firms, international organisations and financial institutions to define what they expect and need from policymakers.

The report's focus on Europe reflects the scope of the research project on which it is based and the geographical location and primary expertise of the authors. However, **the tools and guidance contained in it are generally applicable and should be of interest to policymakers and stakeholders well beyond Europe.** In future iterations of this framework, we hope to expand our coverage and include more insights and examples from the Global South.

The report is designed to be a modular reference resource, with the main chapters each dedicated to one of five phases of the policy cycle, from planning and analysis through to monitoring and evaluation. The structure and content are explained further in ‘How to navigate the report’ below. First, this Introduction outlines how the report approaches the concept and scope of just transition and clarifies its relationship to existing guidance.

Interpreting national just transitions

Scope and dimensions of justice

Justice takes several forms, and various definitions of just transition exist across disciplines and practitioners. The scope adopted here is broad, without endorsing a specific definition. It views just transition as having **three core dimensions**:³

- **Processes** that are open and inclusive, empowering people to influence decisions that affect them (**procedural justice**).
- **Distribution** of benefits and costs fairly across all of society. (**distributive justice**)
- **Recognition** of people's and groups' diverse knowledge and identities (**recognitional justice**).

For a global just transition to net zero, governments should also take responsibility for how domestic consumption and production of resources and emissions affect the wellbeing and potential for economic development in other countries. Recognising this, many countries in the Global North committed at the UN climate conference COP26 in 2021 to embed the just transition in their international support.⁴ Much work remains to achieve global climate justice. However, the scope of this report is limited to domestic transition impacts and policies, which it considers in detail.

Introduction

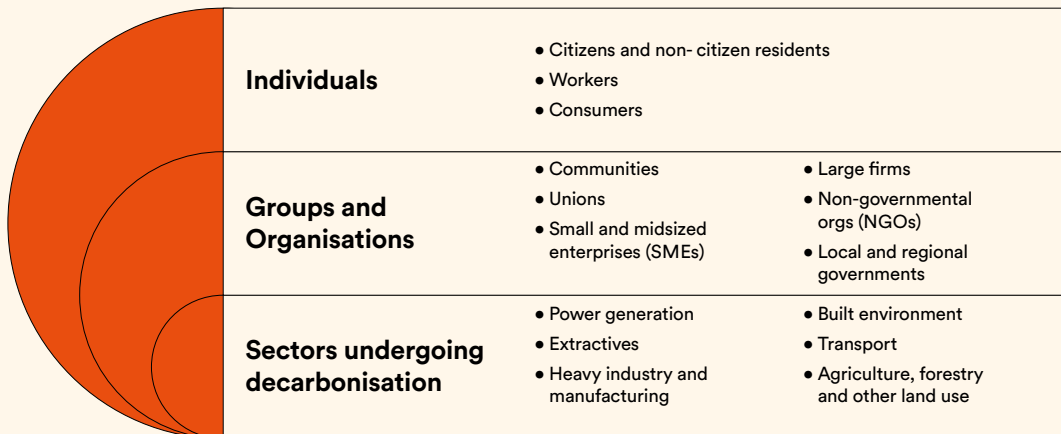
Roles and sectors

The nature of the transition will be different in each country and sector. Extensive guidance exists for the energy sector, particularly for the phase-out of coal mining and coal-fired power generation. There is also increasing recognition of the need and potential for a just transition in agriculture and land use and of the essential role that nature plays in supporting a low-carbon economy. Many policy initiatives have been framed in spatial terms, focusing on regional development and transformation in areas where these sectors and industries are concentrated. This report draws on and seeks to amplify existing resources – see the endnotes and references.⁵

A national transition also has many aspects that do not fit neatly into sectoral or spatial frames. These can include democratic processes for people to contribute to policymaking, fiscal instruments that cut across sectors or that apply to sectors that are themselves geographically dispersed (e.g. transport, buildings), laws promoting access to justice, and measures to promote the voices and agency of marginalised groups.

Figure 1 provides a general framework to guide thinking about areas where just and robust decarbonisation is needed and the breadth of potential social impacts of the transition at a national level. People play various and different roles as stakeholders and participants – whether as individuals or members of households, communities or organised groups – within the range of sectors that must decarbonise to reach net zero.

Figure 1. Roles and sectors that national governments should assess for a just and robust transition



Informed by Robins et al. (2021)

Interpreting national just transitions

Institutional variety

Options available to national policymakers will also depend on political and economic institutions.⁶ Advice in this report notes where these factors create different approaches or constraints to be aware of when evaluating transition policy options.

Key variations in institutional characteristics include:

- **Electoral institutions.** Countries with proportional representation (PR) electoral systems tend to give legislators greater ‘electoral safety’ to impose costs on citizens than countries with majoritarian electoral systems. PR systems tend to enable smaller parties to enter the legislature and potentially form coalition governments (which may include green parties but also parties opposed to climate action), whereas majoritarian systems tend to be dominated by two major parties.
- **Institutions for mediating between government, business and unions.** Coordinated economies have more entrenched institutions for seeking consensus in economic policymaking, such as greater reliance on collective bargaining, along with higher levels of employment protection and greater reliance on ‘patient’ capital for investment. More liberal economies tend to rely more on market mechanisms and decentralised, short-term industrial relations, while firms are more reliant on dispersed shareholders for investment.
- **Centralisation.** Some countries tend to concentrate decision-making power at the national level, while those that have more decentralised systems (federal or other kinds) afford more power over decisions to regional and local authorities.

Introduction

How to navigate the report

The European Union’s just transition measures

The EU’s Green Deal strategic framework commits explicitly to a just transition in pursuit of the Union’s climate neutrality goal. The Council of the EU issued a Recommendation in 2022 on measures for national governments to use to ensure that the transition “is fair and leaves nobody behind” and “invited” Member State governments to adopt a relevant package of policies in close cooperation with social partners.⁷

There are also funding mechanisms at EU level to improve the fairness of the transition, notably:

- **The Just Transition Mechanism (JTM)** was established in 2021 and represents a regional and spatial approach to just transition. It channels funding towards sub-national regions where pronounced transition impacts are considered likely. The EU allocated €17.5 billion (in 2018 prices) to a Just Transition Fund from 2021–27. To access these funds, governments were required to submit Territorial Just Transition Plans for the relevant areas, demonstrating social impacts due to fossil fuel or emissions-intensive industrial activities.⁸
- **The Social Climate Fund**, part of the Fit for 55 package, represents a broader approach, since it seeks to redistribute €65 billion throughout the period 2026–34 from carbon pricing applied to the transport and building sectors under the expanded EU Emissions Trading System. The total to be spent is €86.7 billion, of which national governments are required to commit 25% from domestic budgets. In a similar fashion to the JTM, this measure incentivises Member State governments to assess transition impacts by preparing Social Climate Plans, which must take place in consultation with regional and local authorities, economic and social partners, and civil society.⁹

The advice within this report applies whether countries are EU

Member States or not. That way, it can be applied to a wider range of countries, including some outside of Europe, particularly in the Global North. However, lessons from EU mechanisms are included where they hold more general insights for just and robust net zero policy.

How to navigate the report

Given the encompassing scope of national just transitions, this report is intended as a reference resource and to be modular: policymakers and other stakeholders need not read it cover-to-cover but can use the sections relevant to their work.

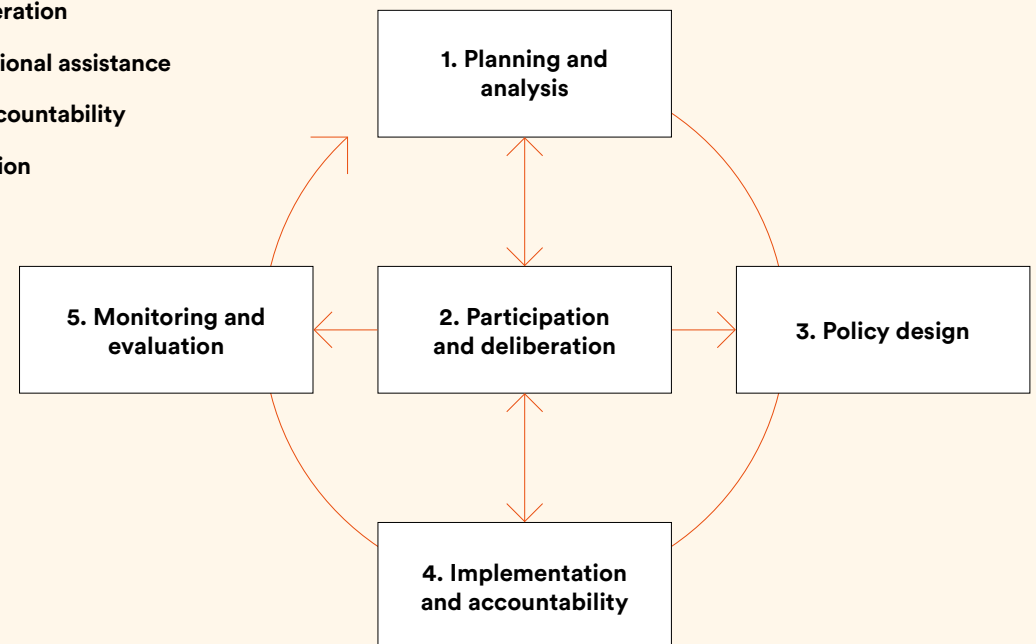
Advice is grouped into chapters reflecting **five phases of the policy cycle**:¹⁰

- Phase 1. Planning and analysis**
- Phase 2. Participation and deliberation**
- Phase 3. Policy design for transitional assistance**
- Phase 4. Implementation and accountability**
- Phase 5. Monitoring and evaluation**

In reality, the cycle should be dynamic and iterative (see Figure 2). Activities in different phases can overlap, and evaluation should flow back into planning and analysis. Participation, a crucial ingredient for properly carrying out other phases, is included as the second phase, in recognition of the fact that identifying relevant stakeholders and considering how to exchange information requires some prior thinking.¹¹

However, no plans are complete without input from stakeholders, since many aspects of lived experience cannot be captured by centralised approaches. Approaches in Phases 1 and 2 should therefore be used in conjunction to develop well-founded and legitimate transition plans.

Figure 2. The just transition policy cycle



Introduction

How to navigate the report

The content in all the chapters follows a similar structure (except for Phase 5, monitoring and evaluation, which presents a set of high-level principles), as follows:

- 1. Concepts and definitions of essential terms used to guide thinking about activities in each phase.**
- 2. Guidance for policymakers to consider when applying these concepts, based on leading research and examples from historical or recent transitions.**
- 3. Approaches for policymakers to use, each outlined by comparing their features, strengths and weaknesses and illustrated with further resources.**
- 4. Case studies demonstrating the use of these approaches in various countries and contexts across Europe, with suggested lessons for others to follow.**

Functions across the whole of government

Steering structural change in a way that is just and robust requires contributions and coherence across many areas of government policymaking; it is beyond the power and remit of individual government ministries or policies to trigger the extent of change required to meet net zero goals. Consequently, a whole-of-government approach is needed, with each ministry taking responsibility for aspects of the just transition agenda linked to its remit.

All of the chapters contain actions that should be undertaken by multiple government ministries (or 'departments', used here interchangeably), although clearly different elements will be more relevant for different parts of government. To guide policymakers to relevant sections, Table 1 presents an overview of functions across the cycle, indicates which ministries typically take responsibility for these functions (recognising that the exact allocation of roles and responsibilities varies by country), and indicates where they are discussed in the five phases described in this report.



Introduction

How to navigate the report

Table 1. Illustrative responsibilities for national government ministries or departments

Function	Climate/ Environment	Sectoral line ministries	Finance/ Central planning	Labour/ Welfare/ Social inclusion	Business/ Economy	Regional development	Education	For more see (report section):
Develop national and sector just transition plans	✓	✓	✓	✓	✓	✓	✓	1.2.1
Assess economic and distributive impacts	✓	✓	✓	✓		✓		1.2.2
Create processes for public participation	✓	✓		✓		✓		2.2.2
Convene industrial stakeholders for participation (unions and firms)	✓	✓		✓	✓	✓		2.2.3
Design policies to support consumers, workers, and marginalised groups	✓	✓	✓	✓		✓		3.2.1
Assess and update skills and education policies		✓		✓			✓	3.2.2
Design policies to raise investment	✓	✓	✓		✓	✓		3.2.3 3.2.6
Encourage private sector just transition using regulation and public procurement policies	✓	✓	✓					4.2.3
Draft new, and update existing, climate legislation	✓	✓						4.2.4
Monitor impacts and evaluate policies	✓	✓	✓	✓	✓	✓	✓	5



1 Phase 1: Planning and analysis

- 1.1 Concepts and definitions
- 1.2 Guidance
- 1.3 Approaches for planning and accountability
- 1.4 Case Study: Labour market assessment by the UK's Climate Change Committee



1 Phase 1: Planning and analysis

Key messages

- **National decarbonisation strategies and roadmaps – at whole economy and sector levels – should fully integrate justice, and planning for transition impacts and fair procedures should begin immediately.**
- **Analysis of transition impacts and potential policy interventions requires a combination of qualitative and quantitative tools, to capture resources and other factors that affect people’s wellbeing.**
- **Political support for the transition can be increased by designing policies that carefully manage economic change, provided these are communicated well and developed in partnership with influential groups.**
- **Independent committees on climate change, if given an appropriate remit, can provide analysis and advice to policymakers on the social impacts of the transition that can help to design credible policies.**

This chapter outlines the concepts, analytical tools and institutions that governments can use to understand what is changing in the transition, who will be affected, and what influence policy can have on benefits and costs.

Governments can begin by identifying the sectors and industries where emission reductions are concentrated in national climate strategies and plans, then consider in each sector how people are involved in their different roles, as identified in Figure 1.

Approaches in this phase should be carried out in tandem with Phase 2.

1.1. Concepts and definitions

Analysis of whether transitions are just should focus on their (expected) effects on the **wellbeing** of people. Analysis of the political robustness of transitions, by contrast, should focus on their (expected) effects on the **political attitudes and behaviour** of people, firms and organised groups such as labour unions, business associations and NGOs. Both will typically be influenced – though not necessarily determined – by the effects on people’s **resources** (e.g. their income and wealth).

A person’s resources are one of the numerous **conversion factors** that determine how a person’s **exposure** to changes in their context (e.g. their local economy) associated with the net-zero transition affects their wellbeing (these factors comprise what is often called **vulnerability** in the context of negative impacts). Over the long term, conversion factors also contribute to people’s **adaptive capacity**: their ability to improve their wellbeing over time by seizing opportunities and recovering from negative short-term effects on their wellbeing.

Throughout this phase, ‘effects’ and ‘impacts’ both can be taken to mean *expected outcomes*, since planning and analysis takes place ex-ante and attitudes and behaviour form in response to perceived risks and opportunities.

Finally, **rights** are essential for policymakers to consider when planning and developing transition policy. Human rights provide guidelines by defining objectives (such as guaranteeing an adequate standard of living, including access to heat and shelter) and thresholds (such as avoiding forced displacement). Others, such as property rights, can be more in tension with policy – affecting, for instance, appropriate actions towards stranded assets. Rights are considered further in Phase 4.

1.1.1. Wellbeing

People’s wellbeing is what ultimately matters for justice. Considering people’s wellbeing in terms of whether their basic needs are met is in line with the approach taken in the *Sixth Assessment Report* of the Intergovernmental Panel on Climate Change (IPCC).¹² The moral imperative to secure people’s basic needs is reflected in important international and regional treaties and soft-law standards, such as international human rights treaties, the European Pillar of Social Rights, and the Sustainable Development Goals. To measure whether people’s basic needs are being met entails measuring many variables, such as access to safe housing, food and energy.

Phase 1: Planning and analysis

Concepts and definitions

Beyond basic needs, people's lived experience also matters. People value specific things: for example, their particular relationships (to people in their community, for instance), their work on different projects (including the particularities of their job), attachments to places or objects (like their homes), and identities.¹³ More subjective measures of wellbeing, which can be gained from qualitative and participatory approaches that give people and communities a voice, can therefore also yield important insights into the effects of transitions on people.

The transition to net zero presents many opportunities for improving people's wellbeing, but there are also risks of adverse impacts. Many people will experience a mix of both. Box 1.1 describes some of the nuances in the concept of wellbeing for a just transition.

1.1.2. Resources

Wealth and income are often used in policy analysis as a proxy for people's capacity to live well. However, such resources are a means to an end – wellbeing – not equivalent to it. Some important parts of life are not greatly affected by resources, such as people's social relationships or identities rooted in places and communities. How much a given amount of resources will actually make someone better off also varies according to factors like (dis)ability and social context.

It is, nonetheless, important for policymakers to understand how the transition affects the resources of people and organised groups. As they can be measured quantitatively, resources can be used as a proxy for some types of impacts on wellbeing, provided that this proxy role remains clear in planning processes and frameworks and that other impacts are also captured through qualitative measurement. In addition, impacts on resources clearly influence the political attitudes and behaviour of people and organised groups, especially firms, workers and their representatives.

1.1.3. Political attitudes and behaviour

Impacts of the transition on people's wellbeing or resources can affect their political attitudes and potentially also their political behaviour – such as who they vote for or whether they mobilise for or against a policy, especially if similar impacts are felt by many people in a community. In addition, the behaviour of organised groups will be influenced by effects on their resources or the resources of their members, or on their ability to achieve their objectives. Therefore, the analysis of wellbeing and resource impacts can also yield relevant information about potential political implications of the transition.

Political attitudes and behaviour also depend on people's pre-existing values and ideologies and on the way information about impacts is communicated and framed by public officials or the media. Transition impacts, and even changes in political attitudes, will not necessarily alter people's political behaviour. For organised groups, policy impacts tend to have a more predictable effect on political behaviour, since their main objectives are typically clear and they tend to have access to sufficient information about how policies affect them.

1.1.4. Exposure

Exposure simply concerns whether a person (or organised group) is potentially affected by economic or social changes induced by the transition – for instance, if they operate or work in an emissions-intensive sector or are reliant on a particular source of energy supply or mode of transport.



Phase 1: Planning and analysis

Concepts and definitions

1.1.5. Conversion factors

Conversion factors determine how exposure to changes in people’s environment affects their wellbeing. They include personal characteristics such as age, sex, gender, race, (dis)abilities and skills; individuals’ resources and social networks; and local and macro-structural factors such as the economic context, prevailing legal entitlements (e.g. to social services and welfare payments), and social norms.

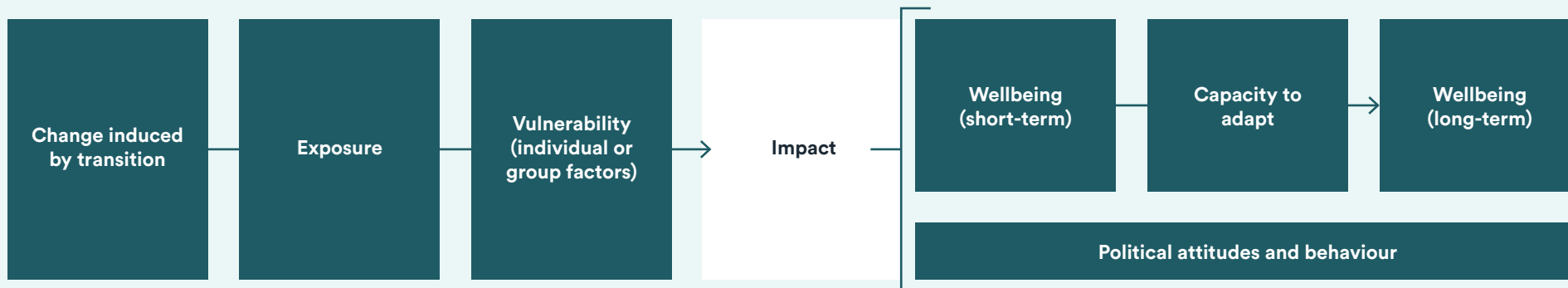
These factors determine how vulnerable a person is to adverse change or how well placed they are to capitalise on beneficial change. For example, older workers with relatively specialised skills living in regions structurally dependent on high-carbon industries are more vulnerable to fossil fuel phase-out than younger workers with more transferable skills living in cities. Women may be less well placed to access decent work in new and growing green industries due to prevailing gender norms or discrimination in the labour market.

1.1.6. Adaptive capacity

Over time, impacts on wellbeing are mediated further by people’s ability to adapt to that change, i.e. their ‘adaptive capacity’. Where the line lies between vulnerability and adaptive capacity is unclear, and both can be analysed using conversion factors, especially those factors relating to personal characteristics and resources.

However, the distinction is meaningful and relevant in many transition contexts, particularly when people’s particular projects, relationships, attachments and identities are disrupted. If people’s basic needs are met and they are given adequate support, over time they can be expected to develop new sources of subjective wellbeing.¹⁴ For instance, vulnerable workers in high-emission industries who lose their job and thus a component of their identity, with negative effects on their wellbeing in the near term, will be able to find new jobs and forge new identities more easily if they are adequately supported financially and with training opportunities and can access employment opportunities that utilise their skills.

Figure 1.1. How concepts for transition analysis relate to each other



Box 1.1

Basis for objective wellbeing in this framework

There are two main traditions of thought about wellbeing. The first equates wellbeing with some kind of mental state. Under this approach, understanding a person's wellbeing requires asking them questions about how they feel at a particular point in time, or how they evaluate their life to be going overall.¹⁵

The second tradition assumes that human beings naturally have certain features, which means they need to have and do certain things and be in certain kinds of relationships with others in order to live well.¹⁶ This more objective approach is particularly useful when thinking about the generic goods and conditions that people need – for example, adequate nutritious food, safe drinking water, clothing, shelter and safe surroundings. People also need meaningful social relationships, to have basic skills and the opportunity to develop more advanced skills and knowledge, and to contribute to society in meaningful ways.¹⁷ Wellbeing as viewed under this approach requires certain resources but is not reducible to those resources.¹⁸ One theory of *distributive justice* is that resources should be distributed in order to ensure all people can have their basic needs met.

This objective approach, however, does not capture all of what makes life go well for a person. Each individual has undertaken particular 'projects' (like their career/job, caring roles, or sporting or artistic pursuits) and developed particular relationships, attachments and identities over the course of their life, many of which are important to their own estimation of how well their life is going. These are not well captured by objective measures of wellbeing, such as basic needs. They are captured in subjective assessments by people of their own wellbeing.

However, policymakers – who plan policies that apply to potentially millions of people – mostly need to work with more objective measures. A helpful middle ground involves making room in analyses of wellbeing effects for certain projects, relationships, attachments and identities that people *tend to have*, such as their jobs, familial and friendship networks, attachments to place, and identities related to these.¹⁹ Theories of *recognition justice* assert the importance of publicly recognising and valuing the different identities and attachments of particular groups.²⁰ However, theories of distributive justice can also entail distributions of resources that take account of (i.e. partly 'recognise') at least some of these identities and attachments.



Phase 1: Planning and analysis

Guidance

1.2. Guidance

1.2.1. Strategies and timeframes for a just transition

Planning and analysis for a just and robust transition should begin immediately, under the framework of national Long-Term Strategies (LTSs) (as invited by the Paris Agreement’s Article 4) and medium-term roadmaps and milestones (including, for EU Member States, National Energy and Climate Plans). An overarching long-term timeframe is important for including people’s and groups’ adaptive capacity and the prospect of future opportunities under the scope of planning.

Roadmaps should identify concrete impacts, intermediate interventions and progress reviews. The UN Development Programme has created a framework for integrating just transition into LTSs and Nationally Determined Contributions.²¹

National cross-sectoral planning should address the interactions between different areas of decarbonisation (including social institutions and behaviours) linked to sector-level planning. Plans at both levels should identify and involve key stakeholders and assess the likely social effects of proposed pathways. Government ministries therefore need to coordinate for effective planning (see 4.2.1). In particular, Finance Ministries should be involved in early planning, to ensure that plans are achievable within the macroeconomic and fiscal context, and sufficient public resources are allocated for the policy interventions in roadmaps.

Historical experience consistently shows that the economic and social costs of transitions are higher in terms of both wellbeing and resources when they are disorderly and unmanaged by policy.²² Planning ahead will enable policymakers to maximise benefits and minimise costs, and sustain political support for related decisions.

Table 1.1. Analysing social impacts of the transition: operationalising concepts

Market	Exposure measure	Vulnerability conversion factors	Wellbeing impacts (channel in brackets)	Political attitudes and behaviour	Adaptive capacity conversion factors
Consumer	Changes in price of goods and services (absolute and proportionate)	Wealth	Physical health (ability to heat home, nutrition)	Reported attitudes towards climate or sectoral policies (e.g. survey responses)	Individual- and community-level factors:
		Disposable income			
Labour	Change in probability of employment	Home address	Social relationships (personal mobility, cost of activities)	Measures of political engagement (e.g. aggregate voting patterns)	Individual-level – overlap with vulnerability factors (e.g. wealth, education)
		Level of education			
		Gender	Mental health (work identity, isolation, stress)		Community-level – concentration of supporting institutions (e.g. employment services)
		Age			
Household status (e.g. single parent)					

1.2.2. Creating tools for transition analysis

Both qualitative and quantitative tools are needed to capture transition effects. In many cases, quantifying impacts on wellbeing requires making simplifying assumptions. This creates significant uncertainty over results and can prevent a deeper understanding of the channels of impact that matter for justice and for political support, such as how much people are able to participate in decision-making that affects them. Additionally, some quantitative tools require technical capacity and are expensive to develop and use.

Table 1.1 proposes concrete measures, mapped onto Figure 1.1, that can serve as inputs to decision-making tools (such as econometric models or multi-criteria analysis).²³ The same measure can be quantitative or qualitative – for example, by substituting numerical or probabilistic estimates of exposures with categories such as ‘low/medium/high’ or ‘positive/negative’.

The table focuses on the main channels for economic effects on households:

- **The consumer market:** changes in the price and availability of goods and services; and
- **The labour market:** disappearance or changes in some jobs, creation of others, and changes in relative wages.

Phase 1: Planning and analysis

Guidance

1.2.3. Patterns and trends in political attitudes and behaviour

Studies can provide greater insight into the factors that affect whether people support or oppose policies, which include individuals' socioeconomic characteristics and, even more so, their values and ideologies. Factors associated with objectively greater wellbeing will not always directly link to more favourable policy attitudes. For instance, in Norway, income and education appear not to be strongly linked to attitudes towards climate policies, while other political attitudes are, and access to local public transport seems not to affect views on road taxes.²⁴

Context and policy design are also important factors.²⁵ Unmanaged change creates strong opposition, as observed in places where coal mines have been shut down suddenly, like the Powder River Basin in the United States.²⁶ However, as new industries and technologies become more competitive than old ones, it will affect the political power of various groups – for example, causing the splintering of business associations as the diversity of energy sources increases.²⁷

Assistive policy can build support but needs to be seen as adequate and credible, and inclusive and transparent decision-making is equally important. Financial and other forms of transitional assistance can help build support for the transition.²⁸ However, where assistance measures are poorly communicated, or perceived by affected groups to be inadequate, they can fail to quell opposition. Recently, for example, farmers in the Netherlands protested against policy measures affecting farmland and animal herds in spite of there already being grants available for converting to sustainable farming.²⁹

Involving groups in planning and bargaining over policy enables them to act as a bridge to the public and the stakeholders they represent. Firms, labour unions and sometimes NGOs are key in driving support or opposition among members and their communities; officials in local authorities can also have influence. For example, when the Spanish government negotiated a Just Transition Agreement with labour and business representatives for workers and communities affected by the phase-out of coalmining, its vote share in affected municipalities increased relative to similar municipalities that had no coal mines. Union support for the Agreement appears to have played an important role in building public support.³⁰

1.2.4. Independent climate change committees and just transition commissions

Establishing specific bodies to evaluate impacts and policy options can help policymakers with transition planning and analysis. Climate change advisory bodies exist in over 40 countries³¹ and, in a similar vein, several governments have created commissions specifically focused on just transition.³² These commissions can include a greater role for stakeholder participation and deliberation, such as commissions on the phase-out of coal in Canada and Germany – these participatory aspects are explored in Phase 2.

These institutions have advantages: they provide expertise (through technical modelling and other analytical tools and the contextual knowledge and experience of their participants); they confer credibility and legitimacy on government planning processes;³³ and they can consider diversity across regions within the scope of their research and advice, to reflect place-based dimensions of transitions. For example, the Just Transition Commission in Scotland has provided the Scottish Government with advice on the outline of its sectoral Just Transition Plans and has carried out research and public workshops in tandem.

The Phase 1 case study explores the UK's Climate Change Committee's experience of advising the Government by carrying out technical analysis on the labour market in the net zero transition.

Phase 1: Planning and analysis

Approaches

1.3. Approaches to planning and analysis

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Computable General Equilibrium (CGE) modelling	Consumer and worker exposures, generally at a national-sector level	Models the underlying behaviour of consumers, firms and workers to predict how key labour and consumer market outcomes will be affected by decarbonisation policies. Can be combined with other tools to translate results to a more disaggregated level.	Can quickly produce quantitative impacts of a range of decarbonisation policies. Coverage of all sectors in the economy. Captures interactions between sectors.	Requires highly simplified representations of producer and consumer behaviour. Models can be a ‘black box’ and their correct interpretation requires knowledge of assumptions.	Inputs: extensive albeit generally publicly available data covering historic resource flows. Modelling: significant expertise and resource required to build model.	Frankfurt School of Finance and Management (FSFM) and the AARC Consortium (2021) Final Report on the Transition Process Towards Climate Neutrality for Romania – Section 4.2 Climate Change Committee (2023) A Net Zero Workforce
Techno-economic modelling	Consumer and worker exposures	Similar to CGE modelling but tends to focus on particular sectors and include a more detailed representation of the cost structure of producers.	Can quickly produce quantitative impacts of a range of decarbonisation policies. Uses a more detailed representation of producer behaviour than CGE models.	Does not capture interactions between sectors. Models can be a ‘black box’ and their correct interpretation requires knowledge of assumptions.	Inputs: data on the cost structure and consumer demand for the sector of interest. Modelling: significant expertise to develop/program model software.	Element (2020) Deep-Decarbonisation Pathways for UK Industry
Descriptive statistics of consumer vulnerability	Consumer and community vulnerability and wellbeing	Represents consumer vulnerability to the energy transition by combining sociodemographic and consumer data to estimate ‘conversion factors’. Can be combined with estimated exposures to analyse wellbeing impacts from the transition.	High granularity in terms of geographical coverage or household types. High flexibility to tailor to the appropriate measurement of vulnerability given the context.	Static: describes historical trends; does not infer future changes without further modelling or assumptions.	Inputs: sociodemographic and consumer data. Modelling: involves calculations that can generally be done in standard statistical software.	Dellaccio et al. (2022) The distributional effects of pathways to net-zero and the implications for fuel and transport poverty
Wellbeing indices	People’s wellbeing and community conversion factors	Quantitative index-based measures of wellbeing, where the indices are comprised of a suite of measures of known correlates of wellbeing such as health and local environment.	Represents a comprehensive set of channels through which the transition can affect wellbeing and focuses on the relevant outcomes of policy interventions. Captures relevant, desired outcomes of policy interventions. Can make policy analysis more relatable when presented to the public.	The wide variety of indicators available may be hard to present and interpret.	Inputs: the data can come from a range of sources, including survey and administrative sources. Modelling: simple descriptive statistics using standard statistical software can be used.	What Works Centre For Wellbeing (2017) Understanding Local Needs for Wellbeing Data Centre For Thriving Places (2022) Methodology, Thriving Places Index

Phase 1: Planning and analysis

Approaches

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Shift share analysis	Worker and community exposures	<p>Analyses how the historic economic performance of an area is accounted for by national, sectoral and local components.</p> <p>Can be used to understand the strength or vulnerability of geographical areas to the transition, or to forecast regional employment.</p>	<p>High geographical granularity. A flexible method that can be applied to various outcomes of interest (e.g. employment, output).</p> <p>Does not require significant modelling resources.</p>	<p>May not be appropriate in local economies dominated by large employers.</p> <p>Does not use a structural model of the economy; historical performance may provide limited ability to predict future performance.</p>	<p>Inputs: a national-level forecast of sectoral employment and historical region-sector level employment data.</p> <p>Modelling: can be performed using standard spreadsheet software.</p>	<p>Frankfurt School of Finance and Management (FSFM) & the AARC Consortium (2021) Final Report on the Transition Process Towards Climate Neutrality for Romania – Sections 4.3-4.4</p>
Econometric estimation of effect of policies and shocks	Consumer and labour exposures	<p>Encompasses broad range of methods that can be used to estimate the impact of previous policies or shocks which have led to a rationing in the use of carbon in production.</p>	<p>Results are generally transparent and easy to interpret.</p> <p>Can capture the specificities of a particular place, set of consumers or workers.</p>	<p>May not allow simulation of the impact of future policies.</p> <p>Tool is reliant on previous appropriate policies or other shocks.</p>	<p>Inputs: historical data on the economic variable of interest (e.g. employment, prices).</p> <p>Modelling: varies depending on the model specification.</p>	<p>Scheer et al. (2022) Whose jobs face transition risk in Alberta? Understanding sectoral employment precarity in an oil-rich Canadian province</p> <p>Upton and Snyder (2017) Funding renewable energy: an analysis of renewable portfolio standards</p>
Text analysis of job and task descriptions	Worker exposures and adaptive capacity	<p>Algorithmic analysis of text related to jobs, such as job adverts. In the context of the just transition, this can analyse the characteristics of potential new and at-risk jobs.</p>	<p>High geographical and sectoral granularity.</p> <p>Can be used to monitor changes in labour market in close to real-time.</p>	<p>May require proprietary data.</p> <p>Results can be sensitive to methodology.</p> <p>Limited guidance on the appropriate assumptions.</p>	<p>Inputs: text data describing jobs.</p> <p>Modelling: requires data science expertise.</p>	<p>Saussay et al. (2022) Who's fit for the low-carbon transition? Emerging skills and wage gaps in job ad data</p> <p>Christiaensen et al. (2022) Towards a Just Coal Transition: Labor Market Challenges and People's Perspectives from Wielkopolska – Section 6</p>
Survey of attitudes	Attitudes (links to exposure and conversion factors)	<p>Primary data collection on people's support for or opposition to policies and factors that correlate with these attitudes, to understand drivers of opposition and support for climate policies.</p>	<p>Can be tailored to the scope of the policy analysis required.</p> <p>Can capture perceived vulnerabilities and risks that may not be captured using other tools.</p>	<p>Requires primary data collection.</p> <p>Does not necessarily establish the causes of support/opposition for policies.</p>	<p>Inputs: survey design and data collection.</p> <p>Modelling: knowledge of more advanced statistical methods and statistical software to conduct the modelling.</p>	<p>Saelen and Aasen (2023) Exploring public opposition and support across different climate policies: Poles apart?</p> <p>Aasen and Saelen (2022) Right-wing populism and climate policies: Explaining opposition to road tolls in Norway</p>

Phase 1: Planning and analysis

Approaches

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Discrete choice modelling	Attitudes (can augment analysis of all concepts)	Surveys and models people's preferences over a set of options. In the context of the just transition the options could be over different types of jobs, transport options or local amenities.	Can be used to predict how people will react to changes in their environment. Survey can be tailored to the scope of the policy analysis required.	Requires additional assumptions that may not be valid in certain situations.	Inputs: specialised survey design and data collection. Modelling: knowledge of the statistical methods underpinning discrete choice modelling and statistical software.	Christiaensen et al. (2022) Towards a Just Coal Transition: Labor Market Challenges and People's Perspectives from Wielkopolska – Section 4
Land and assets repurposing assessment	Adaptive capacity of firms or communities	Screening and spatial evaluation tools can identify land, infrastructure and buildings that will become underutilised or stranded and propose conversion to suitable uses.	Assesses the capacity of communities and industries to adapt to change by serving new economic functions. Focuses on spillovers and aggregate effects, not just discrete individuals or firms.	Uses are dependent on investment and enabling conditions. Local assessments should be nested within higher-level (regional, national) strategies and scenarios.	Inputs: methodology with criteria and parameters to assess suitability. Process: technical expertise commensurate with methodology; in some cases, dedicated software, such as GIS [geographical information system] applications for land repurposing.	EU Coal Regions in Transition Initiative (2020) Environmental rehabilitation toolkit World Bank (2020) A Road Map for a Managed Transition of Coal-Dependent Regions in Western Macedonia – pp. 103-116
Political economy analysis	Political behaviours and adaptive capacity of people and groups based on their role within systems	Research into the organisations, material incentives and norms that affect the likely trajectory of the transition and implementation of policies at national, subnational, or sectoral level.	Highlights 'room for manoeuvre': constraints for the transition by path dependence, and leverage of particular organised groups to support or facilitate change within systems. Provides a long-term view of potential change.	Multi-causal explanations can be complex and abstracted from detailed solutions. Analysis can be skewed towards explaining failures and constraints if it is not embedded in decision-making that actively seeks solutions.	Inputs: clarity over how analysis will be used to inform just transition strategies and plans. Definitions of key terms and assumptions. Process: can be carried out by a team with a formal Terms of Reference, timeframe and outputs, or can be embedded into the thinking and working practices of all staff.	FAO (2017) Strengthening Sector Policies for Better Food Security and Nutrition Results: Political Economy Analysis Whaites (2017) The Beginner's Guide to Political Economy Analysis

1.4. Case Study

Labour market assessment by the UK's Climate Change Committee

Context

The Climate Change Committee (CCC) is an independent body established by the UK's 2008 Climate Change Act with a mandate to advise the Government on emission reduction targets (such as net zero), recommend national carbon budgets for five-year periods, and address other questions at the Government's request. The statute requires it to suggest "sectors of the economy in which there are particular opportunities for contributions to be made towards meeting the carbon budget" as well as "the costs and benefits of setting such a budget".³⁴ It also monitors the Government's progress against its goals in an annual progress report.

The CCC's report on the Sixth Carbon Budget ('6CB'), published in 2020, recommended a 78% reduction in the UK's greenhouse gas emissions by 2035 in order to meet net zero by 2050, and provided a set of sector-based pathways to achieve these reductions.³⁵ The ability of sectors to pursue these pathways will depend on the availability of workers with suitable skills. These pathways will also have a significant effect on the wellbeing of certain workers.

Action

To inform government analysis of the transition challenges related to workers and jobs, the CCC carried out a detailed study as part of its role on monitoring policy progress towards the carbon budgets. In a 2023 report, *A Net Zero Workforce*, the Committee's secretariat analysed the potential labour market impacts of the transition and associated reskilling requirements.³⁶

To capture the complex range of factors affecting the labour market through the net zero transition, the CCC combined existing literature on transitions, analysed labour market and environmental data, and convened an Expert Advisory Group.

Producing the main analysis in the report involved four stages:

1. Identify and define three potential impact categories for sectoral employment based on the 6CB report: 'growth' sectors, in which employment is expected to increase; 'transition' sectors, which will need to either alter their production or phase down to reduce emissions; and 'adjust' sectors, which can support sectors in other categories, for example through education, or those that are on the periphery of the transition.
2. Allocate sectors to these categories by considering the sectors against a set of mediating factors such as the emission intensity of production, opportunities to facilitate emission reductions, and the availability of low-carbon technologies. This allocation relied on the judgement of the Expert Group, aided by data such as the contribution of different sectors to UK emissions.

3. Review evidence on previous transitions to identify factors that have a large bearing on the impact of an economic transition. Three such factors were identified: geographical concentration of transition sectors, worker characteristics and the pace of transition.
4. Analyse labour market and environmental data to assess these factors – for example, the geographical concentration of key sectors for the net zero transition.

The CCC found that around one-fifth of the UK's workforce work in sectors that will be significantly involved in the transition: either increasing, phasing down or redirecting production. More new jobs are expected to be created than will be lost, depending on the UK's international competitiveness and the extent to which the workforce can be reskilled. The CCC also identified which sectors provide opportunities for creating employment and specific geographical locations that face a high risk of disruptive labour impacts.

The approach closely matches the concepts set out in this report. For example, allocating sectors to different impact categories and analysing the geographical concentration of sectors can be done to estimate the exposure of workers and communities to transition effects. Including modelling variables on the characteristics of workers and the pace of transition addresses conversion factors and adaptive capacity.

1.4. Case Study

Labour market assessment by the UK's Climate Change Committee

Lessons

The CCC's team recognised that the sectoral lens used to produce the analysis has its limitations. For example, it can hide significant variance in the impact on jobs across occupations within a sector, and the ease with which workers can switch between sectors. However, it is an important lens for embedding the supply of and demand for skills into sectoral pathways and developing suitable transition modelling (and for embedding other constraints, such as supply chains).

Following wider engagement, the CCC has considered using an alternative, 'task-based' lens that would make its results more comparable with academic evidence. This lens uses data on the tasks involved in different jobs rather than focusing primarily on which sector a job is in. One use of this data is to categorise certain jobs as 'green' depending on their tasks. Task-based analysis can identify more precisely where jobs are likely to be created and lost from the transition³⁷ and how easily workers may be able to switch jobs, by analysing the similarity of tasks involved.³⁸

Analytical approaches for transition planning need to respond to existing policymaking structures, but also to help those structures adapt to a changing context. In this case, the CCC engages with government teams organised along sectoral lines (for example, transport, industry, energy), and others along policy lines (such as in the skills teams in education and labour departments). Using both a sector-based and a task-based lens may help to engage with teams that take different approaches to analysing and developing the labour market policy response to facilitate the net zero transition.

The CCC's analysis reflects the value of having an independent advisory institution for effective planning for a just and robust transition. Such an institution can carry out targeted analysis, engage with stakeholders to refine approaches, and communicate decision-relevant findings to specific audiences. The Climate Change Act also highlights that policy design ultimately remains at the discretion of government, and detailed CCC recommendations towards specific sectors have not always been followed.³⁹ However, the CCC is also an important institution for creating accountability for successive governments, including through litigation where policy diverges from its advice (see Phase 4).



2

Phase 2: Participation and deliberation

2.1 Concepts and definitions

2.2 Guidance

2.3 Approaches for participation and deliberation

2.4 Case studies

- Citizens' assembly on food policy in Switzerland

- Norway's Council on Just Transition in Working Life



2 Phase 2: Participation and deliberation

Key messages

- Policymakers should create a range of forums for participation and dedicate sufficient resources to carry out participatory processes within the timeline required for effective decision-making for the net zero transition.
- Citizens’ assemblies, or similar ‘representative deliberative processes’, can be used to understand what an informed public can agree on in complex policy areas – including net zero itself or sectoral transitions, such as in food, transport, or energy.
- Dialogue between workers’ representatives, firms and government should address the net zero transition and seek to be constructive for designing measures such as training and financial support.
- Governments should make the links between participatory processes and policy design transparent so that participants and the wider public have trust in policymaking.
- Policymakers should dedicate special effort to ensuring that more vulnerable and marginalised people, including women and people experiencing racial inequality, can participate and are not excluded by the persistence of unequal power structures in participatory processes.

This chapter provides guidance on how national governments can use different approaches to participation and deliberation so that people’s knowledge and perspectives can inform the design of policies that will affect them. This is essential for procedural justice and can enable greater representation of people from vulnerable and marginalised groups. Governments should consult and co-create policies with citizens, residents, workers, communities, firms and other organisations to manage the distribution of transition costs and benefits.

Participation in economic activities for decarbonisation can also facilitate procedural and distributive justice, which is considered in Phase 3.

2.1. Concepts and definitions

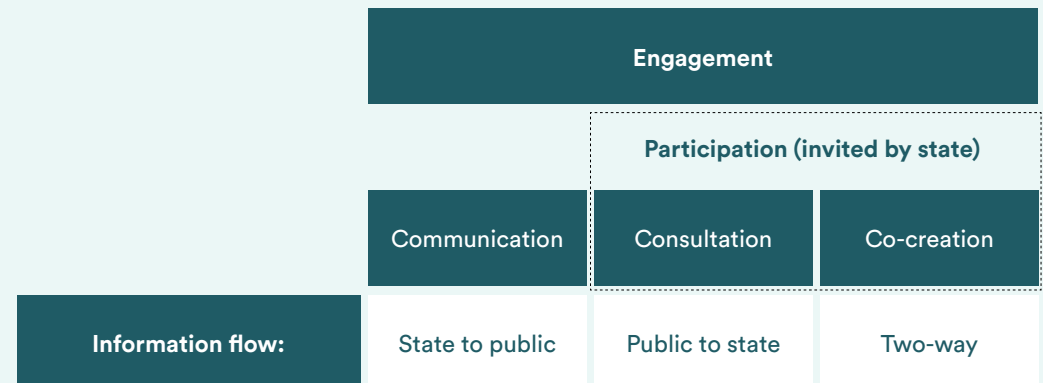
2.1.1. Public participation and engagement

There are numerous types of public ‘engagement’ processes. **Participation** is the direct or indirect involvement of stakeholders and the public at large in decision-making about policies, plans or programmes in which they have an interest.⁴⁰ Participation is both important for procedural justice, based on

universal rights to take part in the conduct of public affairs, and is likely to improve policy outcomes, since it improves the knowledge available to decision-makers, along with people’s trust in decisions and institutions.⁴¹

Participation requires the flow of information from people to government through either **consultation**, whereby policymakers seek to understand views and perspectives, or **co-creation** (sometimes called ‘collaboration’ or ‘cooperation’), whereby policymakers work together with people to design solutions.⁴² By contrast, **communication** involves government provision of information to stakeholders without inviting their input. Communication is also important to a just and robust transition and is addressed in Phase 4. Types of public engagement are outlined in Figure 2.1.

Figure 2.1. Typology of public engagement processes for policymaking



Phase 2: Participation and deliberation

Concepts and definitions

Although there is no universal legal definition of public participation with respect to climate policy, there is a strong basis in international agreements for its central role in the net zero transition. For example:⁴³

- **Action for Climate Empowerment (ACE)**, the subject of Article 12 of the Paris Agreement (and Article 6 of the UNFCCC), requires governments “to enhance climate change education, training, public awareness, public participation and public access to information”. Approaches for the effective implementation of ACE have been developed in the Glasgow work programme on Action for Climate Empowerment and the action plan on that programme, adopted at COP26 and COP27 respectively.
- **The Aarhus Convention**, to which most European countries and the EU are signatories, establishes the right of the public to participate in decision-making related to specific environmental matters, the right to access environmental information and the right to access justice (see also Phase 4). Implementation of the Aarhus Convention relies on national laws and EU legislation.

2.1.2. Representation, deliberation and influence

In a national policy context, the number of people affected by decisions is likely to be much too large for them all to be involved directly in processes. Therefore, their perspective and interests must be **represented** by another party, whether by individuals or groups. Elected representatives in Parliament serve this basic function, but alternative forms of representation can enhance decision-making processes by linking them more directly to people’s knowledge and lived experience.

Options for forming representative groups vary by stakeholder and sector. Random selection allows deliberative bodies to ‘descriptively’ represent the wider public (i.e. in terms of personal characteristics) as closely as possible. Groups with specific interests can be represented by organisations created specifically to represent them: unions represent workers (and union confederations represent unions); business or producer associations represent firms and industries; and NGOs can speak for vulnerable groups and for the environment. However, representation can also mask inequalities: for instance, producer associations might represent organisations with different interests, such as large agricultural firms and smallholder farmers, but be biased towards more powerful members. It is important to pay close attention to the means and degree of representation for genuine procedural justice.

Deliberation means a structured process of dialogue and debate, where people receive information and interact with alternative perspectives before reaching a group conclusion based on clear, shared evaluative criteria. Deliberation can have aspects of consultation and of co-creation, depending on the design of a given process. Typical deliberative processes are thought of as part of democratic politics (see 2.2.2), but processes in industry for dialogue between workers, firms and government can reflect deliberative principles, too.

Inviting stakeholders and the public to input into decision-making is not sufficient for procedural justice: they should have the opportunity to genuinely **influence** outcomes. What this means in practice will vary, given the wide range of policies under consideration for the net zero transition and the range of different public and stakeholder perspectives that can contribute. Co-creation approaches will likely entail a more responsive stance from policymakers due to the two-way information flow. In all cases, it is important for governments to disclose what information is being shared through participatory mechanisms and how they intend to address the views raised. By contrast, limited transparency can undermine trust in governance and policy and lead to political opposition to the transition.

Phase 2: Participation and deliberation

Guidance

2.2. Guidance

2.2.1. Principles and core elements of participation

Policymakers should be clear on whether participants are helping to define the problem within a specific context, develop options, or make a decision. Typically, involving people earlier in the decision-making process gives them greater influence over outcomes and enhances procedural justice.⁴⁴ The option to participate to inform decision-making should be accessible and open to all and processes should be transparent (although these conditions come with caveats, such as when creating deliberative forums using random selection). Power imbalances that might prevent some people from feeling able to participate and comfortable in doing so should be addressed (see 2.2.4).

Steps for creating decision-making processes include:⁴⁵

- Notifying relevant stakeholders (or, for representative deliberative bodies, invited members of the public) of their right and opportunity to participate
- Clearly identifying the purpose of participation, including the type of decision and any options already identified
- Outlining timelines for participation in each stage of the process
- Providing relevant information needed to participate effectively, such as about the transition context and wider national decision-making processes relevant to the transition
- Making relevant adjustments to meet people's specific needs or the circumstances, such as providing information in multiple languages or formats for accessibility purposes
- Clearly identifying which public authorities are responsible and points of contact
- Using a mixture of online and in-person modes for participation, which should be neutral and easy to access

- Considering inputs fairly, including granting people equal voting rights and giving equal consideration to the inputs received through different channels (e.g. online and in-person)
- Storing data on participants and their inputs in a secure and consensual manner compliant with relevant regulations, such as the EU's General Data Protection Regulation (GDPR)
- Publishing inputs such as minutes of meetings and written consultation responses transparently and in a timely fashion.

The goals of comprehensive and fair participation on the one hand and delivery of the transition at the pace needed to achieve net zero goals on the other can be in tension.⁴⁶ Due to the urgency for decarbonisation, there might be only a small window for decision-making to manage economic change effectively. Rapid processes tend to favour those groups that have the largest resources to organise or fund responses to complex government processes in a short period of time. There are also limits to how effective participation can be when managed in a centralised and top-down manner. Stakeholder engagement in the development of Territorial Just Transition Plans in EU Member States has been deemed insufficient in many cases (by observers under the EU's Just Transition Platform), due to a mixture of both problems.⁴⁷

Governments should move early and quickly to promote and organise participation channels, and target more vulnerable and under-represented groups to ensure that they are included (see 2.2.4). Implementation of participatory processes can often be hastened through greater investment of resources in relevant government agencies. Policy design that does not use participation to gain early buy-in from stakeholders may well encounter organised resistance and be exposed to litigation later (see 4.2.5). An apparent trade-off in favour of a rapid transition can lead to measures that are legally and politically fragile and less successful in the medium and longer term.

National policymakers should provide the resources that regional and local authorities, or other delivery partners, need to run effective processes (see also 4.2.2), especially in policy spheres and locations where local entities are more trusted by constituents than the national government. For instance, 'climate commissions' at the subnational level can provide a forum for different stakeholders to input into planning and decisions that affect local or regional economic development. National policymakers should provide guidance such as defining principles or methods for local authorities to use to ensure they reach marginalised groups (see 2.2.4).

2.2.2. Convening citizens for deliberation

National policymakers have the opportunity and responsibility to engage with the public on the transition to net zero. Representative deliberative processes can be powerful for building a 'social mandate' for fair and inclusive policies.⁴⁸ It is particularly important to seek public input on policy changes that affect large swathes of the population, such as taxation and social policy. However, input from the public on more specific issues, such as sectoral plans, can also produce principles and criteria to guide decision-making. These processes can be understood as somewhere between consultation and co-creation, depending on their design and when in the policymaking process they are used.

The Organisation for Economic Co-operation and Development (OECD) notes that representative, deliberative processes have taken place across many policy areas and at all levels of government (15% of cases in its 2020 data were at national level). It highlights 12 different models for deliberative participation between citizens characterised by four types of purpose, including 'informed citizen recommendations' or 'citizen opinion' on policy questions.⁴⁹ Representation of the wider population can be achieved through random selection using statistical methods, to ensure sufficient diversity of characteristics and opinions so that unjust societal power structures are not reproduced in the assembly. Participants can also include non-citizen residents.

Phase 2: Participation and deliberation

Guidance

This report follows the Knowledge Network on Climate Assemblies (KNOCA) definition of an assembly as “any participation process that combines random selection, deliberation, and decision-making” on policy.⁵⁰ The OECD report highlights subtle differences between assemblies, juries, panels and councils; these differences are not reflected here in detail, but their existence shows that policymakers have options to tailor processes based on their goal and available resources.

Factors for policymakers to consider in the establishment of a citizens’ assembly include:⁵¹

- **Purpose.** As with all participatory measures, governments first need to choose what role to give recommendations generated by deliberative processes in decision-making about decarbonisation. Deliberation can occur at the very start of the cycle to set priorities or principles that policymakers should consider when approaching policy, or it can be used later on to generate direct policy suggestions for legislators or the public to vote on and the executive to implement. The appropriate remit can also depend on which public body commissions the assembly. To clarify the remit, the commissioning body should commit to how it will respond to outputs and recommendations.

The task participants are set will frame the problem and affect which solutions they produce. Tighter remits can be useful for exploring nuances of a policy area but may limit the connections that people can draw to other parts of related systems. Importantly, processes with broader remits can also have implications for decarbonisation policy. They can also encompass national climate adaptation, other environmental issues, or wider systems change (see the Phase 2 case study on Switzerland’s assembly on the food system). Remits can also mention fairness or justice explicitly – this is the case, for example, in assemblies carried out in Scotland and Spain.

- **Design.** The features of an assembly should enable its participants to complete their task effectively. Policymakers should consider:
 - How the process is governed, including roles for public officials and external experts
 - How people are recruited and whether they are financially supported for participating
 - How long the process lasts
 - How and where people are convened
 - How deliberation is structured, including whether the assembly is split into smaller groups to cover more topics
 - How much scope to give third-party delivery partners in designing and facilitating the process
 - What kind of evidence is provided to participants, how it is communicated to them, and by whom
 - The extent to which the participants themselves are able to decide the design features of the process
 - What rules are set for how participants develop recommendations, reach decisions and agreement on final outputs.⁵²
- **Institutionalisation.** Beyond the commitment to respond or act on the recommendations (see ‘purpose’), governments need to reflect on how citizens’ assemblies can contribute to decision-making longer-term. Creating permanent structures or rules requiring policymakers to convene similar processes at certain points or under certain conditions in the future can increase participation throughout the transition and respond to ongoing change, while reducing costs.⁵³

- **Perceptions and legitimacy.** To contribute to a just and robust transition, deliberative processes need to be perceived as representative and fair by the wider public, by stakeholder groups, and by policymakers who are not close to the process. Final reports issued by the assembly can help by including a sample of the rationales discussed for certain recommendations. All procedures should be published online and be transparent and the process should be subject to an independent (also transparent) evaluation afterwards.⁵⁴ Genuine random selection is vital. All the design choices listed above should be considered with the additional objective of ensuring legitimacy, and integration into the policy cycle should also be monitored transparently (see Phase 5).

2.2.3. Worker participation and relations between unions, businesses and government

Enabling workers to participate in transition planning and measures to shape the labour market should begin with strengthening existing rights for workers and establishing or reinforcing permanent institutions for social dialogue. Such rights are firmly established by several international and European commitments, including the ILO Guidelines for a just transition, the European Charter of Fundamental Rights of the EU, the European Pillar of Social Rights, and the SDGs. They include collective bargaining, a key form of participation for workers in a transition, and the right to strike to ensure collective bargaining power. The EU Minimum Wage Directive, introduced in September 2022, requires all Member States to target a collective bargaining coverage of at least 80% of workers.

Phase 2: Participation and deliberation

Guidance

Collective agreements can be made more ‘green’⁵⁵ by putting environment on the agenda (globally, just under a quarter of agreements in 2022 addressed environmental transitions),⁵⁶ and should aim to create deliberative spaces to explore assumptions and tensions perceived by different parties. Sectoral social dialogue would help to ensure support for workers at risk of losing jobs and that new green jobs are of high quality, and to anticipate and address skill needs; bringing together low-carbon and high-carbon industries can help to explore and maximise skill overlaps and investments that can smooth the transition. Potential outputs are the design of – and criteria for receiving – training, funding and relocation support.

Governments can also directly consult firms and unions to understand anticipated skills gaps and needs, or concerns about job quality. For instance, the UK government, through its Green Jobs Delivery Group, is working with industry partners to understand labour supply and demand mismatches/ challenges within their sectors and employment issues associated with this. Even prior to policy design, purposeful social dialogue with workers and the firms that employ them can build legitimacy for the transition. However, new institutions should be sufficiently broad and show a responsiveness to people’s input, not just to powerful incumbent interests. For example, the UK’s North Sea Transition Deal for oil and gas had limited worker representation and has not led to greater alignment of sectoral policy with national climate goals.⁵⁷

A country’s existing institutions will have a strong influence on the most suitable approaches for engagement between government, businesses and workers:

- **In countries with strong institutions for tripartite bargaining**, known as ‘concertation’,⁵⁸ national-level bodies bring together government, peak business associations, and peak union bodies.
- **In countries without strong institutions for tripartite bargaining**, it is important to encourage social dialogue between firms and workers. Some firms are disclosing processes for identifying skill gaps for workers and other affected stakeholders in the transition by engaging with unions and communities, and this example of best practice can be encouraged by national laws and regulations (Phase 4 addresses this in more detail).⁵⁹

Including NGOs in broader sectoral or national dialogues can help to represent people whose interests are affected by the transition but who are not represented by unions, such as workers elsewhere in the value chain, consumers, and communities in affected areas. For example, the German Coal Commission featured the broad participation of social partners and civil society, including unions and environmental NGOs, and resulted in near-unanimous agreement on a programme to phase out coal, including policy measures to support workers and structural policies and funding for the regions affected.⁶⁰ However, depending on existing political positions among unions and businesses, there might be a case for narrower discussions to build trust and foster a shared vision for workforce transition (see the Phase 2 case study on Norway’s Just Transition Council).

2.2.4. Involving marginalised people and communities

Vulnerable people and communities should be able to participate in shaping the transition. For instance, poor people, including those experiencing hunger, or at least groups representing their needs and interests, are key stakeholders in any decisions that could have implications for food security. It is also essential to ensure a diverse range of perspectives are heard. The IPCC states that including women, people experiencing racial inequality, and other marginalised people in policy design processes “increases the democratic impetus for climate action” and “makes climate mitigation policies more effective”.⁶¹ As well as poverty, age is an important factor, and both young people and the elderly are likely to be additionally vulnerable and often excluded by existing policies. The same applies to communities in areas where transition impacts are concentrated or that are disadvantaged by economic and political structures.

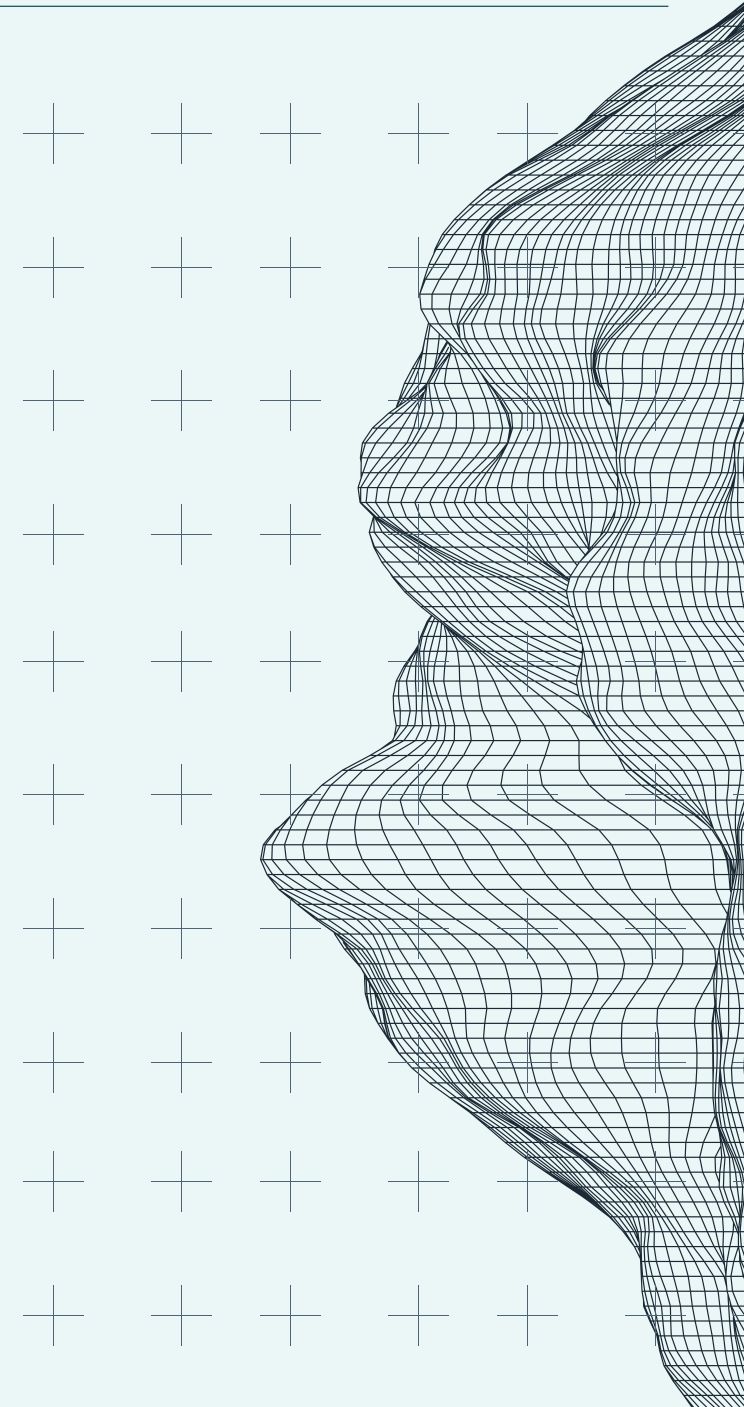
There can be additional barriers to involving these groups effectively, which national policymakers should take proactive steps to overcome beyond the core principles outlined in 2.2.1.⁶² Three considerations are relevant:

- **Reach.** The first task is to invite marginalised and vulnerable people or representatives acting on their behalf to participate in policy processes.
- To reach people to invite them to forums such as community workshops, policymakers can work with trusted individuals in those groups, particularly in contexts of lower rates of trust in government such as migrant communities. For example, the government of New Zealand has carried out 37 meetings at community level (as of September 2023), in addition to consulting more conventional stakeholder groups, to inform its Equitable Transitions Strategy.
- For citizens’ assemblies, using letters to recruit participants can help to target particular geographical areas. Places in the assembly may need to be reserved for people from marginalised groups who have lower response rates, and extra outreach needed to find participants.⁶³

Phase 2: Participation and deliberation

Guidance

- NGOs should be given a place in high-level stakeholder forums and decision-making bodies on funding allocations and social policies (such as for the EU Just Transition Fund or Social Climate Plans – see the Phase 4 case study), since they are often best placed to advocate for the wellbeing of marginalised people who cannot participate themselves.
- Additional, targeted consultations using online participation might be needed to involve repeatedly underrepresented groups. This was done in Spain, for example, through a national survey of young people aged 16–30.⁶⁴
- **Capacity.** Policymakers should also enable people to participate fully.
 - This might include adjustments to the location and timing of activities, funding to cover people's budgets for childcare and transport, and sometimes remuneration should be provided for participation.
 - For citizens' assemblies or other processes carried out with digital technology, it is important to provide equipment, training and ongoing technical support for those who lack resources, experience or confidence.⁶⁵
 - Where there is already a range of support and assistance available – such as grants, training workshops and courses, provided by national government, EU programmes, or civil society – national policymakers can compile the available information and make it accessible for local-level groups.
- **Equity.** The structure and content of processes themselves should create equal opportunity to contribute, and recognise diverse perspectives.
 - Skilled and trusted facilitation is still necessary in representative deliberative processes to ensure this, which shows the importance of using specialised delivery bodies.
 - In labour market bargaining, policymakers can dedicate agenda items to gender and require unions and business associations to demonstrate clear routes and support for women to participate as representatives.
 - Appropriate messaging is a key component of equity. The information that policymakers or experts working on their behalf share with people should be tailored to local and cultural contexts to help people make sense of the transition. Working with trusted partners within communities can also be beneficial here.



Phase 2: Participation and deliberation

Approaches

2.3. Approaches to participation and deliberation

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Targeted interviews or focus groups	Consultation directly with individuals, e.g. as workers, consumers or citizens	Structured or semi-structured sessions with individuals or small groups to discuss their experience of economic change (e.g. siting of infrastructure, working conditions in new industries)	Provides deeper understanding of individuals' lived experience and organisations' positions on an issue, driving both wellbeing and political behaviour. Can contextualise quantitative analysis (see 1.2.2) and other participation approaches.	Not representative: should be complementary to a wider consultation strategy. Highly resource-intensive per person, implying a limited number of people can be reached.	Third-party organisations likely needed to conduct interviews of groups. Partnerships with local organisations (government, NGOs, unions) to access affected stakeholders. Can draw on technology e.g. social media to inform recruitment approach.	O'Beirne et al. (2021) The UK net-zero target: Insights into procedural justice for greenhouse gas removal Scheer et al. (2022) Whose jobs face transition risk in Alberta? Understanding sectoral employment precarity in an oil-rich Canadian province
Online participation	Consultation with a large, self-selected group of the public	Surveys or discussion sessions open to all (subject to any chosen criteria, e.g. age), using remote technology.	Enables participation and consultation en masse and with people who might not join in-person processes. Large datasets of responses can be disaggregated for insights on particular groups.	Not representative: self-selection biases against those who are unaware or unable to participate. Less effective at providing information to participants and creating space for critical reflection.	Support provided to people who lack the means or knowledge to use online technology.	Itten and Mouter (2022) When Digital Mass Participation Meets Citizen Deliberation: Combining Mini- and Maxi-Publics in Climate Policy-Making
Deliberative research for transition planning	Representative deliberation, between consultation and co-creation	Structured workshops bringing together a randomly selected, representative group of people, presented with planning questions and preliminary analysis on transition impacts.	Can produce principles or criteria for decision-making within a multi-faceted process. The considered consensus that results can be perceived as a highly legitimate basis for decision-making.	Ineffective at providing 'hard' metrics for policymakers to apply directly to specific policy problems. Need to find consensus can dilute proposed solutions to the point of being ineffective. Highly resource-intensive.	Third-party organisations should carry out workshops to ensure independence from political incentives. Plan for communicating findings to stakeholders within and outside of government. Fruitful discussion may require screening out individuals with strongly held negative views on climate action.	Mulholland et al. (2020) Understanding and engaging the public on climate change

Phase 2: Participation and deliberation

Approaches

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Citizens' assembly	Representative deliberation, between consultation and co-creation	Random selection of participants; a structured process combining information, deliberation and decision-making on policy issues related to climate change and decarbonisation.	Recommendations can reflect preferences of an informed public with capacity to consider dilemmas and trade-offs, situating decarbonisation in the context of wider transformations in the economy and society.	Wider societal legitimacy is not guaranteed but requires considered communication, transparency, and clarity on role in policymaking process. Most resource-intensive, but can be lowered over time if the practice is repeated.	Buy-in from decision-makers in relevant departments. Choices on sensitive design features, including the remit. Third-party organisations should carry out the process to ensure independence from political incentives.	KNOCA (2023) Guidance OECD (2020) Innovative Citizen Participation and New Democratic Institutions
Climate or just transition commission	Co-creation between key stakeholder representatives	Governance of decarbonisation overall or sector-specific transitions, involving key stakeholder organisations (and community representatives if at local level).	Transition pathways that emerge from collaboration are likely to enjoy broader support. Potential to provide independent evidence, build knowledge and capacity, and lead to innovative measures.	Collaborative actions can take longer to emerge despite partnership building and convening. National commissions will be dominated by large organisations. Maintaining vision and direction in the context of clashes in perspectives can be a challenge.	Budget and staff to establish a secretariat. Clear terms of reference.	New Zealand's Just Transition Partnerships created regional bodies to manage oil and gas phase-out in Taranaki and industrial closure in Southland Pringle et al. (2023) Evaluation of the Impact of PCAN-supported Climate Commissions
Collective bargaining for transition	Co-creation between worker/ business and government representatives	National-level forums or sectoral deals between government, union and business associations.	Agree terms of workforce transition, including training, financial support, supporting social policies (e.g. early retirement).	Restrictive laws may prevent collective bargaining. Divergent views on net zero among unions and business associations may create barriers that require additional stages of dialogue.	Enabling laws or regulations that create legitimate structures for bargaining (including by incentivising firms). Analysis on labour force and industry-specific transition effects (see Phase 1).	Instituto para la Transición Justa (2022) Spain, towards a just energy transition: Executive Report

2.4. Case studies

Citizens' assembly on food policy in Switzerland

Context

Switzerland has been gradually transforming its food system since the 1990s, in line with Article 104 in its Constitution that sets outcome goals for the sector. It has reformed traditional agricultural support policies, shifting towards greater use of direct payments conditional on ecological performance. Government financial support is large relative to the sector's contribution to the national economy.

However, political polarisation over the food system's transition has been growing. In 2020, a proposal by the Federal Council to improve efficiency and environmental impact, including reducing carbon emissions, was rejected by Parliament despite vocal support from some parts of civil society.⁶⁶ The issue is also publicly salient, and referenda on agricultural issues (such as the use of pesticides) were held after petitions succeeded in crossing the required threshold of 100,000 signatures.

The Government has produced several new strategies and plans to move agricultural policy forward, including the 2030 Sustainable Development Strategy, and an Action Plan for 2021–23. Decarbonisation is one goal within the Strategy (specifically, a one-quarter decrease in the carbon intensity of final food demand). The Action Plan committed to “dialogues for a sustainable food system” to support transformation.⁶⁷ In addition, the Government began work on a strategy on the climate impact of the food system as a sectoral element under its Long-Term Climate Strategy.

Action

In 2022, a trio of Swiss civil society organisations carried out the ‘Swiss Food Future’ project.⁶⁸ As part of this project, Landwirtschaft mit Zukunft and Biovision organised a citizens' assembly on the country's food system, partly funded by the national government in partnership with philanthropic foundations. The task was to consider the question, ‘What should a food policy for Switzerland look like that provides everyone with healthy, sustainable, animal-friendly and fairly produced food by 2030?’

The assembly's remit was to play a consultative role: policymakers committed to take the results into account when drafting new agricultural policy documents. Importantly for this role, the assembly's independence was strengthened further by assigning a separate organisation, Collaboratio Helvetica, to manage practical and logistical aspects of the process and to plan and moderate events.⁶⁹ Participants were randomly selected by another independent organisation, DemoSCOPE.

Decarbonisation was placed within the scope of a much wider system transformation with several societal goals. Participants received information from government officials, academics and experts from various stakeholder groups such as consumers' alliances and youth organisations. To produce sufficiently detailed recommendations for policymakers, the process was broken down into parts and discussions took place on specific themes, including environment (and climate), health, production, social issues and the economy. Working groups on each of these themes developed recommendations for the entire assembly to vote on. Out of 137 recommendations that were put forward, 126 received a majority vote.



2.4. Case studies

Citizens' assembly on food policy in Switzerland

The assembly's final report includes the vote share for each recommendation, along with reasoning and supplementary explanation based on the discussions.

The assembly was intensive in terms of resources and commitment from its organisers and participants, partly because of the measures taken to ensure equal inclusion. Participants joined three in-person weekend meetings of the whole assembly in different locations, and eight online meetings for the working groups. In total, they committed approximately 70 hours each, excluding travel time. Organisers reviewed all presentation materials for simple and accessible language, and they were provided in German, French and Italian to reflect Switzerland's linguistic diversity.

In an innovation for representative deliberative processes, the organisers created the opportunity for participants to join 10 'learning journeys', involving visiting points in the food chain such as farms, restaurants and community-supported agriculture projects spread across many regions. All participants had to partake in at least one learning journey; some participated in two or three.

Citizens endorsed recommendations relevant to decarbonisation, including introducing a carbon tax on certain carbon-intensive foodstuffs and putting revenues 'to good use'; growing vegetable products on land instead of animal feed and developing products for meat substitution within Switzerland; and linking direct payments for farmers to quantifiable environmental performance, including on emissions and non-renewable energy consumption.

Lessons

The food policy assembly demonstrates the interlinkages between policy areas that governments should explore for a just and robust transition to net zero. By creating spaces for participation that focus on societal objectives that encompass but are wider than just decarbonisation, policy can reveal barriers and opportunities in other areas implicated in structural economic change for net zero. The food policy assembly is likely to have shaped the wider political debate at a sectoral level in favour of stronger action, as reflected by several Parliamentarians presenting petitions in support of the recommendations.

Representative deliberative processes can be used to explore which measures an informed public would support in a complex policy area. Like many citizens' assemblies that have been studied in depth, the Swiss experience reflects this. They can be particularly useful in contexts where political debates are polarised. Recommendations are unlikely to consist of innovative new policy measures, but they do give policymakers confidence over which specific interventions could win the political support of informed citizens.

Due partly to the timing of the political and policy cycles, the Government's Climate and Food Strategy does not make clear how exactly the assembly might influence policymaking, except for making further assurances that it will consider the recommendations in policy measures.⁷⁰ Clear and honest communication about the impact of the assembly on policy is important to ensure that these innovative forums do not disillusion people about deliberative processes.

2.4. Case studies

Norway's Council on Just Transition in Working Life

Context

Norway has committed to cutting greenhouse gas emissions by 90–95% by 2050 compared with 1990 levels. The energy transition is a key issue for national employment and for social policy via the oil and gas industry's contributions to state revenues. Production of oil and gas accounts for 28% of domestic emissions (not including emissions when the fuels are consumed) – the second-largest contributor to domestic emissions after transport. The industry itself is highly concentrated in the south-west of the country, but due to its importance for the national economy, jobs and infrastructure in related value chains (such as engineering, financial and advisory services; equipment manufacturing; and shipbuilding and outfitting) extend across the country.⁷¹

There is no political consensus on a pathway for reducing Norway's oil and gas output. Plans for the energy sector have focused on developing hydrogen and offshore wind for domestic consumption while reducing emissions from oil and gas operations through electrification, but continuing to issue new licences for fossil fuel exploration and extraction.⁷² However, a just transition aligned with the Paris Agreement requires phasing out oil and gas production.⁷³

Norway has a strong system of tripartite bargaining, with central roles for peak national bodies representing both workers and businesses. There are four peak associations on the labour side, and four on the business side. The labour movement is divided over policy for a low-carbon transition. For example, some professional-service unions support including environmental issues in collective bargaining and protecting environmentally sensitive areas from oil and gas exploration; industrial unions are indifferent towards so-called 'green collective bargaining' and oppose the protection of areas. The Norwegian Confederation of Trade Unions (the LO) is the workforce's largest representative organisation: its 26 affiliate bodies represent around half of the organised workforce across a wide range of sectors.⁷⁴ Debates within the LO reveal a split over whether a just transition means a change *within* the economy's current sectoral makeup or a move *away from* fossil fuels.⁷⁵

Action

The coalition government of Labour and Centre parties elected in Norway in 2021 created a new national body for tripartite discussions on the low-carbon transition and the workforce, called the Council on Just Transition in Working Life. The mandate of the Council is to be an "arena for dialogue on issues relating to restructuring in working life driven by climate policy", and to be aligned with the agenda set out in ILO's 2015 Guidelines for a Just Transition. The mandate also emphasises gender and geographical factors.⁷⁶

The Ministry of Climate and Environment leads the Council, extending the scope of climate and environment policy planning and analysis to the labour market. All four union confederations and all four peak business associations participate. Among the union bodies, only the LO has actively opposed a phase-out date for the oil and gas industry. Environmental NGOs have been excluded from participating, with the intention of keeping the discussion focused on working life, but this issue too has created a division between different unions.⁷⁷

The design of the Council is intended to extend a tradition of trust between social partners to the climate transition. The timeframe is open-ended, with plans for two meetings each year. An initial meeting established the framework for future work and a shared vision of just transition in the workforce; members stated their willingness to exchange views on transition impacts and opportunities, focused on education, upskilling and life-long learning.⁷⁸ The first ordinary meeting invited Norway's independent 2050 Climate Change Committee for discussions and inputs on their work. The agenda for future meetings and invitations to other ministries will be determined on an ad hoc basis.

2.4. Case studies

Norway's Council on Just Transition in Working Life

Lessons

The Council demonstrates tensions between political feasibility and justice in transition pathways. The politicisation of oil and gas in Norway presents a challenge to climate policymaking and highlights that unions are not a monolithic group. In this context, a dedicated forum to focus on a more positive vision of workforce transition might unblock the path to domestic decarbonisation by strengthening and normalising collective bargaining on environmental transitions and producing skills policies and investment in low-carbon technologies like wind power and carbon capture and storage. A pragmatic evaluation of the Council's impact might focus on these factors.

However, there is a genuine risk that the Council will facilitate a delay in decarbonisation, if powerful groups dominate the policymaking process in ways that promote their economic interests in continued oil and gas expansion. For a truly just transition that includes Norway's contribution to global emission reductions aligned with the Paris goals, the Council should also build understanding and support for a managed phase-out of fossil fuel production that safeguards workers' rights.

Furthermore, the lack of clear timeframe or output in the new Council's mandate means that it could be disbanded if interest wanes or after the next change of government – this possibility is indicated by short-lived previous attempts to establish similar bodies (such as the Working Life's Climate Council in 2011), which failed to become established forums for dialogue. Evaluations of the Council should also consider design features, like the decision to exclude environmental NGOs, in this context.

As with all forms of participation, transparent integration into decision-making processes might make the Council more effective. The Ministry for Climate and Environment has no remit to make education, labour or social policy, so other Ministries should be closely involved to translate the knowledge shared in the Council into concrete transitional assistance. It is unclear at this stage whether and how the Council will also be linked more closely to similar bodies – for example, the Norwegian Committee on Skill Needs, which is tasked with analysing future skill needs, assessing the knowledge base and facilitating a societal dialogue. It is chaired by the Directorate of Higher Education and Skills, so has no direct formal links to the Council.⁷⁹



3

Phase 3: Policy design for transitional assistance

- 3.1 Concepts and definitions
- 3.2 Guidance
- 3.3 Approaches for transitional assistance
- 3.4 Case study : Carbon tax revenue redistribution in Ireland



3

Phase 3: Policy design for transitional assistance

Key messages

- Policymakers should provide forward-looking and broad transitional assistance where possible, but backward-looking measures (including compensation and exemptions) have a role where negative transition impacts are pronounced and critical for justice or political support.
- Fiscal and social policies are key levers for providing financial assistance to households; Finance Ministries are central to reforming public and private finance to provide investment for the just transition.
- Governments should support current and future workers to benefit from decent green jobs by using training and education policies to match skills with opportunities, offering tailored advice and support to navigate the job market, and supporting relocation where necessary.
- A place-based approach can be integrated into national policy by providing resources to subnational authorities and using public investment to incentivise and assist local ownership and supply chains.
- Transitional assistance should be tailored for women and other marginalised people, according to factors such as ethnicity and disability, and partner with organisations that are skilled in supporting each of these demographics.
- Policy should be designed in ways that make the offer of assistance credible and sensitive to the social context of recipients, or channelled through institutions that do this, otherwise political support for the transition might not materialise.

This chapter explores how governments can design policies to support the transition and shape the social opportunities and costs it creates. Expected timeframes for transitions vary across countries and sectors, but significant changes in all sectors are expected within the next decade.

Distributive justice and political support for the transition depend on governments' ability to ensure the people and organisations who need it most receive financial and non-financial assistance to support their adaptation to these changes, so that the benefits and costs are fairly shared. Policy design should respond directly to the priorities identified through planning and analysis and be informed by extensive participation through Phases 1 and 2. The institutions and capabilities necessary for successful interventions are discussed in Phase 4.

3.1. Concepts and definitions

3.1.1. Scope of transitional assistance

Appropriate policies to provide transitional assistance will vary widely depending on the recipient, sector, geographical and regional characteristics, and the landscape of existing policies. However, a typology based on two variables can help to explore options:⁸⁰

1. **Objective.** Assistance that is backward-looking and static (**conservative**) would aim to protect recipients' interests at a point before changes occur during the transition – so is more likely to be **unconditional**. Alternatively, forward-looking and dynamic (**adaptive**) policies aim to support recipients to adjust to new circumstances, so are more likely to be **conditional** in order to incentivise a change in behaviour (such as making new low-carbon investments).

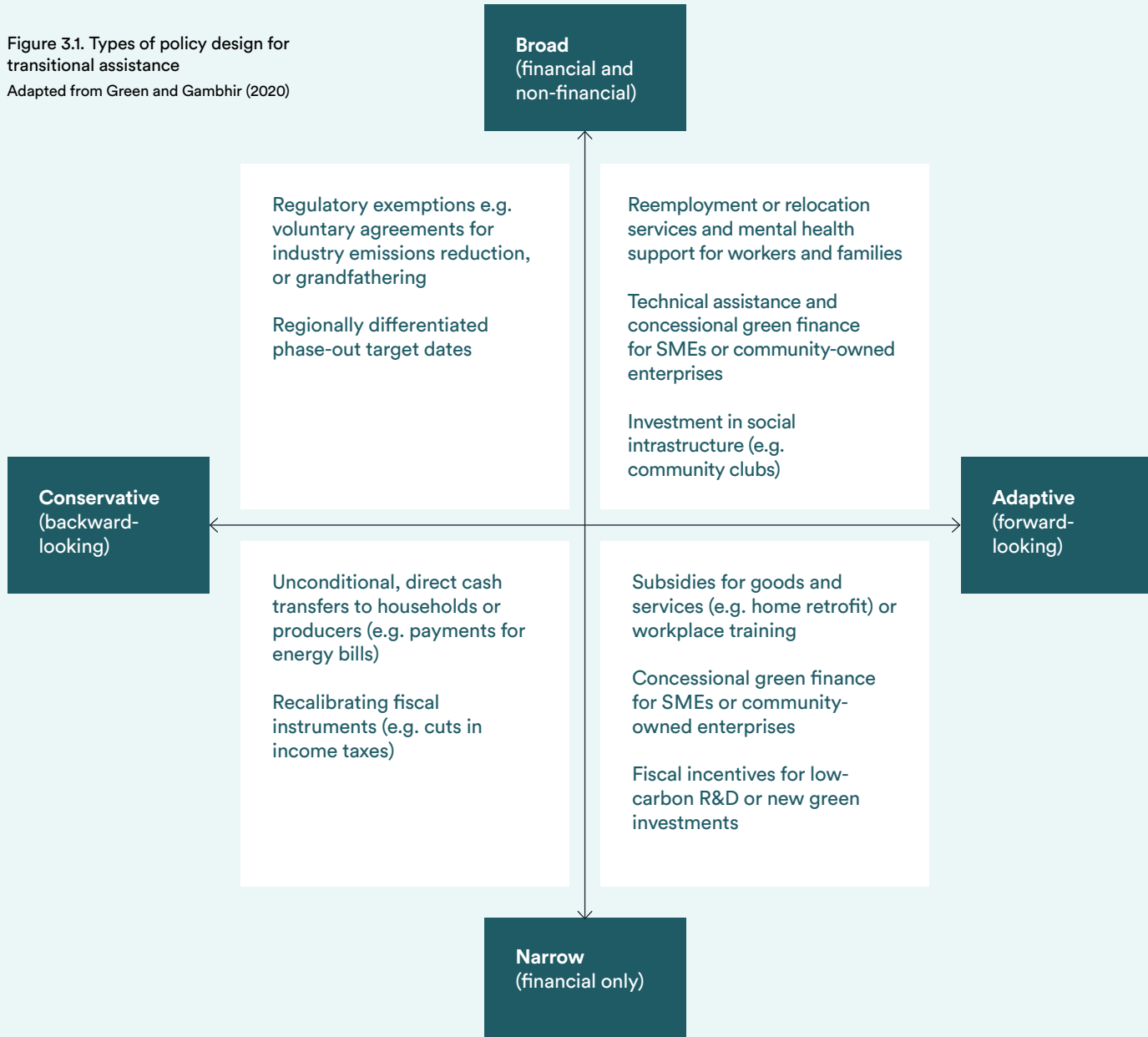
2. **Scope.** Policies can provide only financial support (**narrow**) or they can combine financial support with in-kind support for aspects of a person's wellbeing that are not well-supported by money (**broad**) (see 1.1). A policy focus on wellbeing rather than resources is likely to highlight transition impacts on people that cannot be reduced to income or wealth, and to show where broader forms of support are needed. This could include, for instance: ensuring respect and visibility for identities and heritage, such as for mining or agricultural communities as they transition to new industries or practices;⁸¹ tailored training programmes, or on-the-job assistance for workers to transition to low-carbon jobs.

Combining these two dimensions highlights the different options governments have to support households, communities and businesses. Figure 3.1 provides some examples of policies that fall into the four categories that emerge from the typology. The approaches are discussed in more detail in 3.3 below.

Phase 3: Policy design for transitional assistance

Concepts and definitions

Figure 3.1. Types of policy design for transitional assistance
Adapted from Green and Gambhir (2020)



Often, ‘smart’ packages of policies with different objectives and scope can and should be used together to address the same area of structural change. Narrow compensation using financial transfers or welfare payments can help to protect vulnerable people, but support to adapt is likely to be necessary for people, businesses and communities to make a shift to a more positive future.⁸² For example, achieving a reduction in national emissions from road transport in a just and robust way might be achieved through a combination of:

- Accompanying fuel taxes with compensatory welfare payments for low-income households (*conservative, narrow*)
- Targeted and time-limited exemptions on fossil fuel vehicle phase-out requirements for people who are highly vulnerable to the effect of such requirements (*conservative, broad*)
- Investing in rail and other public transport infrastructure and ensuring jobs in the public transport sector are well-paid (*narrow, adaptive*)
- Creating training opportunities for jobs in electric vehicle (EV) manufacturing and relocation assistance for people to take these up, or providing technical assistance to local authorities with spatial planning (*broad, adaptive*).

Broad conservative measures, such as exemptions to new laws or regulations for highly exposed businesses or regions, can be straightforward to apply but involve trade-offs. They can reduce the ambition or effectiveness of the measure or alter the distribution of the costs of achieving a given objective (since exempting some may mean others bear greater costs). Broad, adaptive measures are likely to be the most administratively complex options, requiring greater state capacity to carry out effectively (see Phase 4).

Phase 3: Policy design for transitional assistance

Guidance

3.1.2. Timing of transition impacts and credibility of policies

The time profile of transitional assistance policies is also important. Negative impacts can be pronounced in the short term, such as losing a job or the sudden closure of local infrastructure. Meanwhile, the benefits of the transition – such as new employment opportunities, better health, or revenue streams from economic diversification – take longer to manifest. Conservative assistance can offer quick relief for unexpected, concentrated and acute impacts (although good planning and analysis should help to avoid such ‘shocks’). Adaptive assistance measures are essential to ensure that people can capitalise on the opportunities provided by the transition, although these may require more work and time to materialise.⁸³

Governments need to be able to credibly commit to providing sufficiently long-term programmes of support. Voters and relevant interest groups need to be confident that the government will continue to fulfil policy commitments over a relevant timeframe. Public support for policies that entail short-term costs and longer-term benefits can be depressed when people are uncertain about whether the benefits will materialise, either because of political risks that could reverse the policy (politicians might renege on promises or elections might lead to a change of government) or due to doubts about the efficacy of the policy.⁸⁴ The government must credibly commit both to climate policy, which itself is long-term in nature, and to the transitional assistance policies that support people and businesses to adapt to change.⁸⁵

3.2. Guidance

3.2.1. Financial assistance for consumers and businesses

Adaptive assistance for households can help to address the root causes of existing inequalities; conservative assistance should be used where acute short-term harm would otherwise occur. The EU’s Social Climate Fund, which plans to redistribute approximately 25% of revenues from the expansion of the EU emissions trading system (ETS) to buildings and transport, is an example of policy that mixes conservative and adaptive transitional assistance. Evidence from several studies and impact assessments of the Fund, including by the European Commission, found that redistributing revenues can compensate low-income, vulnerable households, especially those in fuel poverty, provided that payments are targeted. Investments in energy efficiency and public procurement of low-carbon technologies can also make the shift cheaper for consumers and businesses. Therefore, while exact allocations of funds will be determined by countries’ Social Climate Plans (which national governments must create in order to access the Fund), the share of redistribution that can be provided as direct income support is capped at 37%.⁸⁶

Public incentives for low-carbon investments also need to be targeted or adjusted for a fairer distribution of benefits. Richer households stand to gain more from flat-rate subsidies or feed-in-tariffs for green technologies like residential solar, energy efficiency retrofits and EVs, since they can cover the remaining upfront and maintenance costs more easily than those with lesser financial resources. Grants or repayment terms for concessional loans for such investments should be proportionate to households’ economic circumstances, and/or be used with complementary policies, such as improving cycle and bus networks in lower-income regions.⁸⁷

National policies should use clear criteria to operationalise exposure and the conversion factors that determine people’s vulnerability and ability to adapt (see 1.1). Existing definitions of or approaches to identifying vulnerability vary by country. For example, authorities in Czechia have measured energy poverty according to a household’s share of income spent on energy services or level of energy bill debt, while in Latvia the definition relates to whether the household already receives support for housing-related expenses or lives in social housing. Energy retailers are well-placed to help policymakers to assess which households need assistance, based on customer data.⁸⁸

Depending on the criteria selected, existing policy levers might be suitable for providing support (e.g. through existing tax credits). Alternatively, dedicated programmes can be set up to meet specific criteria. For example, Czechia’s ‘New Green Savings Light’ provides upfront subsidies for home insulation measures to single-family households, pensioners and those receiving housing benefit.⁸⁹ Additionally, criteria and the application process for available funding should also be made as simple as possible for people to access. France, for instance, simplified two programmes for energy efficiency into a single scheme, ‘MaPrimeRénov’, and set up a cross-ministry working group to make the system more efficient and accessible (see 4.2 for related aspects of government coordination and funding arrangements).⁹⁰

The appropriate level of financial assistance to businesses depends on their size, potential to contribute to inclusive and low-carbon economic diversification, and the polluter pays principle. To achieve transition goals, support for businesses should be adaptive and encourage socially-inclusive and climate-positive investment. Small and medium-sized enterprises (SMEs) and cooperative businesses should be prioritised because they will typically need greater assistance to transition away from carbon-intensive value chains.⁹¹

Phase 3: Policy design for transitional assistance

Guidance

Repurposing existing subsidies and forms of price support for producers are important levers for transition. In agriculture, for example, subsidies for inputs like nitrogen fertiliser result in increasing emissions and have other negative environmental impacts. Price supports for farmers push costs onto consumers, which can harm the poorest households, and farm policies linked to production and land use mean that 80% of direct payments in Europe go to 20% of farmers – but smallholder farmers are unlikely to be able to adapt to new agricultural techniques and technologies without support. Recalibrating policies can reallocate costs and benefits and create positive incentives.⁹²

Large businesses also need to make significant investments of their own to decarbonise their operations and value chains, including to comply with new regulations. This is in line with the polluter pays principle – which, analysis shows, has not been adhered to in EU Member States’ Territorial Just Transition Plans.⁹³ The political feasibility of reforms in line with this principle may dictate whether exemptions or payments are needed. Firms and their industry associations will typically lobby governments to withdraw policy proposals that would impose costs on them, or try to seek exemptions or compensation for such policies. Governments should aim to make any such payments (ideally loans rather than grants) conditional on recipients upgrading their assets and operations to transition to low- or zero-carbon production, in the vein of industrial policy. In the context of a just net zero transition, conditionality can potentially also relate to improvements in labour conditions, provision of retraining schemes, profit-sharing with government or workers, or reinvestment into further R&D.⁹⁴

3.2.2. Labour market policies, training and education

Broad support for workers through the transition requires a mixture of active and passive labour market policies.

Examples of active policies are incentives for training or relocation; passive policies include unemployment benefits and early retirement allowances.⁹⁵ As with all kinds of assistance, these should be tailored to people’s specific needs and available opportunities from the transition, based on analysis in Phase 1 and social dialogue in Phase 2. For instance, people’s preferences towards options for new jobs (such as salary and ability to relocate) are likely to be influenced by their age or life stage. It is especially important to ensure women have access to labour market opportunities from the transition (see also 3.2.4), as women are as yet underrepresented in green jobs across Europe.⁹⁶

Support to workers who are at risk of unemployment is critical for justice, since the immediate shock to wellbeing can take a long time for people to recover from. The scope of analysis and policy coverage should extend beyond the immediate industry at risk to supply chains and local communities – for example, to include people working in transport networks and other services in areas near industrial plants. The time profile of financial assistance presents a trade-off: disbursements spread over time can support people for longer but nearer-term lump sum transfers could enable them to make large upfront investments in things such as training or relocating in order to find new employment faster.⁹⁷ The choice should be informed by an assessment of available new jobs and suitable skills.

Developing skills to find decent work is a core pillar of adaptive assistance, both for workers who have lost jobs and for those entering the labour force or looking to move into low-carbon growth industries created by the transition. Some sectors will need to plug significant skill gaps to achieve the required transition: for instance, renovating Europe’s ageing residential and commercial building stock will require attracting millions of workers who have specialised energy efficiency training⁹⁸. From a national or regional perspective, a package of measures will be needed, based on audits of workers’ available

skills and existing and anticipated labour demand, over the following time frames:⁹⁹

- **Short-term:** employment services like counselling, job exchange centres and digital services, and payments or in-kind support to relocate
- **Medium-term:** education and (re)training programmes, including on-the-job retraining where possible
- **Long-term:** investment in small businesses to create diversified low-carbon sectors where skillsets can be fully utilised.

How best to provide this package will depend on the institutional context.¹⁰⁰ Countries with strong centralised collective bargaining institutions can define income support and similar measures through national or sectoral dialogue with unions and business associations. Governments in economies without these institutions might need to create dedicated funding vehicles to complement existing unemployment benefits and other forms of social protection, informed by new multi-stakeholder spaces for dialogue where possible.

Delivering upskilling and reskilling also requires coordination across government functions, with training providers and with subnational authorities who might be responsible for funding and implementing employment services. Core educational curricula are also important for giving young people skills that can be used in green jobs in the future. Coordination is discussed in Phase 4.

Policymakers should remain alert to the quality of new low-carbon jobs and whether they provide decent work. Green jobs do sometimes offer higher wages than comparable carbon-intensive jobs, but this is not always the case, and often depends on the skill level involved.¹⁰¹ National policy should ensure that businesses provide attractive wages and decent work by setting conditions for recipients of public finance, raising regulatory standards and reporting requirements (see also Phases 4 and 5). Public sector providers can also offer attractive wages and working conditions to set a floor for job quality in the market.

Phase 3: Policy design for transitional assistance

Guidance

3.2.3. Place-based investment and community ownership

Policies to support employment and household wellbeing will only be effective if there is also sufficient investment and diversification at the local level. Assistance for communities should be channelled primarily through local and regional governments, but national policymakers can create dedicated national agencies or facilities to provide financial, strategic and technical assistance to local projects and programmes. A locally-tailored or place-based approach will reduce the overall costs of the transition to governments, businesses and households. Research in the UK, for instance, shows that a place-based approach to net zero entails less than one-third of the upfront investment, and double the energy savings for consumers, compared with uniform adoption of low-carbon measures.¹⁰² How to implement place-based policy is addressed further in Phase 4.

National-level funding is often essential to create sufficient investment in assets and capabilities that generate new income sources and services at local level. Productivity, health and wellbeing will benefit from improving infrastructure of all kinds – including economic (e.g. low-carbon public transport networks), social and cultural (e.g. educational institutions, libraries, community clubs, and heritage projects), and natural (e.g. parks and green spaces).¹⁰³ Adaptive assistance can also be used to provide locally-specific skill development plans to be delivered by community organisations and public–private partnerships. Public decarbonisation projects funded directly by government are also a good option, especially where market failures (such as coordination problems or financing barriers) hinder the private sector, since they can be managed explicitly in the public interest.¹⁰⁴

Local tensions might arise over the rapid development of new decarbonisation assets or infrastructure, similar to that discussed in 2.2.1.¹⁰⁵ For instance, NIMBYism (‘not in my back yard’) can drive public opposition to renewable energy projects sited in people’s local areas. Decisions to support new low-carbon industries (such as hydrogen and direct air capture) and mines for transition minerals should limit local environmental impacts of production, transport and storage infrastructure, to prevent harm to local communities. Financial compensation cannot address all of these issues, since affected people might not think promises of compensation are credible (see 3.1.2) or legitimate (if they perceive it as ‘bribery’) and they may be concerned about their views not being respected or about being excluded from economic or political decision-making.¹⁰⁶ A general principle for navigating these tensions is to plan ahead in an integrated way across sectors and to develop projects as part of a wider programme for positive regeneration, including broad, adaptive measures. Another is to work with partners who are trusted (or at least perceived as neutral) to support the policymaking process and facilitate productive discussions over packages of support that can benefit communities.

Policymakers should also provide assistance for communities to own and operate businesses and assets so that people can participate more actively in and gain wider benefits from the green economy. A ‘community wealth building’ model can help governments to understand how local ownership and a supportive role for local institutions can lead to durable and just economic development and has strong relevance for a just and robust net zero transition.¹⁰⁷

‘Energy communities’ – entities controlled by cooperatives or local institutions that work for the benefit of local people rather than for profit – are a key element of community action. They allow citizens and residents to own renewable energy assets and to collaborate on other low-carbon energy measures such as renovating buildings and sharing EVs, contributing to a more resilient energy system and further developing skills.¹⁰⁸ Community approaches can also be used in the land use sector, by enabling local organisations to steward rural land, including restoring forests and peatlands and conceivably attracting revenues by selling carbon credits for sequestration.¹⁰⁹

Public financing for decarbonisation projects can include targeted allocations for community entities, and criteria for preferential assistance can be added to encourage inclusive models. In Italy, for example, financing for energy communities in the region of Lazio favoured participation by multiple stakeholders (citizens, businesses and municipalities) and by vulnerable households (as measured in terms of fuel poverty or other financial conditions).¹¹⁰ Across sectors, national governments should support community organisations to thrive and generate sustainable income streams, by providing low-cost financing (pooling community investments where necessary), technical assistance (such as feasibility studies and legal costs), and training to succeed in bringing products to market.¹¹¹ Regulatory levers to support community entities are also important, and are addressed in 4.2.3.

Phase 3: Policy design for transitional assistance

Guidance

3.2.4. Gender-responsive and intersectional policy design

Policymakers should mainstream gender into policies for net zero and recognise how the impacts and opportunities of the transition are distributed unevenly between people of different gender. An intersectional perspective is necessary, since gender is just one of many factors that contribute to people's marginalisation: other factors include ethnicity and experience of racial inequality, disability, sexuality, and migrant status.¹¹² Measures to increase participation of women and other underrepresented groups in public decision-making bodies are an essential starting point (see 2.2.4). Policymakers should also focus on developing metrics and measurements, including demographically disaggregated data,¹¹³ that enable more effective policy interventions (see Phase 5).

Women and others in marginalised groups ought to gain from transition opportunities in terms of improving skills, gaining new employment and receiving income. Education policy (including through apprenticeships, mentorship and targeted courses) should support women and underrepresented groups to gain skills needed for green jobs – which, across the EU and UK, are so far disproportionately held by men.¹¹⁴ Further, the World Benchmarking Alliance's just transition assessment found that only 8% of businesses, which included electricity providers, oil and gas companies, and automotive manufacturers, disclosed that they have at least 30% of women on governance bodies.¹¹⁵ It is important for policy to close gender gaps in sectors like construction and the manufacturing of low-carbon technologies, where men are currently overrepresented among workers and might receive training provided by firms (which policy should also incentivise for all – see 3.2.2).¹¹⁶ Additionally, government policy should acknowledge and assist organisations like women's collectives, migrant community groups, and NGOs that can help people to access information and navigate requirements (e.g. for job openings, or applications to receive public or commercial finance).

Transitional assistance should also be tailored to protect vulnerable and marginalised people from negative impacts.

In contexts of sudden job losses in a largely male workforce, such as in the closure of fossil fuel extraction facilities or heavy industry, women are likely to need special kinds of broad assistance to protect them from negative impacts, which can include domestic violence. Partnering closely with civil society, chiefly women's non-profit groups, can and should inform these measures, as evidenced by assistance programmes in Poland and Romania.¹¹⁷ It is especially important to extend income support to workers across value chains to avoid reproducing inequalities – many workers in wider supply chains can be from demographic groups that are not as well represented among employees of large firms, which are often the focus of transition policy. Public investment in projects and firms should apply screening criteria to ensure safeguarding measures and favour those that can demonstrate positive impacts. For instance, upgrading and decarbonising cross-country transport infrastructure should ensure that new spaces and facilities are suitable and safe for women and for people with disabilities.

3.2.5. Enhancing the credibility of transition assistance

Transitional assistance measures can potentially enhance political support for climate policies by reducing the costs and increasing the benefits that constituents and interest groups expect to receive from the overall policy package.¹¹⁸ However, this increased support is contingent on these groups perceiving both the climate policy and the offer of transitional assistance to be credible.

Countries with political systems and institutions for cross-party cooperation and coordination between governments and industry can rely on these arrangements (such as proportional representation, power sharing, or joint government–industry organisations) to enhance policy credibility. Agreements and bargains make policy reversal more difficult and politically empower the intended recipients of promised long-term benefits.¹¹⁹

Countries without these institutional structures need to devise other means of making policy investments credible to voters.¹²⁰ In some such contexts, it may be possible for governments to strike bargains directly with affected stakeholders – for example, where unions and firms in affected industries are relatively concentrated – in a more ad hoc way, as with the 'social pacts' common in southern European countries and Ireland in the 1990s and 2000s,¹²¹ and the Just Transition Agreement in place for Spanish coal regions.¹²²

Policy-specific institutional innovations (e.g. delegation of authority to independent bodies, and earmarking benefits via 'trust funds') can enhance the credibility of proposed long-term policies in various contexts,¹²³ as can enshrining policies in law (see 4.2.4).¹²⁴ Where possible, structuring policy benefits themselves in ways that make them politically or practically difficult to reverse – for example, by focusing on physical infrastructure or human capital – can also enhance credibility.¹²⁵

Phase 3: Policy design for transitional assistance

Guidance

3.2.6. Finance Ministries as key enablers of the just transition

Finance Ministries’ active involvement in policy design (and throughout the policy cycle) is essential for a just and robust transition. Although government ministries or departments responsible for climate change or environmental policy are likely to be responsible for leading net zero transition plans and developing sectoral policies, Finance Ministries are central actors in coordinating economic change and control most of the levers to enable effective transitional assistance.

The Coalition of Finance Ministers for Climate Action highlights that both successful climate action and reducing social risks (including inequality) are crucial for Finance Ministries’ core priorities of protecting macroeconomic stability and delivering economic prosperity. Just transition therefore cuts across these institutions’ functions – which typically include shaping economic strategy and vision, fiscal policy, reforming financial policy and the financial system.¹²⁶ Finance Ministries should also work closely with their national central banks to ensure that those institutions’ assessments, advice and actions towards the monetary and financial system – including coordinated macroeconomic policy – are in support of a just and robust transition.¹²⁷

Examples of levers that Finance Ministries can use in the policy design phase include:

- **Integrating just transition into budgetary processes.** Budgets are critical for the deployment of resources towards national objectives. A first step is to integrate any existing approaches to assessing climate and social aspects of sustainability, which can lead to greater value for money and more effective public investment by financing policies that achieve multiple objectives. National budget guidelines to line ministries should refer both to net zero or other low-carbon commitments and to social inclusion, and make use

of budget tagging and reporting methodologies. The OECD, World Bank and UN Development Programme provide guidance for and classifications of various approaches to climate budget tagging.¹²⁸ Carrying out these approaches successfully is likely to require cross-ministry coordination, as described in 4.2.1.¹²⁹ National governments can also create a role for participatory budgeting (PB) processes at local level through budget allocations to subnational authorities. PB can enhance procedural and potentially also distributive justice by allowing local people to propose and vote on ideas for decarbonisation projects to fund, such as the way Scotland has promoted using its Just Transition PB Fund.

- **Reforming taxation and expenditure.** Reallocation of resources away from high-carbon and socially costly fiscal policies is a likely result from using just transition approaches in the budget cycle, and a key opportunity for bringing about socially-just decarbonisation (see also 3.2.1). Redirecting subsidies for fossil fuel consumption is critical for a just transition: they are typically regressive because richer households lead more energy-intensive lifestyles, and savings can be used for other social policies to prevent negative impacts of reform on poorer households.¹³⁰ Another important priority is to address tax loopholes and reform corporate taxes that currently encourage offshoring wealth and economic activity, contributing to economic inequality and greater global emissions – noting that successful action on this front might require international cooperation.¹³¹

- **Carbon pricing with redistribution.** Policy packages that link carbon taxes or mandatory emission trading systems to redistributive measures can mitigate additional costs on households or firms (conservative assistance – such as through increased social welfare payments) or make investments that help recipients adjust to new circumstances (adaptive assistance – such as providing finance for home retrofits). Crucially, political acceptability must also be factored into policy design: support is more likely when redistributive measures are well-communicated and highly visible.¹³² The Phase 3 case study examines the role of Ireland’s Department of Finance in linking the country’s carbon tax to redistributive policies; other examples include the Nordic countries, which have successfully linked increasing environmental taxation with redistribution and investment in green industries to gain public acceptance.¹³³
- **‘Green-plus’ sovereign debt issuance.** Public finance for a just transition can be expanded by national governments issuing bonds with proceeds allocated for uses that have positive climate and social impacts. This option requires creating adequate reporting frameworks and metrics.¹³⁴

Polymakers working on decarbonisation measures and strategies should actively seek to collaborate with their Finance Ministry counterparts. How to create spaces and practices for effective collaboration, and how Finance Ministries use regulation and procurement to drive implementation of just transitions in the private sector, is addressed in Phase 4.

Phase 3: Policy design for transitional assistance

Approaches

3.3. Approaches to transitional assistance

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Layering direct transfers and social protection payments	Narrow, conservative and adaptive	Mixture of new and existing social programmes and fiscal instruments, with options to target specific groups of consumers or workers.	Opportunity to future-proof welfare states with respect to social and fiscal consequences of transition effects. New instruments make transition policy visible and foster political support.	Using existing tax and benefit policies might fail to be noticed by recipients and not improve subjective wellbeing or political support. Uptake and administration of new instruments can face implementation hurdles.	Analysis of relevant markets and groups (see 1.2.2). Cross-ministry coordination including relevant line ministries for sectors and social or labour policy. Ministry of Finance involvement to provide sufficient fiscal resources.	Noka and Cludius (2021) Energy Vulnerability and Energy Poverty: Experiences and Approaches in the EU
Gender-responsive, intersectional criteria for public climate finance	Narrow, adaptive	Requirements and metrics (e.g. shares of leadership or employment) to benefit and include women and marginalised groups, applied to all recipients of finance from public banks or investments.	Empowerment and inclusion improve economic and social outcomes: resilient operations and supply chains, wider talent pools, improved decision-making.	Few. Criteria should be responsive to specific context.	Close understanding of intervention context to be able to select suitable criteria. Diagnostic tools to assess and monitor inclusion.	2X Initiative (2022) Gender and climate finance toolkit World Bank (2023) Integrating Gender and Social Inclusion in Nature-Based Solutions: Guidance Note
Issuing green social sovereign bonds	Narrow, adaptive	Debt issuance by national government via labelled bonds can raise significant capital for socially positive, low-carbon projects.	Can offer lower borrowing costs than comparable, non-green finance. Strong policy signal towards a just transition to net zero. Allocating investments via regional or local authorities to drive place-based regeneration.	Under adverse economic conditions, spikes in debt sustainability concerns can raise borrowing costs.	Develop an eligible project pipeline to absorb investment and procedures for ringfencing proceeds. Compliance with or reform of fiscal and debt management rules. Follow labelled bond principles, possibly requiring relevant advisory services.	ICMA (2023) Social Bond Principles; Green Bond Principles; Sustainability-Linked Bond Principles; and Climate Transition Finance Handbook Coalition of Finance Ministers for Climate Action (2023) Framework and Guide for Ministers and Ministries of Finance – Part B, Function 3

Phase 3: Policy design for transitional assistance

Approaches

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Just transition finance for large firms	Narrow, adaptive	Public finance (via support schemes, investment funds or public development banks) that specifies climate and social criteria for firms' decision-making. Public finance can crowd in just transition financial products from private financial institutions.	Mobilises private sector investment in the direction of socially just decarbonisation. Creates incentives for changes in business practices to empower workers. Builds new constituencies in support of stronger net zero policy.	Challenging to design efficiently. Potential trade-off between ensuring polluter pays and attracting investment.	Clear strategic priorities in legislation or policy documents with which to align conditions. Wide consultation with firms, workers and other civil society organisations to inform design.	Corkal et al. (2021) Green Strings: Principles and conditions for a green recovery from COVID-19 in Canada ILO and Grantham Research Institute on Climate Change and the Environment (2022) Just Transition Finance Tool for banking and investing activities
Skill development in workplaces and educational settings	Broad, adaptive	Strategy to improve skills for green job opportunities through multiple channels, including on-the-job and vocational training, tertiary and secondary education.	Enabling people to benefit from anticipated opportunities, including improved labour market outcomes for marginalised groups. Closes skills gaps that pose risks to the transition. Increased labour productivity.	Provision of training courses might require additional incentives for firms. Not all skills are transferable.	Data on local and regional skill levels and needs. Delivery partners for training courses. Firm and sector-level skill audits.	EU Coal Regions in Transition Initiative (2020) Sustainable Employment Toolkit UK Green Jobs Taskforce (2021) Report (and catalogue of free courses for green jobs)
Tailored assistance for SMEs and community-owned entities	Broad, adaptive	Mixture of concessional finance and technical assistance, especially pre-development funding, through dedicated public facilities.	Diversifies local and national economies, fosters local skills and supply chains, and can build support for low-carbon activities e.g. renewable energy.	Complex scheme requirements can deter applicants.	Data on local and regional investment needs and current finance flows. Delivery partners for technical assistance. Supportive regulatory and legal framework for ownership models, and for participation in networks and infrastructure e.g. electricity grid.	Austrian Coordination Office for Energy Communities, supported by the Climate and Energy Fund Bankwatch (2023) Selection criteria for energy communities: a practical checklist

3.4. Case Study

Carbon tax revenue redistribution in Ireland

Context

Ireland's framework climate law, the Climate Action and Low Carbon Development Act, amended in 2021, requires the Government to “have regard to ... the requirement for a just transition to a climate neutral economy” when pursuing the national decarbonisation goal (a statutory 51% reduction of emissions by 2030 compared with 2018 levels).¹³⁵ In the Act, just transition is considered as the joint imperative to “maximise employment opportunities, and ... support persons and communities that may be negatively affected by the transition”.

A national carbon tax is one of the central policies supporting decarbonisation in the Irish economy. The tax is applied to motor fuels, solid fuels and gas used to heat homes, and is paid by suppliers. It covers around 50% of economy-wide CO₂ emissions. The Finance Act 2020 established a trajectory for the tax to increase to €100 per tonne in 2030, more than doubling from its level in 2022–23 of €48.50. Rising carbon prices threaten households on lower incomes and at risk of fuel poverty if they lead to increasing bills, as energy costs typically represent a higher proportion of overall costs than they do for better-off households.

The Government committed to implement the tax and complementary policies in a way that ensures the overall impacts are progressive (i.e. cost lower-income households less, proportionate to their income, than higher-income households), to address consequences for justice and political support. To inform this process, prior to the policy being designed, the Department of Finance asked the Economic and Social Research Institute (ESRI) to assess how the distributional consequences of the tax would vary with greater spending on social welfare support. ESRI concluded that redistributing one-third of revenue from a €7.50 rise in the tax, by increasing the main working-age welfare and child benefit payments, could reduce poverty and see the policy having an overall benefit on households in the lowest income deciles.¹³⁶

The Government also considered in the policy design the results of a vote by Ireland's Citizens' Assembly in 2016, in which 80% of participants said they would be willing to pay higher taxes on carbon-intensive activities provided that “any increase in revenue would be only spent on measures that directly aid the transition to a low carbon and climate resilient Ireland” and that households already receiving fuel allowance would not have to pay increased taxes.¹³⁷ And it considered a study carried out by the Environmental Protection Agency in 2021 which found that the majority of people in Ireland supported the spending of carbon tax revenues on programmes to reduce carbon emissions and to prepare for climate change impacts.¹³⁸

Action

In line with these recommendations and the requirement in the Act, Ireland's government has ringfenced revenue from increases in the carbon tax. This revenue will be used for redistribution to mitigate adverse social impacts and to enhance fiscal instruments to promote the social benefits of the transition.

This commitment is made in the Programme for Government, which is a policy strategy and not a legislative instrument. However, the Programme sets out specific spending targets to 2030 intended to both reduce adverse effects and promote opportunities. These include: addressing fuel poverty and supporting a just transition in the workforce (€3 billion); delivering a socially progressive national retrofit programme, including support for community energy efficiency schemes (€5 billion); and promoting sustainable agriculture (€1.5 billion).

In 2023,¹³⁹ the Government allocated carbon tax revenue of €623 million as follows:

- €218 million to targeted social welfare and other initiatives to support households, including increases in the Qualified Child Payment, Living Alone Allowance and Fuel Allowance
- €291 million of investment in residential and community energy efficiency, to part-fund a national retrofitting programme, with a particular emphasis on households in or at risk of energy poverty
- €81 million to programmes to incentivise farming in a greener and more sustainable way
- €33 million to other sectors to support programmes such as peatland rehabilitation, investment in routes for cyclists, non-motorised transport and pedestrians, and the Midlands Just Transition Fund.

3.4. Case Study

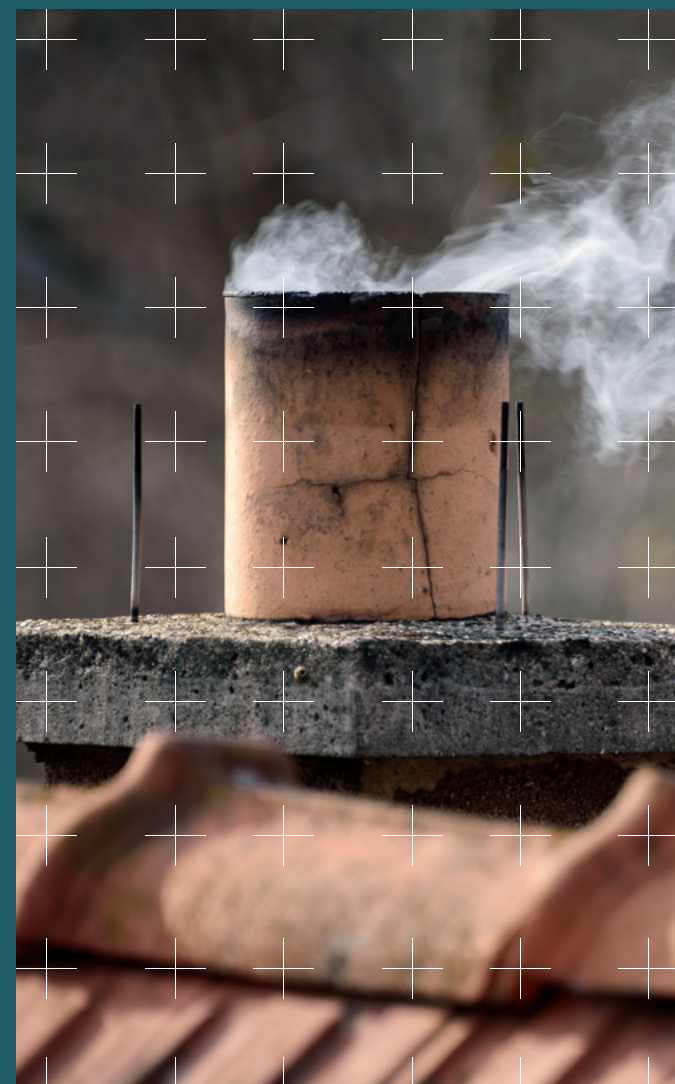
Carbon tax revenue redistribution in Ireland

Lessons

The statutory schedule of increases in the carbon tax enables the Government to make investment plans based on anticipated receipts.¹⁴⁰ Delivery of financial assistance to low-income households also demonstrates the potential of linking existing social welfare measures to new climate policies. However, these policies require coordinated management of teams working on revenue and allocation of expenditure, and a heightened degree of collaboration between the Department of Finance and the Department of Public Expenditure, National Development Plan Delivery and Reform.

Using remaining revenues for investment in strategic programmes also necessitates coordinating within a crowded space of funding initiatives for projects. The Irish government channels funding to green investments through EU mechanisms including the Just Transition Fund,¹⁴¹ as well as proceeds from its own green bond issuance. This shows the importance of creating broad programmes and a project pipeline based on just transition principles in tandem with raising revenue. A narrow view of just transition affecting only a few highly exposed regions is unlikely to address all vulnerable groups or to maximise opportunities for making structural change to facilitate the achievement of net zero. An additional focus on energy consumers and on national priorities like housing retrofitting can help in this regard.

Whether Ireland's policy is politically robust remains to be seen, although it has not yet been a target of criticism by the Opposition. Public and political acceptance of the policy benefits from independent evaluation by ESRI. Monitoring the use of funds is also an important aspect of ensuring transparency, with a paper setting out the allocations of the forecasted hypothecated portion of carbon tax revenues published annually on Budget day. Finally, the tax indicates how citizens' assemblies can be a significant part of a political process that drives stronger climate action: the Joint Oireachtas Committee on Climate Action in the Irish Parliament generally supported the Citizens' Assembly's recommendations, which informed subsequent government policies and legislation.¹⁴²



4

Phase 4: Implementation and accountability

- 4.1 Concepts and definitions
- 4.2 Guidance
- 4.3 Approaches for implementation and accountability
- 4.4 Case study: Implementing the Just Transition Fund in Czechia



4

Phase 4: Implementation and accountability

Key messages

- Governments should seek the most suitable framework for effective leadership and coordination of just transition policy based on the make-up of existing institutions and the experience of what has worked historically for managing economic transitions in similar contexts.
- Dedicated structures for partnership between different levels of government and sufficient resources for subnational authorities are priorities to drive effective place-based implementation of a just transition to net zero.
- National policymakers can use tools in regulation and public procurement to drive firms' actions for the just transition, and should adopt international best practice to update remits and requirements for this purpose.
- Formal accountability through national legal systems is bolstered by governments creating framework laws and supporting capacity within the judiciary to improve the administration of climate-related justice.
- Many international legal obligations require governments to take action in support of access to justice for the public, and marginalised people may need dedicated support to make this effective and truly just.

This chapter addresses how governments can implement just transition policies once they have been planned and designed. Successful implementation relies on concerted action across multiple government departments and public bodies, and at different levels of governance. Furthermore, for the transition to be just, implementation processes should be inclusive and open, and decision-makers should be accountable for their performance. Laws and regulations create accountability structures for public and private decision-makers.

4.1. Concepts and definitions

4.1.1. Implementation

Policy **coherence** and institutional arrangements are key factors for effective delivery of a just transition (as reflected in the ILO Guidelines). Implementation is a 'strategic challenge', which governments can respond to through the creation of appropriate institutions.¹⁴³

There is no single institutional model that is proven to be successful across all contexts, so approaches will inevitably build on existing structures. Policymakers should consider the remits and capabilities of government departments, subnational authorities and other relevant agencies, and the roles of private sector and civil society actors. Governments can also create new working arrangements, relationships and delivery bodies to ensure coherent policy. Other important factors include data types and availability, and channels for sharing knowledge and information.

Overall, models for implementation have four key dimensions:¹⁴⁴

1. **Political leadership:** having clear responsibility for driving forward the just transition agenda vested in part of the executive branch of government, within either an existing ministry or a newly created entity.
2. **Horizontal coordination:** creating successful conditions for collaboration within and between multiple ministries and departments, and with other government agencies, at the level of national government (see Table 1).
3. **Vertical coordination:** empowering and partnering with regional and local authorities to deliver the place-specific elements of a just transition.
4. **Steering non-state actors:** aligning regulation and other incentives so that private firms implement a just transition in their own operations and supply chains, and collaborating with civil society actors (unions, NGOs and community organisations) to deliver policies.

Phase 4: Implementation and accountability

Concepts and definitions

4.1.2. Accountability

Accountability is essential for climate and just transition policy commitments to be credible over time (see 3.1.2) and for improving policies over iterations of the policy cycle. Several institutions can contribute to accountability, including parliamentary committees, climate advisory bodies, independent agencies, ombudsmen, and national human rights institutions, by creating “regular focal points for scrutiny of the government’s performance”.¹⁴⁵ In this respect, accountability also flows from approaches covered in 1.2.4 and Phase 5.¹⁴⁶

The legal system, including administrative review bodies and the judiciary, contributes to **formal** accountability by providing access to justice – a core tenet of international legal instruments on environmental policymaking such as the Aarhus Convention (see 2.1). Laws contain rights, duties, permissions and powers that enable the executive branch of government to implement a just transition. The judiciary supports effective and robust implementation of decarbonisation measures by enabling scrutiny of the decisions made by the executive branch. Policies and laws that are insufficiently ambitious with regard to decarbonisation or that have negative impacts on human rights can be challenged, promoting greater speed and integrity of the just transition. Mechanisms for grievances and redress are important in the event of friction that has not been anticipated in transition planning or policy design. The legal system creates formal channels through which people can express dissatisfaction to enable the review of policies, and through which policymakers can learn which changes or updates are necessary and appropriate.

Governments can also be held accountable by civil society actors through various forms of ‘civil redress’, such as criticism in the media and by non-governmental organisations (NGOs), protests, and civil disobedience.¹⁴⁷ For these **informal** accountability channels to function effectively, there need to be robust protections of democratic freedoms, and information about governments’ performance in meeting climate goals needs to be transparent to civil society actors.¹⁴⁸ Democratic freedoms are being curtailed in many countries, including in Europe, partly in response to the rise in environmental and climate-related protests, and information about climate performance is often obscured by technical complexity and long-term targets. Governments should work to reverse these trends.

4.2. Guidance

4.2.1. Coherent national policy

Successfully implementing plans and policies requires consistency across different policy spheres, actions and timeframes (see 1.2.1), to ensure they do not undermine each other and that positive interactions can be maximised. For instance, education and training policies should contribute to developing core skills that, to the extent possible, can be applicable and useful across industries in different sectors. Sectoral and territorial plans, national medium-term plans and Long-Term Strategies (LTSs) should form a nested whole.¹⁴⁹ Going further, mainstreaming climate considerations (both mitigation and adaptation) into all decision-making processes can contribute to the joint consideration of decarbonisation along with other government imperatives and priorities.

Clear political leadership on just transition should sit with a single part of the executive. Climate and Environment Ministries are responsible for drafting transition plans and strategies and arguably should champion the just transition agenda across government, working cross-sectorally and seeking buy-in from other ministries. However, ‘climate units’ within other ministries (including Finance Ministries) should be given remits or guidelines that address the just transition and can lend extra political heft and practical support.¹⁵⁰ Comparative studies highlight that climate policy coherence and mainstreaming are more likely to succeed when the head of government champions this. Since heads of government are likely to have limited bandwidth, an alternative option is to create a dedicated staff or agency acting on their behalf on just transition integration.¹⁵¹

Phase 4: Implementation and accountability

Guidance

Horizontal coordination is a second key condition for coherence, for which contributing factors identified by the ILO Guidelines include integration of just transition into national strategies and line ministry mandates.¹⁵²

Options for collaboration between ministries include inter-ministerial organising committees; ‘superministries’ formed of staff from multiple line ministries; central agencies; just transition ‘tsars’ who champion the agenda across government; and standing rules for cabinet meetings to bargain over and co-create policies and programmes.¹⁵³ Finance Ministries and those responsible for welfare policies should be included and take an active role, to ensure transitional assistance policies are backed by sufficient finance and appropriately calibrated to be implemented effectively.

A central agency such as a ‘Just Transition Unit’¹⁵⁴ can contribute to both horizontal coordination and leadership, but to have leverage it should be allocated an adequate budget and have the confidence of line ministries. South Africa offers an example from the Global South that could be applied in many contexts: the Presidential Climate Commission (PCC) leads and oversees the national just transition, coordinates efforts across government, and provides a forum for participation by stakeholders including business associations, unions, academic institutions, and community and non-profit organisations. The PCC has created a framework for national action and a Just Energy Transition Investment Plan for the five-year period 2023–27.¹⁵⁵

Each country needs to find its own solution and create overlapping and reinforcing elements. Coordination is needed not only between ministries or departments but also between subordinate teams, such as those working on taxation revenue and green investment or on skill needs in different sectors (see case studies in Phase 3 and Phase 1, respectively). The everyday practices of coordination, including communication and joint activities, will flow directly from high-level commitments and official remits.

4.2.2. Subnational capacity, funding and project selection

Every phase of policymaking requires vertical coordination, i.e. close partnership between regional and local authorities and national government. Subnational authorities should contribute to the analysis of skills, vulnerability, infrastructure quality and investment needs. National policymakers should create tools to build capacity and harmonise approaches across territories, such as data templates or outlines for calls for project proposals.

New institutions can facilitate this. For example, the UK has established a Local Net Zero Forum and five regional Local Net Zero Hubs to provide clear routes for coordination, which will produce key performance indicators at local level. Policymakers should integrate social factors into the remit and design of such institutions. A proposal for Regional Just Transition Support Centres across the EU, by the campaign group Beyond Fossil Fuels, provides an example template.¹⁵⁶ Subnational authorities also need resources to create their own just transition delivery units – as has been done successfully in Western Australia, for instance.¹⁵⁷

Wherever possible, funds should be allocated to subnational authorities to make investments, while national policymakers define the rules and principles for project selection procedures. There can be tensions between the speed of delivery required to achieve decarbonisation goals on the one hand and the time taken to establish structures for vertical coordination on the other, as with participation in 2.2.1. Communicating with local stakeholders and communities, and carrying out social and environmental due diligence at a local level, needs to happen before opportunities can be realised; project proponents and private investors develop a pipeline of new projects gradually in response to long-term policy signals (see 3.2.5). Therefore, national governments might be tempted to define investment plans centrally. However, designing roadmaps and policy actions in an entirely top-down manner can undermine just and inclusive implementation, which can ultimately affect the delivery of projects in any case.¹⁵⁸ Overcoming these challenges requires transparent and accessible procedures, independent monitoring and strengthened accountability mechanisms. Funding pots at the national level should be streamlined and simplified, with calls for proposals and criteria that applicants can easily understand. Government agencies that assess projects for compliance with environmental and social standards should be well-resourced with staff and funding. Civil society organisations should be involved in institutions for monitoring how investment is allocated, and organisations not involved in such bodies should be given the chance to provide input at regular intervals through consultations.

The Phase 4 case study on Czechia’s implementation of EU just transition funding highlights challenges in government coordination and project selection.

Phase 4: Implementation and accountability

Guidance

4.2.3. Using regulation and procurement to drive a just transition

Policymakers should consider tools that can make the private sector an implementation partner for the just transition, particularly through investment, workforce development and stakeholder collaboration. International guidance, especially for large firms, should inform policy, including the OECD Guidelines for Multinational Enterprises (updated in 2023), the UN Guiding Principles on Business and Human Rights, and the UN High-level Expert Group on the Net Zero Emissions Commitments of Non-State Entities.¹⁵⁹ Legislation, regulation and an enabling policy environment can support firms' capacity and ambition for the just transition. Currently, firms do not plan sufficiently rigorously or broadly on this issue and they tend to focus mainly on green job creation, under-emphasising protections for workers, consumers and suppliers and making limited use of social dialogue.¹⁶⁰

Governments have several levers to enhance private sector action on the just transition using regulation and procurement policies:

- **Mandatory transition plans** for both non-financial and financial firms are being considered by the UK and the EU. Regulations mandating such plans would mean firms having to set out their strategies and concrete actions to reach net zero emissions. Plans of this kind should anticipate and assess social risks and opportunities from that transition and identify actions to mitigate the risks and enable the opportunities. Important components are: ensuring meaningful social dialogue and participation for workers and stakeholders as plans are developed (see 2.2.3); engagement with suppliers and clients; and including social metrics in targets and milestones, plus actions for reaching them.¹⁶¹ For example, the UK's Transition Plan Taskforce established a working group to integrate just transition into its final Disclosure Framework; after further regulator consultations, mandatory transition plans are likely to apply to real economy sectors like food and agriculture, and banks and investors.¹⁶²

- **Mandatory due diligence laws** can require firms to consider whether their business plans comply with the Paris Agreement and meet corporate standards of care, which should address the social impacts of their operations and supply chains. For example, the EU's proposal for the Corporate Sustainability Due Diligence Directive includes provisions for very large private firms to develop Paris-aligned transition plans taking account of impacts on stakeholders, and to address impacts on human rights – although it does not explicitly refer to the concept of just transition. If approved, this directive will need to be implemented by EU Member States, including by enactment of legal provisions that would impose penalties on firms for non-compliance.
- **Disclosure requirements**, such as the EU Corporate Sustainability Reporting Directive, and standards mandated by regulatory or listing authorities, should align with emerging global best practice and evolving disclosure standards, including on emissions. Regulation should break down silos between climate reporting and social responsibility teams within firms. Integrated reporting can provide a much clearer picture of just transition progress across much of the economy, and national policies can draw on and reinforce existing private initiatives, such as the World Benchmarking Alliance's Just Transition Assessment or the just transition indicator in the Climate Action 100+ Net Zero Benchmark.¹⁶³
- **Community business models** in key sectors such as energy and land use can also be encouraged by reforming regulations. For example, at EU level, the revised Renewable Energy Directive (RED II) and the Internal Electricity Market Directive both created frameworks for recognising energy communities (see 3.2.3), which Member States must translate into national legal provisions. However, regulatory barriers persist, including obtaining supply licences, complicated interactions with electricity system operators, and unclear definitions of the ownership structure and business models that qualify as communities.¹⁶⁴
- **Green and social public procurement** can also incentivise joint mainstreaming of climate and social efforts in firms. The ILO Guidelines highlight the importance of broad social inclusion in public purchasing decisions, especially for SMEs and cooperatives. Governments can draw on guidance like the EU's Socially Responsible Public Procurement framework, which seeks to ensure that purchasing decisions incentivise decent work, accessibility, and social, labour and human rights. These should be integrated with green public procurement (GPP) in supportive policies. Ireland, for example, has included training in GPP for all public bodies in its Climate Action Plan 2023.¹⁶⁵ This training should also embed social factors relevant to ensuring a just transition. Procurement often falls within Finance Ministries' suite of options to enable a just transition (see 3.2.6).

Phase 4: Implementation and accountability

Guidance

4.2.4. National laws and judiciaries

Strong national legal systems with provisions for climate mitigation are a foundation for accountability: they provide access to justice in relation to transition impacts and support the political robustness of the transition by making climate policy more predictable and harder to revoke. Climate change framework laws are one way to set a whole-government approach to decarbonisation (and, in some cases, adaptation). They should be designed to serve unmet governance functions in a given national context, into which just transition considerations can be embedded, as follows:¹⁶⁶

- Defining a **narrative and direction-setting** with a clear vision and priorities for a just transition
- Creating institutions to provide **knowledge and expert advice** on the social impacts of the transition
- **Strategy articulation** and mandatory consideration of just transition in plans, roadmaps and LTSs
- **Integration** of just transition into existing laws and regulations, including the roles and responsibilities of subnational authorities
- **Mainstreaming** just transition in line ministry mandates, fiscal and budget processes, and agencies
- Creating institutions and practices to provide **coordination** (see 4.2.1 and 4.2.2)
- Advancing inclusive **stakeholder engagement and alignment**, including in relation to implementation of climate policies, such as by establishing processes outlined in Phase 2
- **Mobilising and channelling finance** such as by creating just transition funds or through mandating budgetary allocations to address social risks and opportunities
- **Oversight, accountability and enforcement** for progress of the transition and the fairness of its social impacts.

Importantly, not all governance functions need to be established or mentioned in a single climate framework law. A framework law is only one part of the overall legal and policy landscape in each country. In some countries, depending on the political system and institutional context, executive policies can also be used to establish governance frameworks (such as China's Five-Year Plans).

Accountability mechanisms come in many flavours, but policymakers should always seek to be clear about the obligations that are created, which actors are responsible for fulfilling which obligations and to whom they are accountable, how compliance should be assessed, and sanctions or consequences in the case of non-compliance. Post-legislative parliamentary scrutiny, public and stakeholder participation, and clear roles for courts and executive oversight agencies (administrative review bodies, ombudsmen, and national human rights institutions) are key elements.¹⁶⁷

Climate change and climate policy are becoming an increasingly common subject of litigation. This can advance justice by encouraging stronger climate policy on the basis of international or national legal requirements.¹⁶⁸ A growing number of cases labelled by scholars as 'just transition litigation' are addressing how climate policies affect social equity and the rights of people and communities. Such cases can challenge existing climate policies, but generally they contribute to rather than undermine the political robustness of the transition by ensuring that social safeguards are respected. Indeed, even policies claiming to advance a just transition should themselves be subject to scrutiny and redress, in case they fail to deliver appropriate assistance, do not follow fair processes or entrench high-carbon activities.¹⁶⁹

Access to justice also entails supporting affected people and groups to engage with the legal system, and strengthening judiciaries' ability to handle climate-related cases. This might include promoting transparent information; raising legal awareness; providing legal aid; strengthening legal standing for NGOs or for authoritative representatives of vulnerable groups (e.g. an Ombudsman for consumers or communities); creating mechanisms for reporting grievances; issuing specialised guidance and recommendations for courts to interpret regulation; dedicated climate tribunals, panels or committees; mainstreaming climate change into the work of national human rights institutions; and continued training for judges in these topics.¹⁷⁰

Phase 4: Implementation and accountability

Guidance

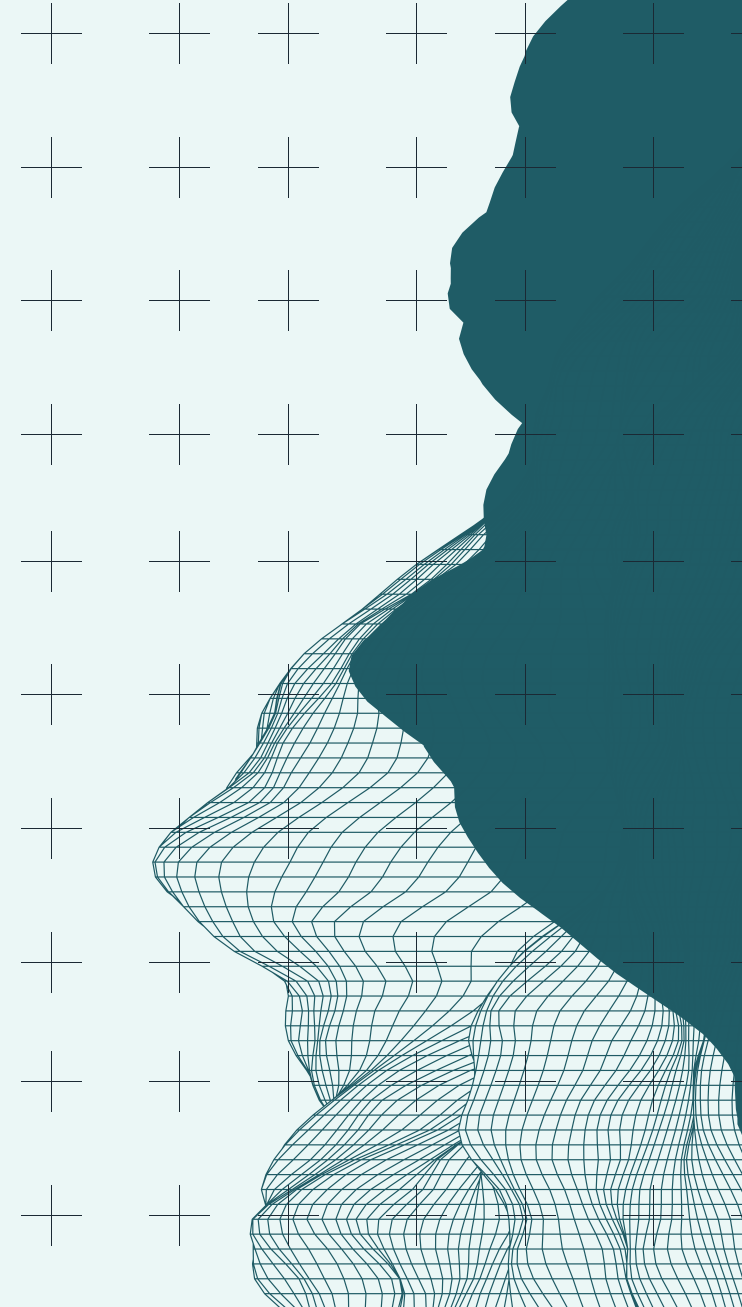
4.2.5. International legal frameworks and standards

Policy or legislation for the transition must comply with all of a state's international legal obligations. Best practice is to have formal procedures with detailed rules for verifying compliance with international (and European) law and to detail steps taken in the text of the policy (or in the explanatory memorandum of legislative instruments). This duty falls to specific ministries, but specialised institutions can help. For example, in Czechia, a specialised department works across government to ensure policy is compatible with EU law. In addition, regulatory impact assessments could be modernised in most countries to include just transition and give coherence to the assessment of social impacts related to decarbonisation. Key laws and conventions of relevance to the implementation of national just transitions in Europe include:

- Aarhus Convention [The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters]
- European Convention on Human Rights
- Espoo (Environmental Impact Assessment) Convention and Strategic Environmental Assessment Protocol
- International Covenant on Civil and Political Rights
- International Covenant on Economic, Social and Cultural Rights
- International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families
- International Labour Organization (ILO) Core Labour Conventions, and Declaration on Fundamental Principles and Rights at Work
- ILO Indigenous and Tribal Peoples Convention No. 169
- UN Convention on the Rights of the Child
- UN Declaration on the Rights of Indigenous Peoples

However, international investment treaties, particularly old-generation treaties such as the Energy Charter Treaty, can increase the costs of adapting energy regulatory frameworks and hamper national decarbonisation efforts. Such treaties often include clauses giving foreign investors the right to bring claims against host governments in private arbitral tribunals, in a process known as investor–state dispute settlement. In these arbitrations, tensions can arise between the protection of foreign investors' investments in the energy sector and the state's right to regulate. Fossil fuel investors have sued states for adopting fossil-fuel phase-out legislation or climate-related restrictions that negatively affect the investors' assets, while some cases target changes to incentive schemes initially designed to encourage the deployment of renewable energy. For example, the Netherlands decided to phase out coal-fired power generation by 2030 and faced lawsuits from coal investors seeking compensation for the impact of climate policy on their investments.¹⁷¹

Government policymakers need to be aware of their obligations when designing domestic climate policies and, where possible, amend or terminate international investment treaties that are not aligned with climate goals. However, even termination may not be immediately effective, as many international investment treaties contain sunset clauses that bind states for some time after termination. Legal and diplomatic solutions to the problems created by existing international investment treaties for climate change mitigation are currently under active discussion in forums such as the OECD. UNCTAD's *World Investment Report 2023* presents a new toolbox aimed at transforming international investment treaties into instruments that positively contribute to (rather than impede) the energy transition and climate action.¹⁷²



Phase 4: Implementation and accountability

Approaches

4.3. Approaches for implementation and accountability

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Workforce development bodies	Vertical coordination and steering non-state actors	Mechanisms for stakeholder participation, which could include subnational authorities, firms, unions and anchor institutions, in developing education and training qualifications.	Involve actors with greater knowledge and ability to act on skill needs and working conditions. Remits can cover sectoral and/or geographical focus.	Risk of bias towards incumbents if large organisations have outsized influence.	Clear and stable mandates to deliver new training programmes. Coordination with wider education policy and any necessary financial assistance for workers and graduates.	New Zealand’s Workforce Development Councils which convene industry and Māori business owners
Regulatory requirements for private sector just transition plans	Steering non-state actors	Require firms, including financial institutions, to assess social risks and opportunities in plans and actions to reduce emissions.	Enable policymakers, investors and clients to scrutinise firms’ approach to climate and social risks and opportunities. Align private sector planning and action with government climate policy.	Lack of data and knowledge to comply effectively with requirements. Risk of an over-emphasis on quantitative metrics in plans, and insufficient or inadequate use of qualitative measurements that capture stakeholder wellbeing.	Alignment with international best practice and standards for regulatory convergence. Clear thresholds for data quality (both quantitative metrics and qualitative description, e.g. of stakeholder engagement). Capacity to audit and enforce compliance and assess adherence to plans. If provided by third-parties, avoid conflicts of interest with their commercial services for regulated firms.	The UK’s Transition Plan Taskforce Disclosure Framework, and related guidance: Curran et al. (2023) Response to the Transition Plan Taskforce consultation on the TPT Disclosure Framework and Implementation Guidance

Phase 4: Implementation and accountability

Approaches

Name	Concepts reflected	Description	Strengths	Limitations	Requirements	Guidance or examples
Green and social public procurement	Supporting actors	Criteria for public purchases to incentivise suppliers to undertake low-carbon investment and respect social rights in their operations. Can also prioritise small and cooperative firms.	Reinforces standards and triggers socially positive decarbonisation along supply chains and across sectors, such as built environment and industry.	Potentially limited supply of low-carbon products from smaller firms.	Analysis to deliver a price premium for green and social products at reasonable cost. Data (chiefly through company reporting requirements) to verify product emissions and social impacts across operations and supply chains.	European Commission (2020) Making socially responsible public procurement work UNIDO and LeadIT (2021) Fostering industry transition through green public procurement: A how to guide in the cement and steel sectors
Just transition provisions in framework laws	Accountability	Creating new or revising existing legislation for national decarbonisation goals to embed just transition.	Meet unserved governance functions in country context, including setting definitions, roles and responsibilities for the just transition.	Enforcement and accountability for roles and responsibilities depends on specificity of legislation, strength of rule of law and judicial capacity.	Comparison of options for legal drafting and legislative procedures that enable scrutiny and public participation.	Spain's Law 7/2021 on climate change and energy transition – Title VI has provisions on just transition strategy and tripartite agreements South Korea's 2021 Carbon Neutral Green Growth Framework Act for Coping with Climate Crisis – Chapter 7 addresses just transition, including the distribution of impacts and participation

4.4. Case Study

Implementing the Just Transition Fund in Czechia

Context

Financial support through the EU's Just Transition Fund (JTF) is allocated to Member States based primarily on emissions of carbon-intensive industrial regions and national employment in coal and lignite mining and carbon-intensive industry. The total allocation to Czechia through the JTF is €1.64 billion.¹⁷³ When combined with co-financing by the national government, this figure reaches €1.93 billion – the fourth largest amount in the EU.¹⁷⁴

Phasing out coal mining and coal-fired power generation is a key early priority for the net zero transition. The Czech government has committed to a 2033 target date for coal exit in its Territorial Just Transition Plan (TJTP), earlier than the recommendation of 2038 made by a national commission on coal that was convened in a similar way to the German Coal Commission (see 2.2.3). The three regions covered in the Czech TJTP (Moravskoslezský, Karlovarský and Ústecký) are highly exposed and vulnerable (see 1.1.5) due to a concentration of coal mining jobs, lower-than-average incomes, long-term unemployment, out-migration, and low numbers of SMEs and science and research professionals.

Czechia launched a national strategy to support these regions in 2015, known as RE:START. Its objective was similar to that of the JTF in seeking to support entrepreneurship, investment and innovation. The strategy began under a dedicated government commissioner, but responsibility was later reassigned to the Ministry of Regional Development. The strategy encountered challenges associated with low institutional capacity in the regions and building trust among stakeholders and the public.¹⁷⁵

Action

The JTF is intended specifically to support economic diversification in regions where concentrated transition effects occur, since other EU funds are also directed towards green investments. Grants through the JTF should primarily be for 'productive investments' in SMEs (including micro-enterprises and start-ups), creating new firms, research and innovation, deployment of low-carbon infrastructure, support for workers, and education and training. Any investments in larger enterprises must be justified in the TJTP by showing they are necessary to avoid overall job losses (factoring in the opportunity cost of alternative investments).¹⁷⁶

Officials in the Ministry for Regional Development developed Czechia's Territorial Just Transition Plan, building on their work on RE:START. Following its approval by the European Commission, responsibility for implementing the plan shifted to the Ministry for Environment and the State Environmental Fund. A national-level Monitoring Committee has been set up to scrutinise implementation and assess whether the disbursement of funds is in line with its primary objective. Almost half of the Committee's members are policymakers, including representatives of the regional governments and officials from national ministries (of finance, regional development, environment, education, labour and social affairs, industry and trade, and culture).¹⁷⁷

The Monitoring Committee's remit includes approving the selection criteria for projects to receive investment from the JTF (alongside other EU cohesion funds) and monitoring their performance annually. The calls for proposals for projects are first designed by thematic working groups, which can include technical expert members external to the Committee.¹⁷⁸ However, the Ministry for Regional Development decided to allocate approximately half of the just transition funds to larger-scale 'strategic projects' selected by a conference of the affected regions, which the Monitoring Committee are unable to scrutinise. Czechia is spending a disproportionately high share of its total JTF budget on large firms and pollution management compared with most other countries.¹⁷⁹

Lessons

Czechia's national policymakers have retained strategic oversight of the use of funds and recruited technical experts to help convert its TJTP into detailed, concrete projects. However, the RE:START Strategy has shown the limitations in taking an overly centralised approach in terms of building strong capacity in the regions themselves. This was considered when designing the governance process for implementing the JTF, which has displayed collaborative decision-making by national and regional policymakers. In addition, the fact that a range of government ministries participate in the Monitoring Committee might contribute to improving horizontal coordination within central government to support a strategy for deeper structural change in these regions.

4.4. Case Study

Implementing the Just Transition Fund in Czechia

On the other hand, subverting the Monitoring Committee by earmarking half of the available funds for strategic projects risks jeopardising the effective implementation of transition policies and investments, since it concentrates public resources in large investments with little oversight or accountability. The Committee itself could be improved if it were to introduce stronger measures for civil society to participate in the creation of plans and selection of projects. Formally involving more NGOs and community associations would enable these groups to hold decision-makers to account and help implement and monitor projects.

Indicative data from the TJTP casts doubt over whether different EU funding options are being used in the most coherent and effective way. The Just Transition Mechanism, which includes the JTF, also includes the private sector mobilisation programme InvestEU and a public sector loan facility financed through the EU budget and by the European Investment Bank, both of which are likely to be more effective sources for investments in large firms or infrastructure projects. Financial assistance through the JTF runs from 2021 to 2027, so a full assessment of the impact of these decisions will be needed later in the implementation process.



5

Phase 5: Monitoring and evaluation



5

Phase 5: Monitoring and evaluation

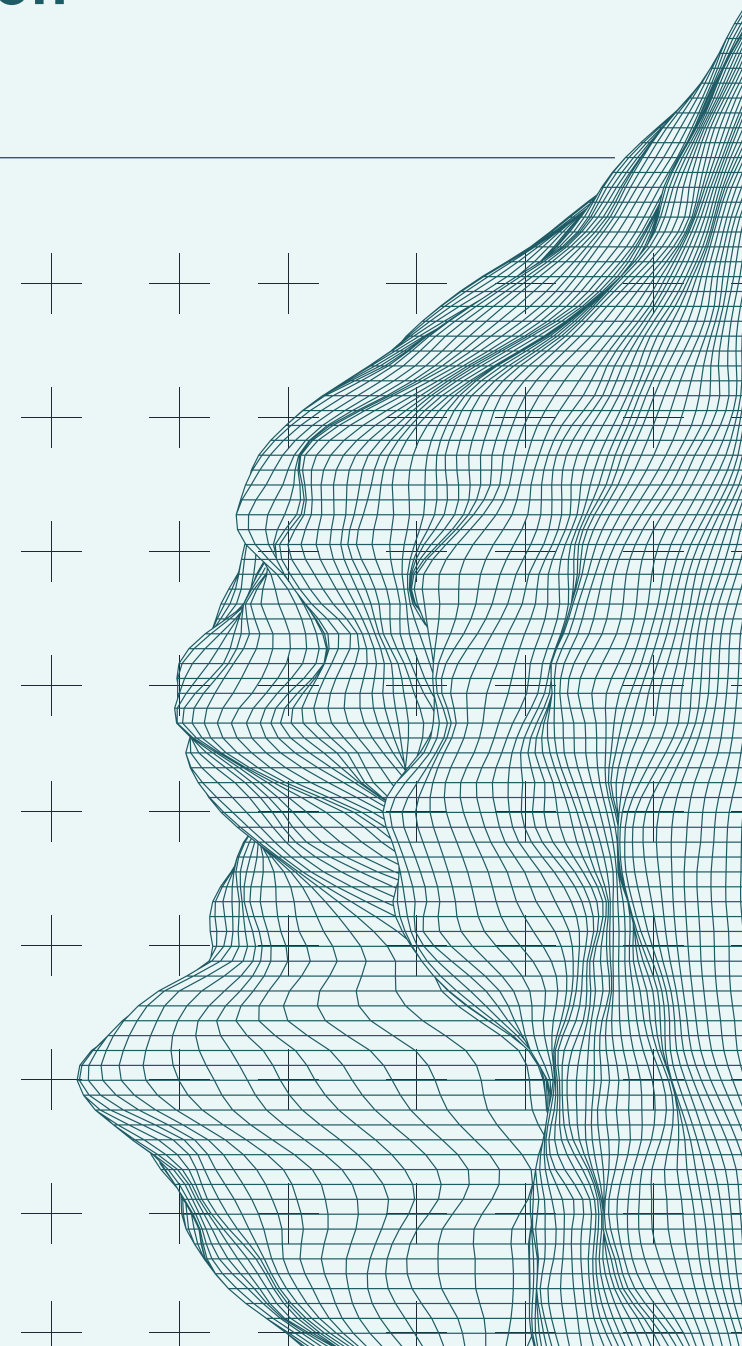
Monitoring and evaluation (M&E) is a new frontier for the just transition. For government policy and commitments towards net zero and social goals to be credible and effective, there should be formal requirements for ongoing assessment, institutions to make these assessments, and adjustments applied to policy once lessons have been identified.

At a general level, an M&E framework should provide high-quality information that is:¹⁸⁰

- **Transparent** – observable to third parties
- **Accurate** – a true representation
- **Comparable** – able to be meaningfully compared across entities
- **Timely** – available in close to real time.

The M&E process both completes the policy cycle and begins it anew by feeding into iterative planning and analysis. However, data for evaluation should also arise from many of the approaches assigned to earlier phases: ongoing measurement of wellbeing and resources, as in Phase 1; stakeholder and public views and experiences from consultation in Phase 2; the formulation of criteria for transitional assistance in Phase 3; and regulation and accountability mechanisms throughout Phase 4.

The principles outlined in Table 5.1 for the design of an M&E framework for national policy and progress on just transition objectives are therefore based on the preceding phases. Each principle relates to a concept from this report and is accompanied by a suggested approach and example.

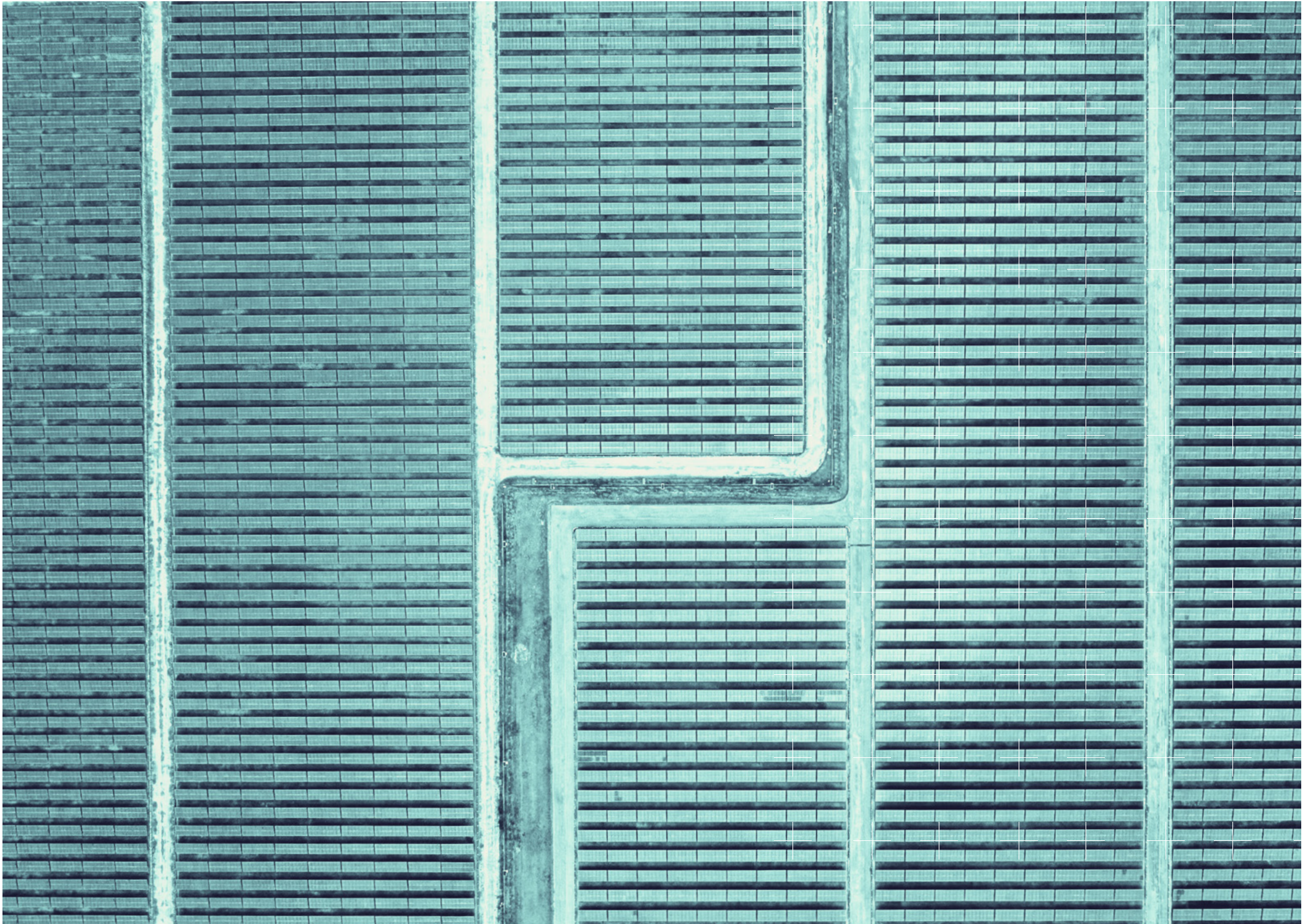


Phase 5

Monitoring and evaluation

Table 5.1. Principles for national just transition monitoring and evaluation

Principle	Concepts reflected	Potential approach	Examples
Reflect the variety of factors and needs that affect people’s wellbeing – these are not sufficiently represented by any single metric	Wellbeing	Data dashboards or indices	Netherlands – Monitor of Well-being and the SDGs New Zealand – Living Standards Framework Dashboard and links to Budget 2023
Monitor stakeholder and public views of just transition policies to highlight negative transition impacts and potential resistance to implementation	Political attitudes	Surveys using mobile technology or bespoke research	UK – Public Attitudes Tracker
Disaggregate data (e.g. by demographic characteristics or local area/region) to assess varying impacts and design targeted interventions	Conversion factors	Integrated measurement of outcomes in specific contexts	UNDP – Gender responsive indicators Thriving Places Index
Monitor granular trends in the labour market to understand how workforce risks and benefits are distributed	Adaptive capacity	Real-time data on skills in low-carbon and high-carbon jobs from job adverts	NESTA – Measuring green jobs and skills PCAN – Just Transition Jobs Tracker
Draw on stakeholder and public discussion to generate qualitative data, to better understand experiences of just transition policies and attitudes towards them	Participation	Creating standing institutions for holding representative deliberative processes	France – États Généraux on bioethics policy
Provide transparent information on how input from participation shapes decision-making, to build trust in institutions	Influence	Regularly updated, independent evaluations	KNOCA – Impact evaluation framework for climate assemblies
Build social and climate metrics into all investment programmes from the bottom up	Adaptive transitional assistance	Project-level assessment tools	Impact Investing Institute – Just Transition Criteria TIPS – Just Transition Transaction Framework
Join up subnational data with national planning to monitor targeted policies and investments	Vertical coordination	Regional M&E hubs with contact points in national ministries	SITRANS – Just Transition Observatory
Require data disclosure by firms as a critical tool for just transition implementation	Non-state actors	Disclosure requirements covering factors such as the categories of engaged stakeholders and steps taken to engage them	World Benchmarking Alliance – Just Transition Methodology UN Guiding Principles on Business and Human Rights – Reporting Framework Paris Peace Forum – Workforce Disclosure Initiative



Endnotes

1. UNFCCC (2015) and ILO (2015).
2. ILO (2023).
3. The Just Transition Research Collaborative (2018) presents typologies of just transition. The approach in this report most closely reflects “structural reform” (through institutional change and evolution of the economic system) – placed between narrower “managerial reform” (which works within economic systems and without challenging existing hegemony) and a broader “transformative approach” (an overhaul of the existing economic and political system). The Just Transition Initiative (2021) also examines the relationship between dimensions of justice and the scope and ambition of the transition. For further background on the variety of just transition concepts, see Wang and Lo (2021).
4. UN Climate Change Conference UK 2021 (2021).
5. The Climate Investment Funds (CIF)’s “Just Transition Planning Toolbox” directs users to a wide range of examples and resources (Atteridge et al., 2023). Advice focused on coal includes a toolbox by the Wuppertal Institute (2022) and experiences of country support from the World Bank (2021a) (see also Stanley et al., 2018). Advice on agriculture includes principles by Just Rural Transition (2023) and guidance on finance by Muller and Robins (2022). For a sense of the sectoral focus of existing policy approaches, see KCI (2023).
6. Rentier et al. (2019) outlines the impact of institutional variety on the phaseout of coal power in Europe. Finnegan (2020) and Mildenerger (2020) discuss the importance of institutions in shaping climate policy trajectories.
7. Council Recommendation 2022/C 243/04.
8. EU Regulation 2021/1056.
9. EU Regulation 2023/955.
10. The policy cycle defined by the OECD (2017) consists of “identifying policy priorities, drafting the actual policy document, implementation, and monitoring implementation and evaluation of impacts.” An extra step is required to embed procedural justice and ensure recognition for people’s lived experience through participation by stakeholders and the public.
11. For comparison, CIF’s Just Transition Planning Toolbox stresses that “stakeholders, including marginalized groups, should be given the chance to influence how risks and opportunities are defined, the vision for transition, the principles that guide planning, and the strategies prioritized for promoting future livelihoods” (Atteridge et al., 2023).
12. Creutzig et al. (2022) – Chapter 5 of Working Group III’s contribution to the IPCC Sixth Assessment Report.
13. Green (forthcoming).
14. Green (forthcoming).
15. See the OECD’s (2013) Guidelines on Measuring Subjective Well-being, p. 29.
16. Ryan and Deci (2001) and Sen (1999).
17. Doyal and Gough (1991), Nussbaum (2011), Ryan and Deci (2017), and Sen (1999).
18. Robeyns (2017, p. 48) and Sen (1979).
19. Green (forthcoming).
20. Iser (2019).
21. Lee and Baumgartner (2022).
22. Atteridge and Strambo (2020) and Aung and Strambo (2020) review the historical record of deindustrialisation and mining transitions.
23. The approach here is similar to that developed in Carley et al. (2018).
24. Sælen and Aasen (2023) and Aasen and Sælen (2022).
25. Furceri et al. (2023) find that market-based policies (like carbon pricing) are more likely to entail political costs for governments than non-market ones (like regulatory emissions caps), as are interventions when fuel prices or inequality are high.
26. Cha (2020).
27. Bang et al. (2022) outline how interest group factions have driven coal phase-out processes in Germany and the UK.
28. Bolet et al. (forthcoming); Gaikwad et al. 2022.
29. Just Rural Transition et al. (2021)
30. Bolet et al. (forthcoming).
31. Dudley et al. (2022).
32. Heffron (2021).
33. Gurtler et al. (2021).
34. Climate Change Act 2008, Provision 34.
35. CCC (2020).
36. CCC (2023).
37. See Saussay et al. (2022).
38. See Cristiaensen et al. (2022).
39. Averchenkova et al. (2018).
40. Quick and Bryson (2022) and Ruppel and Houston (2023).
41. The UN’s Office of the High Commissioner on Human Rights (2018) “Guidelines for States on the effective implementation of the right to participate in public affairs” and (2022) “Good practices and challenges” provide many more practical instructions on public participation in general.
42. See King et al. (2022) for an overview of broader kinds of engagement, including communication and efforts to educate and inform citizens to change behaviours.
43. Ruppel and Houston (2023)
44. Demski (2021).
45. The list of participation principles is adapted from UN Office of the High Commissioner on Human Rights’ (2018) Guidelines and the Europe Beyond Coal Network’s (2019) “Seven Golden Rules”.
46. Ciptel and Harrison (2020) refer to this problem as the “sustainability-inclusivity” tension.
47. European Commission (2022, pp. 4-5).
48. Howarth et al. (2020).
49. OECD (2020).
50. Smith (2022, p. 1).
51. See Stasiak et al. (2021) for a discussion of the legitimacy and resonance of climate assemblies in wider society.
52. A detailed comparison of different national climate assemblies and further guidance on each of these features is available in Smith (2022).
53. The OECD (2020a) discusses options for institutionalisation in greater depth.
54. The OECD (2021) has produced guidelines on the evaluation of representative deliberative processes.
55. Bjergene and Hagen (2020).
56. ILO (2022, p. 93).
57. Sanchez et al. (2023).

Endnotes

58. Concertation “describes an institutional arrangement that grants relatively few encompassing, hierarchal, and monopolistic peak associations privileged access to pre-legislative policymaking via long-standing linkages to political parties and the public administration” (Finnegan 2022, 1208, references omitted).
59. WBA (2021).
60. Litz et al. (2019) and Gurtler et al. (2021).
61. Creutzig et al. (2022), p. 507.
62. European Commission (2022).
63. Smith (2022) and Jaquet (2017).
64. Manca and Schreuder (2022). The study finds that youth have been relatively unable to influence the content of Territorial Just Transition Plans in several EU Member States, despite their large stakes on grounds of their longer-term wellbeing.
65. Smith (2022).
66. Just Rural Transition et al. (2021).
67. Federal Office for Spatial Development (2021).
68. «Ernährungszukunft Schweiz» in German.
69. Bürger:innenrat Für Ernährungspolitik (2023).
70. Federal Office for Agriculture et al. (2023, p. 8).
71. Szulecki et al. (2021).
72. Energidepartementet (2021).
73. The requirement to end new fossil fuel exploration and extraction in order to stay within a 1.5 warming limit is set out clearly in the IEA’s (2021) Net Zero Energy scenario.
74. Houeland et al. (2020).
75. Normann and Tellmann (2021).
76. The Council mandate is available at: reference TBC.
77. Engen et al. (2022) and Hauge-Eltvik et al. (2021).
78. A summary of the Council’s first meeting is available at: reference TBC.
79. Kompetansebehovsutvalget (2021).
80. Core concepts for differentiating transition assistance policies are drawn from Green and Gambhir (2020).
81. Cots et al. (2023).
82. Europe’s response to the energy price crisis characterised this mixed approach, consisting both of subsidies for consumers’ energy bills and incentives for renewable energy deployment and storage – see European Commission (2021).
83. Montmasson-Clair (2021).
84. Fairbrother et al. (2021) and Jacobs and Matthews (2012).
85. Finnegan (2018) and Gazmararian and Tingley (2023).
86. For a review of evidence on the Social Climate Fund, see WWF (2022).
87. Lamb et al. (2020) review ex-post evaluations of the social outcomes of interventions that target energy decarbonisation, including taxes, subsidies, feed-in tariffs, and renewable energy deployment.
88. Palmer and Terry (2023).
89. Mariničová et al. (2023).
90. KCI (2023), p. 65.
91. OECD (2022).
92. Gautam et al. (2022).
93. WWF (2023).
94. Mazzucato (2022).
95. World Bank (2021a, p. 55).
96. Valero et al. (2021).
97. World Bank (2021a, p. 56).
98. Mella and Werner (2023).
99. Stanley et al. (2018, pp. 41-44).
100. See Stroud et al. (2014) for a discussion of the variation in provision of green skill development between coordinated and liberal market economies.
101. Valero et al. (2021) and Sato et al. (2023).
102. Dowling et al. (2022).
103. Skubida et al. (2023) highlight many cases of successful economic and social transformation in regions and localities that have been adversely impacted by change. Top-down support is a common feature across many.
104. Mazzucato and Ryan-Collins (2019).
105. Cipler and Harrison (2020) present this problem as the “sustainability-recognition” tension.
106. van Wijk et al. (2023).
107. Lacey-Barnacle et al. (2023) explore how community energy innovation intersects with community wealth building. McKinley and McInroy (2023) provide a broader guide to the pillars and elements of community wealth building strategies, tailored to the United States.
108. CEE Bankwatch Network (2023).
109. Mafarlane and Brett (2022).
110. REScoop.eu et al. (2023, pp. 6-7).
111. KCI (2023, p. 23).
112. Soubeyran and Choudhary (2023).
113. Cahill and Allen (2021).
114. IEA (2022) and Valero et al. (2021).
115. WBA (2021).
116. Squalli et al. (2021).
117. World Bank (2021a, p. 54).
118. Finnegan (2021) and Gaikwad et al. (2022).
119. Jacobs (2016) and Finnegan (2022).
120. Jacobs (2016).
121. Rhodes (1998).
122. Bolet et al. (2023).
123. Jacobs and Matthews (2017).
124. Gazmararian and Tingley (2023).
125. Jacobs (2016).
126. Coalition of Finance Ministers on Climate Action (2023) pp. 45-46.
127. Monnin and Robins (2023).
128. OECD (2021), World Bank (2021b) and UNDP (2022).
129. Gulrajani and Bosworth (n.d.).
130. Damania et al. (2023).
131. Clausing et al. (2021).
132. Klenert et al. (2018) provide an overview of potential channels for building political support for carbon pricing. However, Mildenerger et al. (2022) demonstrate that even direct carbon tax rebates might not be effective at building support if they are not administrated transparently or if political debates are highly polarised, suggesting that more nuanced political strategies might be needed.
133. Laan et al. (2021).
134. GRI et al. (2021).
135. Climate Action and Low Carbon Development (Amendment) Act 2021, Section 6.
136. ESRI (2020).
137. The Citizens’ Assembly (2018).
138. Environmental Protection Agency (2021).
139. Department of Public Expenditure, DNP Delivery and Reform (2023).
140. Coalition of Finance Ministers (2023).
141. Government of Ireland (2022).
142. KNOCA (2023).
143. Zwar et al. (2023).

Endnotes

144. Implementation concepts are adapted from Breuer et al. (2019), developed for implementation of the SDGs, and are also reflected in Dubash et al. (2022), Chapter 13 of Working Group III's contribution to the IPCC's Sixth Assessment Report.
145. Zwar et al. (2023 p. TBC).
146. Ruppel and Houston (2023)
147. Mason (2005).
148. Newell (2016) and Green and Kuch (2022).
149. Oberthür et al. (2023).
150. Zwar et al. (2023).
151. See for instance von Lüpke et al. (2023), Dubash et al. (2022, p. 1405), and Breuer et al. (2019).
152. ILO (2015, p. 8).
153. Peters (2018).
154. KCI (2023, p. 47) provides detail on New Zealand's Just Transition Unit, which has evolved into a Just Transitions Partnerships Team. This example also demonstrates vertical coordination and working with affected regions. Australia has created a Net Zero Transition Authority with a remit to assist workers and communities affected by the energy transition (Department of the Prime Minister and Cabinet, 2023).
155. PCC (2023).
156. Stępień and Treadwell (2022).
157. Crawford and Rayner (2023, p. 23).
158. European Commission (202, p. 16).
159. OECD (2023), UN (2011), and UN HLEG (2022).
160. WBA and UNDP (forthcoming).
161. Curran et al. (2022).
162. Ross et al. (2023) and Transition Plan Taskforce (2023).
163. For the methodologies guiding these private sector just transition measurements see WBA (2021b) and Climate Action 100+ (2022).
164. Schockaert (2022).
165. Government of Ireland (2023).
166. These governance functions and their application to framework laws are drawn from Sridhar et al. (2022).
167. Higham et al. (2022).
168. For example, insufficient climate mitigation may violate human rights obligations under the European Convention on Human Rights and under a national government's duty of care, such as was found to be the case in Neubauer v. Germany, Federal Constitutional Court, 2021.
169. Setzer and Higham (2023) and Savaresi et al. (2023).
170. Müllerová et al. (forthcoming) and Ruppel and Houston (2023).
171. See *Uniper SE, Uniper Benelux Holding B.V. and Uniper Benelux N.V. v Kingdom of the Netherlands and RWE AG and RWE Eemshaven Holding II BV v Kingdom of the Netherlands*.
172. UNCTAD (2023).
173. Funds are also allocated partly on the basis of production of peat and oil shale, with a much smaller weighting than the other factors (1% of the total). See Proposal COM/2020/22, Annex 1.
174. Cohesion Open Data Platform (2023).
175. Platform for Coal Regions in Transition (2019).
176. EU Regulation 2021/1056.
177. For the Committee membership, see: Seznam členských institucí Monitorovacího výboru Operačního programu Spravedlivá transformace 2021–2027. <https://opst.cz/o-programu/monitorovaci-vybor/>
178. For the Committee mandate, see: Statut: Monitorovacího výboru Operačního programu Spravedlivá Transformace 2021-2027. <https://opst.cz/o-programu/monitorovaci-vybor/>
179. WWF (2023, p. 11).
180. Green and Kuch (2022, p. 50).

References

A

Asen M, Sælen H. 2022. Right-wing populism and climate policies: Explaining opposition to road tolls in Norway. *Transportation Research Part D: Transport and Environment*, 105: 103222. <https://doi.org/10.1016/j.trd.2022.103222>

Atteridge A, de Leo A, Searight H, Davis M, Radwan L, Madhusudanan R. 2023. Just Transition Planning Toolbox. Washington, DC: Climate Investment Funds. <https://cif.org/just-transition-toolbox/home>

Atteridge A, Strambo C. 2021. How can socio-economic transitions be better managed? Lessons from four historical cases of industrial transition. Stockholm: Stockholm Environment Institute. <https://www.sei.org/publications/lessons-from-industrial-transitions/>

Aung MT, Strambo C. 2020. Distributional Impacts of Mining Transitions: Learning from the Past. Stockholm: Stockholm Environment Institute. <https://www.sei.org/publications/distributional-impacts-of-mining-transitions/>

Averchenkova A, Fankhauser S, Finnegan J. 2018. The role of independent bodies in climate governance: the UK's Committee on Climate Change. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/role-independent-bodies-in-climate-governance-uk-committee-on-climate-change/>

B

Bang G, Rosendahl KE, Böhringer C. 2022. Balancing cost and justice concerns in the energy transition: comparing coal phase-out policies in Germany and the UK. *Climate Policy*, 22(8): 1000-1015. <https://doi.org/10.1080/14693062.2022.2052788>

Bjergene JO, Hagen IM (eds.). 2020. Grønne tariffavtaler. Oslo: Glydendal.

Bolet D, Green F, Gonzalez-Eguino M. Forthcoming. How to Get Coal Country to Vote for Climate Policy: The Effect of a 'Just Transition Agreement' on Spanish Election Results. *American Political Science Review*. Preprint available at SSRN: <https://ssrn.com/abstract=4394195>.

Breuer A, Leininger J, Tosun J. 2019. Integrated policymaking: Choosing an institutional design for implementing the Sustainable Development Goals (SDGs), Discussion Paper, No. 14/2019, ISBN 978-3-96021-106-8, Deutsches Institut für Entwicklungspolitik (DIE), Bonn, <https://doi.org/10.23661/dp14.2019>.

Bürger:innenrat Für Ernährungspolitik. 2023. Empfehlungen Für Die Schweizer Ernährungspolitik. <https://www.buergerinnenrat.ch/de/jetzt-wird-aufgetischt/>

C

Cahill B, Allen MM. 2021. Pathways for Just Transitions: Gender Responsive Policies & Place Based Investment. Just Transition Initiative: Center for Strategic and International Studies and Climate Investment Funds. Washington, DC: CSIS and CIF. <https://justtransitioninitiative.org/pathways-for-just-transitions/>

Carley S, Evans TP, Graff M, Konisky DM. 2018. A framework for evaluating geographic disparities in energy transition vulnerability. *Nat Energy*, 3: 621–627. <https://doi.org/10.1038/s41560-018-0142-z>

CEE Bankwatch Network. 2023. Selection criteria for energy communities: a practical checklist. <https://bankwatch.org/publication/selection-criteria-for-energy-communities-a-practical-checklist>

Cha JM. 2020. A just transition for whom? Politics, contestation, and social identity in the disruption of coal in the Powder River Basin. *Energy Research & Social Science*, 69: 101657. <https://doi.org/10.1016/j.erss.2020.101657>

Christiaensen L, Ferré C, Honorati M, Gajderowicz TJ, Wrona SM [eds.]. 2022. Towards a Just Coal Transition: Labor Market Challenges and People's Perspectives from Wielkopolska. World Bank, Washington, DC. <https://doi.org/10.1596/38175>

Clausing KA, Saez E, Zucman G. 2021. Ending Corporate Tax Avoidance and Tax Competition: A Plan to Collect the Tax Deficit of Multinationals. UCLA School of Law, Law-Econ Research Paper No. 20-12. <https://ssrn.com/abstract=3655850>

Climate Action 100+. 2022. Climate Action 100+ Net Zero Company Benchmark v1.2: Disclosure Framework Methodology. <https://www.climateaction100.org/net-zero-company-benchmark/methodology/>

Climate Action and Low Carbon Development (Amendment) Bill 2021 (Act 32/2021) [Ireland]. <https://www.oireachtas.ie/en/bills/bill/2021/39/>

Climate Change Act 2008 [UK], c. 27. <https://www.legislation.gov.uk/ukpga/2008/27>.

Climate Change Committee [CCC]. 2020. Sixth Carbon Budget. London. <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

CCC. 2023. A Net Zero Workforce. London. <https://www.theccc.org.uk/publication/a-net-zero-workforce/>

Coalition of Finance Ministers for Climate Action. 2023. Strengthening the Role of Ministries of Finance in Driving Climate Action: A Framework and Guide for Ministers and Ministries of Finance. Washington, DC: Coalition Secretariat. <https://www.financeministersforclimate.org/reports>

Cohesion Open Data Platform. 2023. Just Transition Fund. European Commission.: <https://cohesiondata.ec.europa.eu/funds/jtf/21-27>

Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality 2022/C 243/04. *Official Journal of the European Union* C243/35. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022H0627%2804%29>

Crawford R, Rayner K. 2023. From theory to action: Implementing a just transition in rural Australia. A Future Worth Living In. <https://www.afutureworthlivingin.org/ourresearch>

Creutzig F et al.. 2022. Demand, services and social aspects of mitigation. In IPCC, 2022: *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Shukla PR et al. (eds)]. Cambridge, UK and New York, NY, USA: Cambridge University Press. <https://doi.org/10.1017/9781009157926.007>

Curran B, Robins N, Muller S, Subramoni A and Tickell S. 2022. Making Transition Plans Just: How to embed the just transition into financial sector net zero transition plans. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/making-transition-plans-just-how-to-embed-the-just-transition-into-financial-sector-net-zero-plans/>

D

Damania R, Balseca E, de Fontaubert C, Gill J, Kim K, Rentschler J, Russ J, Zaveri E. 2023. Detox Development: Repurposing Environmentally Harmful Subsidies. Washington, DC: World Bank. <http://hdl.handle.net/10986/39423>

Demski C. 2021. Net zero public engagement and participation: A research note. Department for Business, Energy, and Industrial Strategy, UK Government. March. <https://www.gov.uk/government/publications/net-zero-public-engagement-and-participation>

Department for the Prime Minister and Cabinet [Australia]. 2023. 'A New National Net Zero Authority'. May 8. <https://www.pmc.gov.au/news/new-national-net-zero-authority>.

References

Department of Public Expenditure [Ireland], DNP Delivery and Reform. 2023. Budget 2023: The Use of Carbon Tax Funds 2023. Dublin: Government of Ireland. <https://assets.gov.ie/235732/93f95f31-bc1e-4823-993f-af16492fe628.pdf>

Dowling D, Melly F, Boyle D, Olgun D, Boyle A, Gouldson A, Sudmant A, Cooper A, Docherty A, Fulker J. 2022. Accelerating Net Zero Delivery: Unlocking the benefits of climate action in UK city-regions. Innovate UK, PwC, Otley Energy, and University of Leeds. London: UK Research and Innovation. <https://www.ukri.org/publications/accelerating-net-zero-delivery/>

Doyal L, Gough I. 1991. *A Theory of Human Need*. Basingstoke: Palgrave Macmillan.

Dubash NK et al.. 2022. National and sub-national policies and institutions. In IPCC, 2022: *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Inter-governmental Panel on Climate Change* [Shukla PR et al. (eds)]. Cambridge, UK and New York, NY, USA: Cambridge University Press. <https://doi.org/10.1017/9781009157926.015>

Dudley H, Jordan A, Lorenzoni I. 2022. Advising national climate policy makers: A longitudinal analysis of the UK Climate Change Committee. *Global Environmental Change*, 76: 102589. <https://doi.org/10.1016/j.gloenvcha.2022.102589>

E

Economic Social Research Institute [ESRI]. 2020. Carbon Taxes, Poverty and Compensation Options. <https://www.esri.ie/publications/carbon-taxes-poverty-and-compensation-options>

Engen RV, Haugan B. 2022. Regjeringen oppretter nytt klimaråd – skal få fortgang i massiv omstilling. VG.no. 30 May 2022. <https://www.vg.no/nyheter/innenriks/i/JxdbnX/regjeringen-opprettet-nytt-klimaraad-skal-faa-fortgang-i-massiv-omstilling>.

Energidepartementet [Norway]. 2021. Energi til arbeid – langsiktig verdiskaping fra norske energiressurser. Meld. St. 36 (2020–2021). <https://www.regjeringen.no/no/dokumenter/meld.-st.-36-20202021/id2860081/?ch=1>

Environmental Protection Agency [Ireland]. 2021. Climate Change in the Irish Mind. Dublin: Government of Ireland. <https://www.epa.ie/publications/monitoring--assessment/climate-change/EPA-Climate-in-the-Irish-Mind-REPORT-19.pdf>

EU Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund. 2021. *Official Journal of the European Union* L 231: 1-20. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056>

EU Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund. 2023. *Official Journal of the European Union* L 130: 1-51. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32023R0955>

European Commission. 2021. Tackling rising energy prices: a toolbox for action and support. Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. COM(2021) 660. Brussels: European Commission. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2021%3A660%3AFIN>

European Commission. 2022. Just Transition Platform: Working Group on Horizontal Stakeholder Strategy - Scoping Paper. Brussels: European Commission. https://ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform/groups_en

European Commission. 2023. Just Transition Platform Working Groups: Implementation Plan. Brussels: European Commission. https://ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform/groups_en

Europe Beyond Coal Alliance. 2019. Seven Golden Rules for Regional Just Transition Planning. Brussels: World Wide Fund for Nature. <https://wwf.panda.org/es/?349991/Seven-Golden-Rules-for-open-and-inclusive-just-transition-planning-at-the-regional-level>

F

Fairbrother M, Arrhenius G, Bykvist K, Campbell T. 2021. Governing for Future Generations: How Political Trust Shapes Attitudes Towards Climate and Debt Policies. *Frontiers in Political Science* 3: 656053. <https://doi.org/10.3389/fpos.2021.656053>

Federal Office for Agriculture, Federal Office for Food Security and Veterinary Affairs, Federal Office for the Environment [Switzerland]. 2023. Stratégie Climat pour l'agriculture et l'alimentation 2050. Réduction des émissions de gaz à effet de serre et adaptation aux effets du changement climatique pour un système alimentaire suisse durable. Partie 2: Plan d'action. Bern: Swiss Confederation. <https://www.blw.admin.ch/blw/fr/home/nachhaltige-produktion/umwelt/klima0.html>

Federal Office for Spatial Development [Switzerland]. 2021. 2030 Sustainable Development Strategy. Bern: Swiss Confederation. <https://www.are.admin.ch/are/en/home/media/publications/sustainable-development/strategie-nachhaltige-entwicklung-2030.html>

Finnegan JJ. 2022. Institutions, climate change, and the foundations of long-term policymaking. *Comparative Political Studies* 55: 1198–235. <https://doi.org/10.1177/00104140211047416>

Furceri D, Ganslmeier M, Ostry J. 2023. Are climate change policies politically costly? *Energy Policy*, 178: 113575. <https://doi.org/10.1016/j.enpol.2023.113575>

G

Gaikwad N, Genovese F, Tingley D. 2022. Creating Climate Coalitions: Mass Preferences for Compensating Vulnerability in the World's Two Largest Democracies. *American Political Science Review*: 1–19. <https://doi.org/10.1017/S0003055422000223>

Gautam M, Laborde D, Mamun A, Martin W, Pineiro V, Vos R. 2022. Repurposing Agricultural Policies and Support: Options to Transform Agriculture and Food Systems to Better Serve the Health of People, Economies, and the Planet. Washington, DC: World Bank. <http://hdl.handle.net/10986/36875>

Gazmararian AF, Tingley D. 2023. *Uncertain Futures: How to Unlock the Climate Impasse*. Cambridge: Cambridge University Press.

Government of Ireland. 2022. Territorial Just Transition Plan: EU Just Transition Fund. <https://www.gov.ie/en/publication/4d421-eu-just-transition-fund/>

Government of Ireland. 2023. Climate Action Plan 2023: Changing Ireland for the Better. <https://www.gov.ie/en/publication/7bd8c-climate-action-plan-2023/>

Green F. Forthcoming. *Justice in Transition: What We Owe the Losers from Legal Change*. Unpublished book manuscript.

Green F, Gambhir A. 2020. Transitional assistance policies for just, equitable and smooth low-carbon transitions: who, what and how? *Climate Policy* 20: 902–21. <https://doi.org/10.1080/14693062.2019.1657379>

Green F, Kuch D. 2022. Counting Carbon or Counting Coal? Anchoring Climate Governance in Fossil Fuel–Based Accountability Frameworks. *Global Environmental Politics* 22 (4): 48–69. https://doi.org/10.1162/glep_a_00654

References

Grantham Research Institute on Climate Change and the Environment [GRI], Green Finance Institute [GFI] and Impact Investing Institute [III]. 2020. The Green+ Gilt: How the UK could issue sovereign bonds that deliver climate action and social renewal. https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/10/Green_Gilt_Proposal_October_2020.pdf

Gulrajani R, Bosworth J. No date. Budgets for climate, sustainability and social inclusion: A rapid review of approaches and tools. New York: UNICEF and UNDP. <https://www.unicef.org/documents/budgets-for-climate-sustainability-and-inclusion>

Gürtler K, Beer DL, Herberg J. 2021. Scaling just transitions: Legitimation strategies in coal phase-out commissions in Canada and Germany. *Political Geography*, 88: 102406. <https://doi.org/10.1016/j.polgeo.2021.102406>

H

Hauge-Eltvik A, Viggen K, Rønning F, Rønning-Birkelund H. 2021. LO-lederen vil holde miljøbevegelsen utenfor rådet for klimaomstilling. Her får hun tung motbør. frifagbevegelse.no/nyheter/lolederen-vil-holde-miljobevægelsen-utenfor-radet-for-klimaomstilling-her-far-hun-tung-motbor-6.158.831419.d0b10f478e.

Heffron RJ. 2021. The Advance of Just Transition Commissions. In *Achieving a Just Transition to a Low-Carbon Economy*: 43-85. Springer International Publishing, Palgrave Macmillan.

Higham C, Averchenkova A, Setzer J and Koehl A (2021) Accountability Mechanisms in Climate Change Framework Laws. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/accountability-mechanisms-in-climate-change-framework-laws/>

Houeland C, Jordhus-Lier DC, Angell FH. 2021. Solidarity tested: The case of the Norwegian Confederation of Trade Unions (LO-Norway) and its contradictory climate change policies. *Area*, 53(3): 413-421. <https://doi.org/10.1111/area.12608>

Howarth C, Bryant P, Corner A, Fankhauser S, Gouldson A, Whitmarsh L, and Willis R. 2020. Building a Social Mandate for Climate Action: Lessons from COVID-19. *Environ Resource Econ* 76: 1107–1115. <https://doi.org/10.1007/s10640-020-00446-9>

I

International Energy Agency [IEA]. 2021. Net Zero by 2050: A Roadmap for the Global Energy Sector. Paris: IEA. <https://www.iea.org/reports/net-zero-by-2050>

International Labour Organization [ILO]. 2015. Guidelines for a just transition towards environmentally sustainable economies and societies for all. Geneva: ILO Publications. https://www.ilo.org/global/topics/green-jobs/publications/WCMS_432859/

ILO. 2022. Social Dialogue Report 2022: Collective bargaining for an inclusive, sustainable and resilient recovery. Geneva: ILO Publications. <https://www.ilo.org/global/research/global-reports/social-dialogue/2022/lang--en/index.htm>.

ILO. 2023. Resolution concerning a just transition towards environmentally sustainable economies and societies for all. ILC.111/Resolution V. Geneva: ILO. https://www.ilo.org/ilc/ILCSessions/111/reports/texts-adopted/WCMS_886647/lang--en/index.htm.

Iser M. 2019. Recognition. In: *The Cambridge Habermas Lexicon* [ed. Allen A, Mendieta E]. Cambridge: Cambridge University Press.

J

Jacobs AM. 2016. Policy Making for the Long Term in Advanced Democracies. *Annual Review of Political Science* 19(1): 433–54. <https://doi.org/10.1146/annurev-polisci-110813-034103>

Jacobs AM, Matthews JS. 2012. Why Do Citizens Discount the Future? Public Opinion and the Timing of Policy Consequences. *British Journal of Political Science* 42(4): 903–35. <https://doi.org/10.1017/S0007123412000117>

Jacobs AM, Matthews JS. 2017. Policy Attitudes in Institutional Context: Rules, Uncertainty, and the Mass Politics of Public Investment. *American Journal of Political Science* 61(1): 194–207. <https://doi.org/10.1111/ajps.12209>.

Jaquet V. 2017. Explaining Non-Participation in Deliberative Mini-Publics. *Eur. J. Polit. Res*, 56, 640–659. <https://doi.org/10.1111/1475-6765.12195>

Just Rural Transition. 2023. Principles for Just Food System Transitions Envisioning a more equitable and sustainable future – and an inclusive path to achieving it. Washington, DC: Meridian Institute. <https://justruraltransition.org/resource/principles-for-just-food-system-transitions/>

Just Transition Initiative. 2021. A Framework for Just Transitions. Washington, DC: Centre for Strategic and International Studies. <https://justtransitioninitiative.org/a-framework-for-just-transitions/>

Just Rural Transition, UN Climate Change Conference UK 2021, World Bank Group. 2021. Compendium of Country Case Studies: Accelerating Transition to Sustainable Agriculture. Washington, DC: Meridian Institute. <https://justruraltransition.org/case-study/compendium-of-country-case-studies/>

Just Transition Research Collaborative. 2018. Mapping Just Transition(s) to a Low-Carbon World. United Nations Research Institute for Social Development. <https://www.unclearn.org/resources/library/mapping-just-transitions-to-a-low-carbon-world/>

K

KCI. 2023. Implementation of just transition and economic diversification strategies: a compilation of best practices from different countries. Bonn: UNFCCC. <https://unfccc.int/documents/624596>

King M, Padmanabhan C, Rose K. 2022. Public Engagement for Net Zero: A Literature Review. London: Centre for Public Impact, Calouste Gulbenkian Foundation UK Branch. <https://gulbenkian.pt/uk-branch/our-work/citizen-engagement-on-climate/>

Klenert D, Mattauc L, Combet E, Edenhofer O, Hepburn C, Rafaty R, Stern N. 2018. Making carbon pricing work for citizens. *Nature Clim Change* 8: 669–677. <https://doi.org/10.1038/s41558-018-0201-2>

Knowledge Network on Climate Assemblies. 2023. Ireland's Citizens Assembly. <https://knoca.eu/irelands-citizens-assembly/>

Kompetansebehovsutvalget. 2021. Norwegian Committee on Skill Needs: Mandate. <https://kompetansebehovsutvalget.no/mandate-of-official-norwegian-committee-on-skill-needs/>

L

Laan T, Roth J, Beedell E. 2021. Nordic Environmental Fiscal Reform Case studies and application for post-pandemic economic recovery. Policy Brief, IISD and Global Subsidies Initiative. Winnipeg: International Institute for Sustainable Development. <https://www.iisd.org/publications/nordic-environmental-fiscal-reform-post-pandemic-recovery>

Lacey-Barnacle M, Smith A, Foxon T J. 2023. Community wealth building in an age of just transitions: Exploring civil society approaches to net zero and future research synergies. *Energy Policy*, 172: 113277. <https://doi.org/10.1016/j.enpol.2022.113277>

References

Lamb WF, Antal M, Bohnenberger K, Brand-Correa LI, Müller-Hansen F, Jakob M, Minx JC, Raiser K, Williams L, Sovacool BK. 2020. What are the social outcomes of climate policies? A systematic map and review of the ex-post literature. *Environmental Research Letters*, 15(11): 113006. <https://doi.org/10.1088/1748-9326/abc11f>

Lee and Baumgartner. 2022. How Just Transition Can Help Deliver the Paris Agreement. New York: UNDP. <https://www.undp.org/publications/how-just-transition-can-help-deliver-paris-agreement>

Litz P, Graichen P, Peter F. 2019. The German Coal Commission. A Roadmap for a Just Transition from Coal to Renewables. Berlin: Agora Energiewende and Aurora Energy Research. <https://www.agora-energiewende.de/en/publications/the-german-coal-commission/>

M

Macfarlane L, Brett M. 2022. Community Wealth Building and a Just Transition to Net Zero. Oban: Community Land Scotland. <https://www.communitylandscotland.org.uk/resources/community-wealth-building-and-a-justtransition-to-net-zero/>

Manca L, Schreuder JH. 2022. The state of youth engagement in the implementation of the EU's Just Transition Mechanism. Generation Climate Europe and CEE Bankwatch Network. <https://bankwatch.org/publication/the-state-of-youth-engagement-in-the-implementation-of-the-eu-just-transition-mechanism>

Mariničová E, Pastorelli E, Apine L, Mrozek K, and Melichar J. 2023. Tackling Energy Poverty in EU Member States. Briefing. CEE Bankwatch Network. <https://bankwatch.org/publication/tackling-energy-poverty-in-eu-member-states>

Mason M. 2005. *The New Accountability: Environmental Responsibility Across Borders*. London: Earthscan.

Mazzucato M. 2022. Rethinking the social contract between the state and business: A new approach to industrial strategy with conditionalities. Working Paper Series (IIPP WP 2022-18). London: UCL Institute for Innovation and Public Purpose. <https://www.UCL.ac.uk/bartlett/public-purpose/wp2022-18>.

Mazzucato M, Ryan-Collins J. 2019. Putting value creation back into 'public value': From market fixing to market shaping. UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2019-05). <https://www.UCL.ac.uk/bartlett/public-purpose/wp2019-05>

McKinley S and McInroy N. 2023. Action guide for advancing Community Wealth Building in the United States. Shaker Hts., OH: Democracy Collaborative. <https://democracycollaborative.org/publications/community-wealth-building-action-guide>

Mella A, Werner E. 2023. Skills and Quality Jobs in Construction in the Framework of the European Green Deal and the Post-Covid Recovery. Brussels: International Trade Union Confederation, Just Transition Centre. <https://www.ituc-csi.org/more-than-two-million-workers-will-be-needed-in-the-construction-sector-in-europe-by-2030>

Mildenberger M. 2020. *Carbon Captured: How Business and Labor Control Climate Politics*. Cambridge, MA: The MIT Press.

Mildenberger M, Lachapelle E, Harrison K, Stadelmann-Steffen I. 2022. Limited impacts of carbon tax rebate programmes on public support for carbon pricing. *Nat. Clim. Chang.* 12 : 141–147. <https://doi.org/10.1038/s41558-021-01268-3>

Monnin P, Robins N. 2022. Supporting the just transition: a roadmap for central banks and financial supervisors. INSPIRE Sustainable Central Banking Toolbox – Policy Briefing Paper 10. <https://www.lse.ac.uk/granthaminstitute/publication/supporting-the-just-transition-a-roadmap-for-central-banks-and-financial-supervisors/>

Montmasson-Clair G. (2021). A policy toolbox for just transitions. Working Paper. Pretoria: Trade and Industrial Strategies. <https://www.tips.org.za/research-archive/sustainable-growth/green-economy-2/item/4152-a-policy-toolbox-for-just-transitions>

Muller S, Robins N (2022) Just Nature: How finance can support a just transition at the interface of action on climate and biodiversity. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/just-nature-finance-just-transition-climate-and-biodiversity-2022/>

Müllerová H, Balounová E, Ruppel O, Houston L. Forthcoming. Building the concept of just transition in law: Reflections on its conceptual framing, structure and content. *Environmental Policy and Law*.

N

Newell P. 2008. Civil Society, Corporate Accountability and the Politics of Climate Change. *Global Environmental Politics* 8(3): 122–153. <https://doi.org/10.1162/glep.2008.8.3.122>

Normann HE, Tellmann SM. 2021. Trade unions' interpretation of a just transition in a fossil fuel economy. *Environmental Innovation and Societal Transitions*, 40: 421-434. <https://doi.org/10.1016/j.eist.2021.09.007>

Nussbaum M. 2011. *Creating Capabilities: The Human Development Approach*. Cambridge, MA: Harvard University Press.

O

Oberthür S, Moore B, von Homeyer I, Söbech O. 2023. Towards an EU Climate Governance Framework to Deliver on the European Green Deal. Policy Options Paper. Brussels: Brussels School of Governance Centre for Environment, Economy and Energy. <https://brussels-school.be/publications/other-publications/towards-eu-climate-governance-framework-deliver-european-green-deal>

OECD. 2013. Guidelines on Measuring Subjective Well-being. Paris: OECD Publishing. <https://www.oecd.org/wise/oecd-guidelines-on-measuring-subjective-well-being-9789264191655-en.htm>

OECD. 2017. Recommendation of the Council on Open Government. Legal instrument/0438. Paris: OECD Publishing. <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0438>

OECD. 2020. Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave. Paris: OECD Publishing. <https://doi.org/10.1787/339306da-en>.

OECD. 2021a. Evaluation Guidelines for Representative Deliberative Processes. Paris: OECD Publishing. <https://doi.org/10.1787/10ccbfc4-en>.

OECD. 2021b. Green Budget Tagging: Introductory Guidance and Principles. Paris: OECD. <https://doi.org/10.1787/fe7bfcc4-en>

OECD. 2022. Financing SMEs for Sustainability: Drivers, Constraints and Policies. OECD SME and Entrepreneurship Papers, No. 35. Paris: OECD Publishing. <http://oe.cd/pub/4NT>

OECD. 2023. OECD Guidelines for Multinational Enterprises on Responsible Business Conduct – 2023 Edition. Paris: OECD Publishing. <https://mneguidelines.oecd.org/mneguidelines/>

P

Palmer J, Terry N. 2023. Finding the fuel poor and framing better policy. Oxford: Environmental Change Institute, University of Oxford. <https://www.eci.ox.ac.uk/article/finding-fuel-poor-and-framing-better-policy>.

Peters BG. 2018. The challenge of policy coordination. *Policy Design and Practice*, 1:1, 1-11. <https://doi.org/10.1080/25741292.2018.1437946>.

References

Platform for Coal Regions in Transition. 2019. Case study: RE:START-Strategy for economic restructuring of Czech coal regions. Brussels: European Commission. https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/knowledge-products/restart-strategy-economic-restructuring-czech-coal-regions_en

Proposal for a Regulation of the European Parliament and of the Council establishing the Just Transition Fund, Annex 1. 2020. COM/2020/22 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0022>.

Q

Quick KS, Bryson JM. 2022. Public Participation. In Ansell C, Torfing J [eds.], *Handbook on Theories of Governance*. Cheltenham: Edward Elgar.

R

Rentier G, Lelieveldt H, Kramer GJ. 2019. Varieties of coal-fired power phase-out across Europe. *Energy Policy*, 132: 620–632. <https://doi.org/10.1016/j.enpol.2019.05.042>

REScoop.eu, CEE Bankwatch Network and CAN Europe. 2023. Public Financing Opportunities for Energy Communities in Europe. Briefing. Antwerp: REScoop.EU. <https://www.rescoop.eu/toolbox/briefing-public-financing-opportunities-for-energy-communities-in-europe>

Rhodes M, 1998. Globalisation, Labour Markets and Welfare States: A Future of Competitive Corporatism? In *The Future of European Welfare: A New Social Contract*, eds. Rhodes M, Mény Y. London: Macmillan, pp. 178–203.

Robeyns I. 2017. *Wellbeing, Freedom and Social Justice: The Capability Approach Re-Examined*. Cambridge: Open Book Publishers.

Robins N, Muller S and Szwarc K. 2021. From the grand to the granular: translating just transition ambitions into investor action. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/from-the-grand-to-the-granular-translating-just-transition-ambitions-into-investor-action/>

Ross A, Curran B, Robins N, Nicholls M. 2023. Sowing seeds: How finance can support a just transition in UK agriculture. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/sowing-seeds-how-finance-can-support-a-just-transition-in-uk-agriculture/>

Ryan RM, Deci EL. 2001. On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52: 141–66. <https://doi.org/10.1146/annurev.psych.52.1.141>

Ryan RM and Deci EL. 2017. *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York: Guildford.

Ruppel OC, Houston LJH. 2023. The Human Right to Public Participation in Environmental Decision-making: Some Legal Reflections. *Environmental Policy and Law*, 53: 2–3. <https://doi.org/10.3233/epl-239001>.

S

Sanchez, F, Nykvist, B, Olsson, O, Linde, L. 2023. Lessons from Oil and Gas Transitions in the North Sea. SEI Report. Stockholm Environment Institute, Stockholm. <https://doi.org/10.51414/sei2023.041>.

Sælen H and Aasen M. 2023. Exploring public opposition and support across different climate policies: Poles apart?. *Ecological Economics*, 209: 107838. <https://doi.org/10.1016/j.ecolecon.2023.107838>

Saussay A, Sato M, Vona F, O’Kane L. 2022. Who’s fit for the low-carbon transition? Emerging skills and wage gaps in job ad data. Centre for Climate Change Economics and Policy Working Paper 406/ Grantham Research Institute on Climate Change and the Environment Working Paper 381. London: London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/whos-fit-for-the-low-carbon-transition-emerging-skills-and-wage-gaps-in-job-ad-data/>

Savaresi A, Setzer J, Armeni C, Kim B, Chan T, Keuschnigg I, Harrington AR, Heri C, Higham I, Hilson CJ, Luporini R, Macchi C, Nordlander L, Obani P, Peterson L, Schapper A, Ghaleigh NS, Tigre MA, Wewerinke-Singh M. 2023. Just Transition Litigation: A New Knowledge Frontier. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4561679

Sato M, Cass L, Saussay A, Vona F, Mercer L. 2023. *Skills and wage gaps in the low-carbon transition: comparing job vacancy data from the US and UK*. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/skills-and-wage-gaps-in-the-low-carbon-transition-comparing-job-vacancy-data-from-the-us-and-uk/>

Schockaert H. Report on the European legal and regulatory environment for energy communities and energy poverty. Brussels: REScoop.eu, Community Energy for Energy Solidarity [CEES]. <https://www.rescoop.eu/toolbox/legal-report-on-european-environment-and-regulatory-issues-related-to-energy-communities-and-energy-poverty>

Sen A. 1979. Equality of What? The Tanner Lecture on Human Value, 22 May. Stanford University.

Sen A. 1999. *Development as Freedom*. Oxford: Oxford University Press.

Setzer J and Higham C (2023) *Global Trends in Climate Change Litigation: 2023 Snapshot*. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/global-trends-in-climate-change-litigation-2023-snapshot/>

Skubida A, Sarna K, Binarová N, Gloawack K. 2023. How to break down the barriers to transformation. WiseEuropa and Impact Hub. Warsaw: WiseEuropa. <https://wise-europa.eu/en/2022/12/29/report-how-to-break-down-the-barriers-to-transformation/>

Smith G. 2023. Key Features of Climate Assemblies and Brief Guidance. Knowledge Network on Climate Assemblies. <https://knoca.eu/key-features-of-climate-assemblies/>

Soubeyran E, Choudhary K. 2023. Why do we need to accelerate the mainstreaming of gender into climate action? London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/news/why-do-we-need-to-accelerate-the-mainstreaming-of-gender-into-climate-action/>

Squalli Z, Unnikrishnan S, Mejri N, Dupoux P, George R, Zrikem Y. 2021. Why Climate Action Needs a Gender Focus. Boston Consulting Group. <https://www.bcg.com/en-ca/publications/2021/climate-action-impact-on-gender-equality>

Stanley MC, Strongman JE, Perks RB, Nguyen HBT, Cunningham W, Schmillen DA, McCormick MS. 2018. *Managing Coal Mine Closure : Achieving a Just Transition for All* (English). Washington, DC: World Bank Group. <http://documents.worldbank.org/curated/en/484541544643269894/Managing-Coal-Mine-Closure-Achieving-a-Just-Transition-for-All>

Stasiak D, Averchenkova A, Morán A, Renn O. 2021. How can the legitimacy and resonance of climate assemblies in wider society be ensured? Knowledge Network on Climate Assemblies Briefing No. 3. <https://knoca.eu/legitimacy-and-resonance-of-climate-assemblies-in-wider-society/>

References

Stępień M and Treadwell K. 2022. How can we assist you? What kinds of technical assistance do just transition regions really need? Briefing. Brussels: Beyond Fossil Fuels. <https://beyondfossilfuels.org/2022/07/05/how-can-we-assist-you/>

Stroud, D, Fairbrother, P, Evans, C, & Blake, J. (2014). Skill development in the transition to a 'green economy': A 'varieties of capitalism' analysis. *The Economic and Labour Relations Review*, 25(1): 10-27. <https://doi.org/10.1177/1035304613517457>

Szulecki K, Chitra A, Harald D, Houeland C, Jordhus-Lier D. 2021. Norwegian Oil and Gas Transition: Building Bridges Towards a Carbon Neutral Future. University of Oslo, Oil and Gas Initiative. <https://oilandgastransitions.org/resources/reports/norwegian-oil-and-gas-transition-building-bridges-towards-a-carbon-neutral-future/>

T

The Citizens' Assembly. 2018. Third Report and Recommendations of the Citizens' Assembly: How the state can make Ireland a leader in tackling climate change. <https://2016-2018.citizensassembly.ie/en/How-the-State-can-make-Ireland-a-leader-in-tackling-climate-change/Final-Report-on-how-the-State-can-make-Ireland-a-leader-in-tackling-climate-change/>

Transition Plan Taskforce. (2023). Disclosure Framework. UK Centre for Greening Finance and Investment, E3G. <https://transitiontaskforce.net/disclosure-framework/>

U

UN Climate Change Conference UK 2021. 2021. Supporting the conditions for a just transition internationally. <https://webarchive.nationalarchives.gov.uk/ukgwa/20230313132211/https://ukcop26.org/supporting-the-conditions-for-a-just-transition-internationally/>

UNCTAD [United Nations Conference on Trade and Development]. 2023. World Investment Report 2023. Geneva: UNCTAD. <https://unctad.org/publication/world-investment-report-2023>

UNDP [United Nations Development Programme]. 2022. Global Climate Public Finance Review. New York: UNDP. <https://www.undp.org/publications/undp-global-climate-public-finance-review>

UNFCCC [United Nations Framework Convention on Climate Change] (2015) Paris Agreement. 21st Conference of the Parties. Paris: United Nations. https://unfccc.int/sites/default/files/english_paris_agreement.pdf

UNHLEG [United Nations High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities]. 2022. Integrity Matters: Net Zero commitments by Businesses, Financial Institutions, Cities and Regions. Geneva: United Nations. <https://www.un.org/en/climatechange/high-level-expert-group>

UN OHCHR [UN Office for the High Commissioner on Human Rights]. 2011. Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework. New York and Geneva: United Nations. <https://www.ohchr.org/en/publications/reference-publications/guiding-principles-business-and-human-rights>

UN OHCHR. 2018. Guidelines on the effective implementation on the right to participate in public affairs. Geneva: OHCHR. <https://www.ohchr.org/en/documents/tools-and-resources/guidelines-effective-implementation-right-participate-public-affairs>

UN OHCHR. 2022. Good practices and challenges faced by States in using the guidelines on the effective implementation of the right to participate in public affairs. A/HRC/49/42. Geneva: OHCHR. <https://www.ohchr.org/en/documents/thematic-reports/ahrc4942-good-practices-and-challenges-faced-states-using-guidelines>

V

Valero A, Li J, Muller S, Riom C, Nguyen-Tien V and Draca M (2021) Are 'green' jobs good jobs? How lessons from the experience to-date can inform labour market transitions of the future. London: Grantham Research Institute on Climate Change and the Environment and Centre for Economic Performance, London School of Economics and Political Science. <https://www.lse.ac.uk/granthaminstitute/publication/are-green-jobs-good-jobs-how-lessons-from-the-experience-to-date-can-inform-labour-market-transitions-of-the-future/>

van Wijk J, Fischhendler I, Rosen G, Herman L. 2021. Penny Wise or Pound Foolish? Compensation Schemes and the Attainment of Community Acceptance in Renewable Energy. *Energy Research and Social Science* 81 (August): 102260. <https://doi.org/10.1016/j.erss.2021.102260>.

von Lüpke H, Leopold L, Tosun J. 2023. Institutional coordination arrangements as elements of policy design spaces: insights from climate policy. *Policy Sci*, 56: 49–68. <https://doi.org/10.1007/s11077-022-09484-0>.

W

Wang X, Lo K. 2021. Just transition: A conceptual review. *Energy Research & Social Science*, 82: 102291. <https://doi.org/10.1016/j.erss.2021.102291>

World Bank. 2021a. Supporting Transition in Coal Regions: A Compendium of the World Bank's Experience and Guidance for Preparing and Managing Future Transitions. Washington, DC: World Bank. <http://hdl.handle.net/10986/35323>

World Bank. 2021b. Climate Change Budget Tagging: A Review of International Experience. Equitable Growth, Finance and Institutions Insight - Governance. Washington, DC: World Bank. <http://hdl.handle.net/10986/35174>.

World Benchmarking Alliance [WBA]. 2021a. Just Transition Assessment 2021: Are high-emitting companies putting people at the heart of decarbonisation? London: WBA. <https://www.worldbenchmarkingalliance.org/research/2021-just-transition-assessment/>

WBA. 2021b. Just Transition Methodology. London: WBA. <https://www.worldbenchmarkingalliance.org/research/just-transition-launch-of-the-methodology/>

WBA and UNDP. Forthcoming. Moving from pledges to implementation: a guide for corporate just transition action.

Wuppertal Institute. 2022. Just Transition Toolbox for Coal Regions. <https://www.coaltransitions-toolbox.org/>

WWF [World Wide Fund for Nature]. 2022. SCF and ETS 2 impact studies: Evidence Review. Brussels: WWF. https://wwfeu.awsassets.panda.org/downloads/ets2_and_scf_studies_review_final__1_.pdf

WWF. 2023. Territorial Just Transition Plan Scorecard Assessment: Summary Report. Brussels: WWF. <https://www.wwf.eu/?9036866/Territorial-Just-Transition-Plan-Scorecard-Assessment>

Z

Zwar C, Edenhofer J, Ruzelyte V, Edmondson D, Flachsland C. 2023. Mapping variation in institutions for climate policymaking: Climate institutions in Germany, the United Kingdom, Sweden, and Australia. Potsdam: Kopernikus-Projekt Ariadne. <https://ariadneprojekt.de/en/publication/report-mapping-variation-in-institutions-for-climate-policymaking/>.



Just and robust transitions to net zero

A framework to guide national policy

The transition to net zero greenhouse gas emissions needs to be socially just and politically robust if it is to succeed. This report presents a framework to guide national policymakers to prepare a coherent programme for such a transition, with a principal focus on Europe.

Theoretically grounded and practically oriented, the report collects resources on national policy and law applicable to specific sectors and to the whole economy, synthesising examples of best practice highlighted by leading research. Its guidance is aimed at governments but also non-governmental organisations, labour unions, firms, international organisations and financial institutions. The report's focus is on Europe but the tools and guidance are generally applicable and should be of wider interest. It is designed to be a modular reference resource, with the main chapters each dedicated to one of five phases of the policy cycle, from planning and analysis through to monitoring and evaluation.

The report was produced by a consortium of research institutions from the UK, Norway, Czechia and Austria. It is an output of the three-year JUSTDECARB project (2020–2023).



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