

Advancing regional structural policy

Demands and starting points for an ecologically sustainable, forward-looking and transformative structural policy

This policy paper addresses the question of **why and how regional structural policy should be further developed in the face of far-reaching ecological challenges**. The paper and the underlying research project¹ focus on Germany. But the paper also aims to provide impulses for the EU, other EU Member States or third countries facing similar challenges.

The paper concentrates on three principles that need to be given greater consideration in future reforms of structural policy:

1. **ecological sustainability**, i.e. the promotion of business models and regional infrastructures that are climate and environmentally friendly or at least do not cause significant climate and environmental harm;
2. **anticipation (foresight, prevention)**, i.e. the aim of anticipating an imminent loss of economic strength and of quality of life in regions in the future and proactively avoiding this by promoting adaptation measures as early as possible; and
3. **a transformative ambition**, i.e. the realisation of an active contribution to the fundamental restructuring of socio-technical systems (e.g. the energy system) that are relevant for both climate (environmental) protection and the regional economy.

This policy paper focusses on the **German national funding system (GFS)**. Early in 2020, the majority of the programmes that had been used in Germany to support structurally weak regions were merged into the GFS. This brought the key structural policy instrument, the "Joint Task for the Improvement of Regional Economic Structures" (GRW), together with around twenty other funding programmes under the single umbrella of the GFS. To date, only some of the programmes in the GFS have an ecologically sustainable, forward-looking or transformative target dimension.

In addition to the GFS, the German Länder also implement numerous structural policy measures including EU programmes: The co-financed funding is primarily channelled through the EU structural and investment funds ERDF (European Regional Development Fund), ESF (European Social



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¹ The paper summarises interim results and considerations from the research project "Transformative reorientation of regional structural policy within the framework of the GFS" (FKZ 3723 14 103 0). This is being carried out on behalf of the German Federal Environment Agency (UBA) by the German Institute of Urban Affairs (Difu) together with the Öko-Institut and the Financial Research Institute at the University of Cologne (FiFo) (duration: November 2023 to September 2026). A more detailed description (in German) can be found in the published interim report (Heyen et al. 2024). The content will be further developed and specified over the course of the project.

Fund) and, since 2021, the JTF (European Just Transition Fund). These programmes are not the focus here, but some lessons can be learned from them in order to take the three principles mentioned above into account.

1 Why ecological challenges and regional structural policy must be considered together

Climate change is one of the greatest challenges of our time (IPCC 2023). At the same time, we need to adapt to the unavoidable consequences of climate change. However, other so-called "planetary boundaries", the ecological limits of the Earth, are also currently being exceeded or threatened to be permanently exceeded – e.g. with regard to biodiversity or land and water resources (Richardson et al. 2023). The UN Environment Programme and others speak of a **threefold environmental crisis: the climate crisis, the crisis of species extinction and the pollution crisis** (UNEP 2022).

In order to overcome these crises, it is necessary to transform unsustainable structures in the economic system and infrastructure, among other things. As a result, **many economic sectors are also under great pressure to change**. This can arise in two ways in the context of ecological challenges (cf. Heyen 2021):

- **On the one hand, as a direct consequence of ecological changes**, when sectors are vulnerable to megatrends such as climate change, resource scarcity or biodiversity loss. Examples of sectors with high vulnerability include agriculture, forestry and water management.
- **On the other hand, as a consequence of climate/environmental countermeasures** (and thus an indirect consequence of ecological challenges), if industries with resource- or emission-intensive production processes or products are affected by climate and environmental policy measures and possibly by the emergence of environmentally friendly alternatives. Examples include the fossil fuel industry, the automotive industry and energy-intensive industries (e.g. chemicals, steel, cement).

To many sectors both kinds of pressures apply, albeit to varying degrees. Industrial sectors, for example, can be affected by resource shortages and rising prices for emissions certificates at the same time.

In addition to ecological and environmental policy drivers, there are a number of other megatrends and challenges that are forcing structural change processes. These include, in particular, new technologies and business models (especially through digitalisation and artificial intelligence), demographic change and the increasing shortage of skilled workers, as well as geopolitical developments and dependencies in supply chains.

The transition to a climate- and resource-friendly economy is expected to have **an overall positive impact on prosperity and employment** (e.g. ILO 2018; Lehr et al. 2019; Mönnig et al. 2021). However, **in certain sectors or value chains** (e.g. fossil fuel industry, automotive industry), there may **also be short- or long-term employment losses**. **Cities and regions that are characterised by such industries can be disproportionately affected by structural change** (e.g. Heider et al. 2023; OECD 2023; Südekum and Rademacher 2024).

The societal support for a politically promoted ecological structural change in regions will largely depend on the extent to which structural policy measures can **proactively counteract negative social and economic developments and utilise the opportunities of a green**

economy. In the past, structural disruptions, such as those that occurred in East Germany after reunification, have often led to a negative spiral. For example, the loss of jobs and income opportunities in the Eastern Länder after 1990 led to an exodus of younger and well-educated people in particular, as well as an increase in municipal expenditure on social security services. The parallel decline in the value of commercial and private property and the dismantling of social infrastructures was in turn accompanied by a sense of loss of identity. Structural upheavals already experienced by the population fuel fears of change and can make people susceptible to populist messages (Amlinger and Nachtwey 2023; Mau et al. 2023).

Structural policy must therefore support regional economic adjustments that are more focussed on the major ecological challenges than in the past, while at the same time maintaining or expanding value creation and employment in the regions across sectors.

The more regionally concentrated an industry is and the more profound its change or even decline, the more the affected regions need structural policy support from the federal government, the Länder and possibly the EU.

This also has the support of the population in Germany: a representative survey from 2024 shows

- ▶ 83 % of respondents are in favour of funding programmes that help companies switch to climate-friendly production processes and products;
- ▶ 85 % are in favour of financial support for affected regions and municipalities receiving;
- ▶ 83 % are in favour of actively attracting new industries there (Detsch 2024).

Together with other pillars of structural and industrial policy, the GFS can play a key role here in the future. To this end, ecological and transformative goals should be anchored more firmly in the funding system without restricting its ability to act – in fact, they must improve it. The ecological modernisation of regional policy can only succeed if it clearly addresses the – often already high – bureaucratic burdens for local companies and other funding recipients. A forward-looking, ambitious funding policy must also be modernised to the extent that it reduces obligations to provide evidence and other administrative burdens to the necessary minimum. Ecological and transformative regional policy will always be as effective as it is locally accepted.

2 Principles and starting points for the improvement of regional structural policy

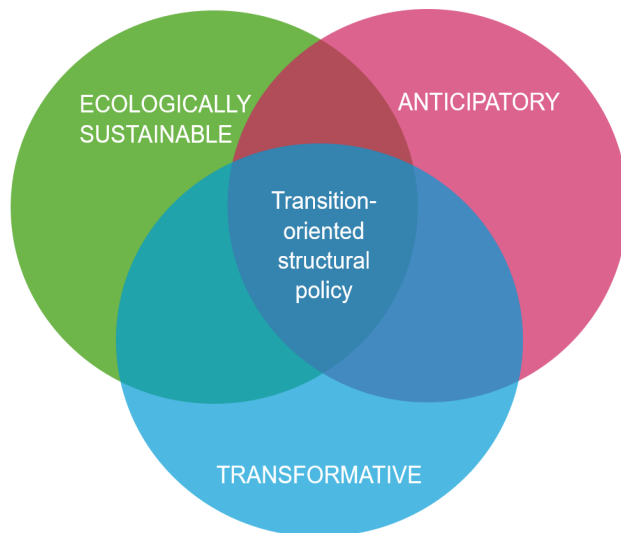
In order to make a relevant contribution to the adaptation of the economy and regions to ecological challenges, the GFS should be further developed – with a view to three requirements or principles:

1. **Ecological sustainability,**
2. **Anticipation (foresight, prevention),**
3. **Transformative ambition.**

The three principles are not fundamentally new. However, they have so far been anchored in the GFS and in structural policy practice only in certain areas. These requirements are not intended to replace the existing economic and social objectives and principles of regional structural policy, but rather – where possible – to supplement them. Economic and labour market policy effectiveness, the development of structurally weak areas and the goal of equal living conditions as well as the efficient use of funds remain of central importance – also in the spirit of an holistic understanding of sustainability.

The three principles overlap but are discussed here one after the other for the sake of analytical clarity. The overall aim is to **combine the three principles into what we call transition-oriented structural policy** (see Figure 1).²

Figure 1: Principles of a transition-oriented structural policy (in addition to classic economic and social policy objectives / principles)



Source: Heyen et al. 2024.

Structural policy is **ecologically sustainable** if it promotes climate and environmentally friendly business models and infrastructure or at least does not cause significant climate and environmental damage ("*do no significant harm*", DNSH principle). In principle, two complementary approaches are conceivable:

- ▶ The explicit dedication of funding for ecologically beneficial purposes ("**earmarking**"), such as the promotion of renewable energy supply in industrial estates;
- ▶ The consideration of ecological (exclusion) criteria in the allocation of funding that pursue other primary objectives, such as the general consideration of climate impacts in all funding decisions ("**mainstreaming**").

A mixed variant of the two approaches is the granting of higher subsidy rates for projects that take certain ecological criteria into account.

In recent years, ecological and, above all, climate policy objectives and criteria have occasionally been anchored in regional structural policy – for example in the GRW and urban development programmes. However, the extent to which the individual programmes take environmental aspects into account varies greatly within the GFS. For example, the GFS programmes "*Digital Jetzt*" (Digital Now), "*Überbetriebliche Berufsbildungsstätten*" (joint vocational training centers) and the "*Großbürgerschaftsprogramm*" (programme for large guarantees) take no or at best only indirect account of environmental aspects. An initial evaluation across all programmes shows that the **ecological focus of the GFS** seems to **warrant further improvement** (Heyen et al.

² In the further course of the UBA project on which this is based, the social dimension will also play an important role in the analysis of the JRC as well as in the recommendations for action, entirely in the spirit of a "*Just Transition*".

2024). In comparison, the ecological focus of EU structural policy is more advanced (cf. Schubert 2023).

Two target systems appear to be particularly suitable as an orientation and basis for operationalising the principle of ecological sustainability, due to their thematic breadth of environmental aspects, their long-term orientation and their existing broad political anchoring: on the one hand, the *Sustainable Development Goals (SDGs)* of the 2030 Agenda, respectively their focused selection in the German Sustainable Development Strategy (Federal Government 2021, 2024a); on the other hand, **the EU taxonomy** for defining environmentally sustainable economic activities³. The taxonomy stipulates that a significant contribution must be made to at least one of six defined environmental goals – and at the same time none of the other goals may be significantly contravened (DNSH principle).

When further specifying the criteria and indicators of ecological sustainability in the GFS programmes, it must be clarified, among other things, which environmental aspects are to be considered and what the relationship between "*earmarking*" and "*mainstreaming*" should be.

An **anticipatory** structural policy is one that attempts to anticipate an impending future loss of economic power and quality of life in regions and proactively avoids those by promoting adaptation measures at an early stage.

With a view to ecological aspects, an anticipatory structural policy can refer to two things, analogous to the above-mentioned drivers of structural change:

- ▶ Firstly, to the **future consequences of ecological megatrends** such as climate change, biodiversity loss and resource scarcity: a forward-looking structural policy would support **the early adaptation of business models and regions to these consequences** through measures that reduce vulnerability or increase resilience, e.g. through climate adaptation measures or measures to increase resource efficiency.
- ▶ Secondly, the **future effects of climate and environmental policy measures** (such as an increasing CO₂ price): A forward-looking structural policy would aim to **adapt (regional) economic structures** to the expected framework conditions **at an early stage**, e.g. by promoting efficiency measures or a more far-reaching transformation of emission- or resource-intensive economic structures, with corresponding qualification requirements for employees.

As part of an anticipatory structural policy, care should also be taken to **ensure that no (new) unsustainable development paths** are taken as a result of **support measures**. This is where the principle of ecological sustainability comes into play again.

Even though there have been discussions about a forward-looking or "precautionary" structural policy since the 1970s (cf. Gärtner 2021), the **regional structural policy currently practised is still primarily reactive by remedying shortcomings and thus focussing on past developments**. There are exceptions in the sense of preventive adaptation to ecological megatrends, at least in the area of climate adaptation, especially within the framework of the GFS programme "Joint Task for the Improvement of Agricultural Structures and Coastal Protection" (GAK). With a view to regional economic adaptation to an intensified climate policy, especially lignite regions and centres of the automotive industry are currently being supported.

³ See https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en (last checked on 09.09.2024).

However, these exceptions are essentially located outside the GFS – precisely because the funding system does not (yet) offer enough room for such forward-looking regional policy.

In order to realise the principle of anticipation, a manageable number of **practicable indicators** are needed that provide **indications of future changes or vulnerabilities** to ecological megatrends and to climate and environmental policy countermeasures. This foresight must take place on two levels:

- On the one hand, **at sectoral level** with a view to sectoral funding priorities: Which sectors are particularly affected and in need of support?
- On the other hand, **at regional level** with a view to the funded area and regional funding priorities: Which regions are particularly affected?

There are already a number of studies on both levels (e.g. Heider et al. 2023; Hünecke et al. 2022; Kempermann et al. 2021; OECD 2023; Rodríguez-Pose and Bartalucci 2023), although most of them are limited to the vulnerability to climate change and climate policy.

When considering regional funding priorities, the **resilience (adaptability) of regions** must be **analysed** in addition to their regional impact. A large number of different criteria are used in various studies to analyse regional resilience.⁴ Some of these indicators can also be found in the German Federal Government's report on equivalent living conditions (Bundesregierung 2024b).

In the context of a further development of the GFS, it is necessary **to discuss which vulnerability and resilience criteria are best suited as a basis – and what this means for the funded areas**. This is because not all regions that are vulnerable with regard to upcoming transition challenges are currently part of the GFS funding area (cf. Heider et al. 2023).

Finally, **transformative** is a structural policy when it makes an active contribution to the fundamental change of socio-technical systems (e.g. the energy system) that are relevant for climate and environmental protection as well as for the regional economy. This can be achieved, for example, by promoting disruptive innovations or phase-outs from established **infrastructures and technologies**. Strengthening interfaces and synergies between different socio-technical systems ("**sector coupling**") can also play an important role in transitions. Procedural approaches that are important for transition processes, such as the **promotion of stakeholder networking, vision-building processes and real-world laboratories** for testing social, technical or regulatory innovations (cf. Wolff et al. 2018), can also be elements of a transformative structural policy.

Many of today's structural policy programmes promote investment in new technologies and business models. However, this is not necessarily associated with a transformative ambition. Only in the last few years, funding for structural policy was specifically targeted for transformation processes contributing to climate policy goals – particularly in the support of German lignite regions in the course of the coal phase-out which involves a relatively far-reaching reorganisation of regional economic structures. However, the funding objects and criteria of the respective Länder are again quite traditional in nature.⁵

⁴ These include: economic diversity, number of start-ups and patents, investment rate of industry, education and training level of employees, population/migration balance, proportion of unemployed people, transfer recipients, young adults and foreign skilled workers, purchasing power, local infrastructure and transport connections, municipal debt and investments (Arndt et al. 2022; Heider et al. 2023; Hennicke 2021; Kempermann et al. 2021).

⁵ See e.g. with regard to NRW: <https://www.efre.nrw.de/europaeische-kohaesionspolitik-ab-2021/efrenrw-2021-2027/just-transition-fund>; <https://www.efre.nrw.de/europaeische-kohaesionspolitik-ab-2021/efre/jtf-programm-nrw-2021-2027-1/auswahlkriterien> (20.03.2024)

There is still a particular need for development and discussion regarding the operationalisation of a transformative ambition within structural policy. Here, it may be possible to learn from international cooperation, where criteria for transformative change or **transformative project design** have been developed (GEF 2017; Kehrer 2020). These criteria include transformative relevance and ambition, i.e. the extent to which interventions contribute to the desired (socio-technical) system change, the spread of disruptive innovation and the increasing resilience of the new system.

3 Conclusion and outlook



In view of the ecological and climate policy challenges, parts of regional economies and infrastructures must also be fundamentally transformed in the coming years and decades. With a significantly stronger integration of the three principles discussed here (ecological sustainability, anticipation and transformative ambition), the GFS could make a significant contribution to this.

For the operationalisation and implementation of an ecologically sustainable, anticipatory and transformative structural policy within the framework of the GFS, some challenges need to be taken into account when undertaking a reform. In addition to the aforementioned definition of suitable funding criteria and indicators, these challenges include an increased number and complexity of objectives and criteria, the scope and consistency of funding as well as challenges in implementation (Heyen et al. 2024).

How these challenges can be met is to be determined in the course of the UBA project "Transformative reorientation of regional structural policy within the framework of the GFS", which also provided the framework for the preparation of this paper. With a view to limiting complexity, administrative burdens, incoherence and funding needs of the programmes, questions of priority setting, untapped efficiency potentials and scope for simpler implementation have to play a central role.

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