FORESIGHT FOR THE CLIMATE PROTECTION

Ability of politicians to act

Climate protection in the era of the polycrisis

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Wörlitzer Platz 1
06844 Dessau-Roßlau
Tel: +49 340-2103-0
Fax: +49 340-2103-2285
buergerservice@uba.de
Internet: www.umweltbundesamt.de

/umweltbundesamt.de
/umweltbundesamt
/umweltbundesamt
/umweltbundesamt

Study conducted by:

Fraunhofer Institute for Systems and Innovation Research ISI
Breslauer Str. 48
76133 Karlsruhe, Germany

Authors:
Simone Kimpeler, Lorenz Erdmann
Fraunhofer Institute for Systems and Innovation Research ISI

With the collaboration of
Katja Hünecke, Öko-Institut
Rebecca Keilhauer, Petra Sandker
Fraunhofer Institute for Systems and Innovation Research ISI
Frauke Röser, New Climate Institute

On behalf of the Federal Ministry for Economic Affairs and Climate Action, BMWK, Berlin

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Sylvia Veenhoff

Design:
Jenny Habermehl

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Foresight for the climate protection

ABILITY OF POLITICIANS TO ACT

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Klimascan project — results of an analysis of key trends and the opportunities and risks they present for climate policy

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List of abbreviations

Abbreviation	Explanation
BMWK	Federal Ministry for Economic Affairs and Climate Action, Berlin
CCS	Carbon capture and storage
CDR	Carbon dioxide removal
CO_2	Carbon dioxide
EKBG	German Act on the Maintenance of Substitute Power Stations
EU	European Union
AI	Artificial intelligence
SME	Small and medium-sized enterprises
KSG	German Federal Climate Change Act (Klimaschutzgesetz)
GHG	Greenhouse gas
UBA	German Environment Agency
USA	United States of America

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1. The ability of politicians to solve problems

Background

Russia's war of aggression on Ukraine, which began in 2022, is still ongoing and Trump has been reelected for a second term in the USA. Transatlantic partnerships in security and economic policy that have endured for many decades are being questioned. At the same time, there are shifts in the global balance of power that are having consequences for trade and global supply chains, international institutions and efforts to protect the climate around the world. The German economy is suffering from economic and structural weakening and price increases, while a shift to the right and social disparities within society are very evident. At the same time, climate change continues at pace and its consequences in the form of extreme weather events are increasingly being felt here in Germany as well. The simultaneous occurrence of various critical developments that can also exacerbate one another is summarized under the term "polycrisis". The polycrisis as a diagnosis of our times defines the picture of today's challenges for society and politicians.

In an era of polycrisis, the ability of politicians to act in Germany will be key to strengthening the resilience of society and the economy and will be a major challenge in the decades to come.

Against this backdrop, the question to be asked is: Which trends are changing the requirements and scope for politicians to act — and what direct or indirect impact are they having on climate protection? What is the resulting need for action in terms of climate policy?

The project

The German federal government is aiming to achieve a 65 percent reduction in greenhouse gas emissions in Germany by 2030 and an 80 percent reduction by 2040. The goal is to achieve greenhouse gas neutrality by 2045. At the heart of this goal is the German Federal Climate Change Act (Klimaschutzgesetz, KSG), which sets binding national climate targets. To meet the requirements of the Act, a comprehensive climate protection program was agreed in each of the years 2019 and 2023, containing measures for the energy sector, industry, buildings, transportation and agriculture. Further efforts are needed to achieve the transformation in the area of climate protection across society as a whole within the planned time frame. Against this background, the goal of the Horizon scanning of developments relevant to climate protection project (or "Klimascan" for short) is to identify developing trends that present new opportunities or challenges for climate protection or the transformation to climate neutrality. Trend signals are consolidated into overarching emerging issues for climate protection policy and cross-departmental needs and options for action are identified. In the individual project phases, employees from various federal ministries were involved in future and strategy workshops alongside experts in the individual trends.

The project was commissioned by the Federal Ministry for Economic Affairs and Climate Action (BMWK) in cooperation with the German Environment Agency (UBA), and was conducted by the Fraunhofer Institute for Systems and Innovation Research ISI in cooperation with the Öko-Institut and the New Climate Institute. The results will be published in the Foresight for climate protection series by the German Environment Agency (UBA).

This in-depth study focuses on five developments and trends in the economy and society that have a particular influence on the ability of politicians to act in an era of polycrisis and, associated with this, on the opportunities or risks for climate protection and the success of the transformation:

1. Diagnosis of our times: global polycrisis
2. Increasing fragmentation in society
3. Structural transformation of the public: from mass media to micro-publics
4. Transformation governance is increasingly reaching its limits
5. New governance approaches: more digital, more polycentric, more transformative

These trends were identified as part of the Klimascan project (see box below) as the relevant developments and trends because they have a significant impact on the ability of politicians to act — and therefore also on the scope to implement climate protection through policy.

Structure of the brochure

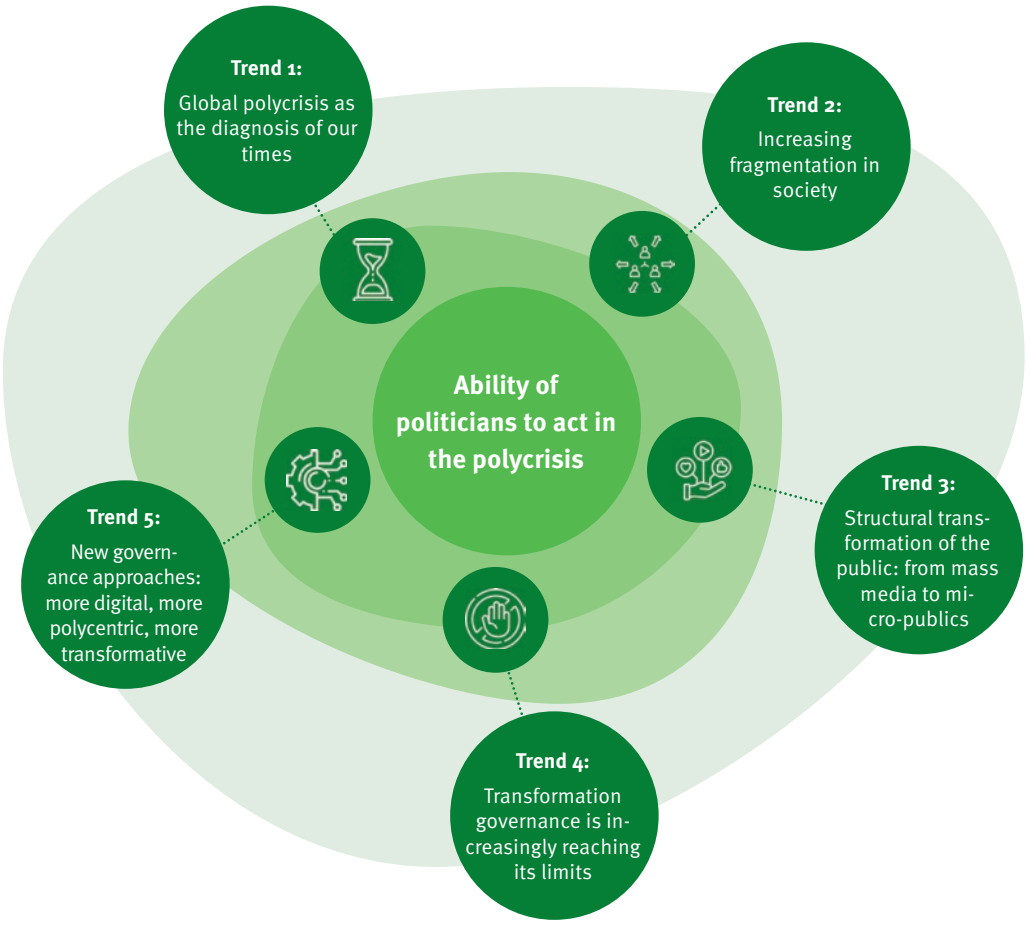
The brochure starts by introducing five trends that influence the ability of politicians to act in the polycrisis. The trends will then be escalated in the form of a mini-scenario that highlights just one possible development and analyzed to identify the opportunities and risks they present for climate protection (section 2). The resulting overarching need to take political action to strengthen the ability of politicians to act within climate protection policy will then be highlighted, and four high-priority areas for action for climate protection policy over the coming years will be discussed (section 3).

2. What's new? Five trends impacting climate protection

The German federal government is legally obliged to comply with the goals and specifications of the German Federal Climate Change Act (Klimaschutzgesetz, KSG) and implement its amendments.

The most recent projection data for 2025 indicates, with regard to achieving the climate target by 2030, over-achievement of the target by a current cumulative total of 81 Mt. CO_2 equivalents (Wehnemann et al., 2025). The reason for the target being exceeded is that the persistent target shortfalls in the transport and building sectors are being compensated for by over-achievement in other sectors (such as the energy sector). A review by Germany's Council of Experts on Climate Change (Expertenrat für Klimafragen, ERK) was not yet available at the date this publication went to press. However, the measures adopted so far on the basis of the projection data from last year (2024) have not yet been sufficient to achieve the target, as the Council of Experts on Climate Change has highlighted (Expertenrat für Klimafragen, 2024). It states that, with the existing instruments for the 2024 projection data, the overarching goal of reducing annual greenhouse gas emissions by 2030 will be narrowly missed, and equally the national obligations under the European Effort Sharing Regulation (ESR) may not be met from 2024 onward (ibid.). The ESR shortfall based on the projection data actually indicates an increase of 126 Mt. CO_2 equivalents to 226 Mt. CO_2 equivalents by 2030. To stay on track to meet the overall goal of the KSG and make up the ESR shortfall, additional efforts and measures will be required, both for specific sectors and across all sectors. The Council of Experts on Climate Change expects the new German federal

Figure 1: Trends influencing the ability of politicians to act and climate protection



Source: Fraunhofer ISI

government to "present a climate protection program within the first twelve calendar months" (Ließmann, 2025), as is also envisaged in section 9 (1) KSG.

However, the current geopolitical, economic and social developments present a more difficult general climate for remaining on track in climate policy.

In this situation with multiple crises that are all having an impact on each other, some of the previously unresolved conflicting goals between German climate protection policy and other policy areas are becoming increasingly stark. The consequence of this is that citizens are less satisfied with politics as a whole and have less trust in the government's ability to take action. There is a risk that policy goals will be played off against each other and that acceptance of climate protection policy measures will decline.

This section describes five selected trends that could hinder or improve politicians' ability to act in general — and therefore also to implement climate protection policy (Fig. 1).

2.1. Diagnosis of our times: global polycrisis

The term polycrisis is a term that is currently often used to diagnose the politics of our times. It describes the complex correlations between the effects of the pandemic, the war in Ukraine and climate change with further critical developments that are influenced by them (Lawrence et al., 2024; Pinzler, 2024). Polycrisis is defined as a situation in which various critical events that mutually influence each other all occur at once (Tooze, 2022). One crisis triggers or can exacerbate another, which means that the impacts are greater than the sum of the effects of individual crises occurring at the same time (Rockström et al., 2024). One refers to a global polycrisis when events combine with long-standing issues to have an impact on different systems and disrupt the interactions between them, e.g., through domino effects or intersystemic feedback effects (Lawrence et al., 2024). It is the "causal entanglement of crises in multiple global systems in ways that significantly degrade humanity's prospects" (Lawrence et al., 2022).

Current facts and figures

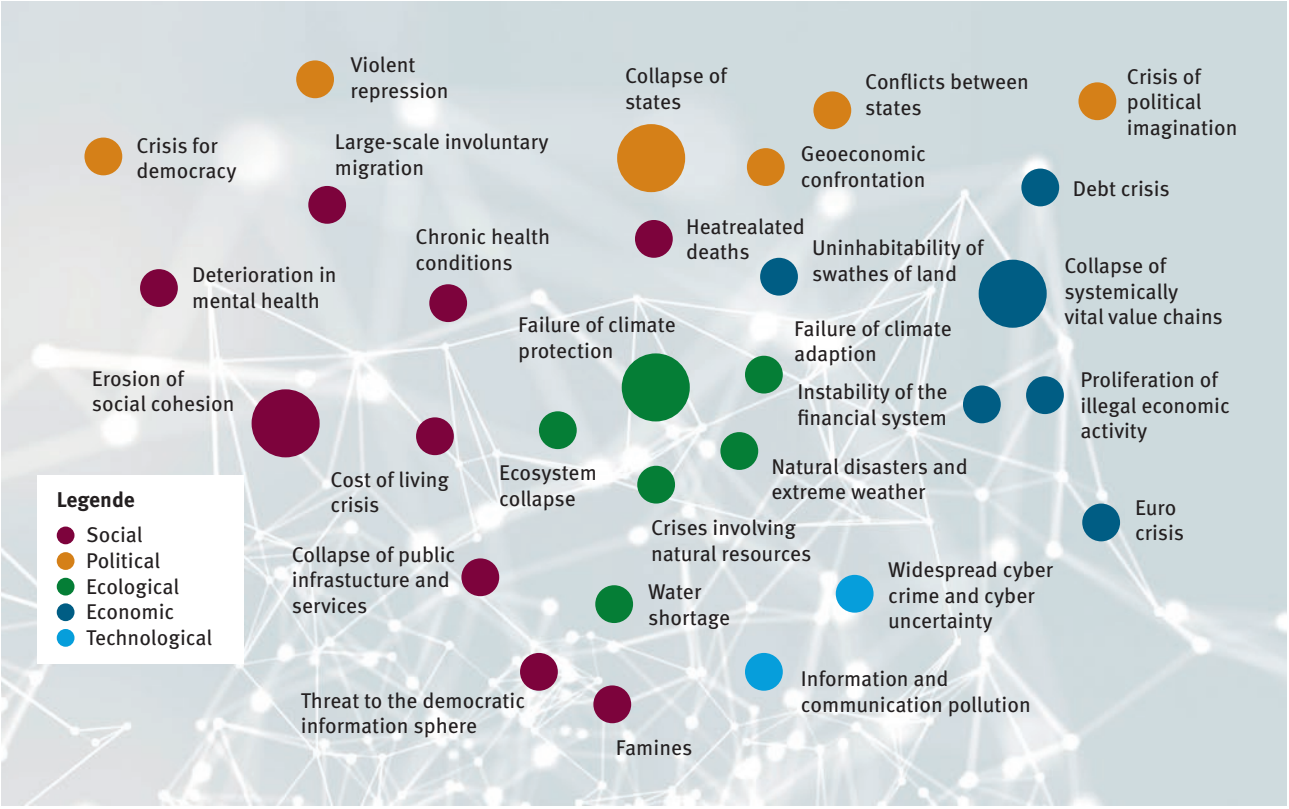
Since the pandemic, followed by Russia's war of aggression in Ukraine, our world has been "in turmoil" (Münkler, 2024). Both events have had complex repercussions for global supply chains (BMWK, 2022; Interos.AI, 2022). There has been a particular impact on the automotive industry, food, medicines (Mirchandani, 2020), raw materials for industrial production (Güßgen & Stölzel, 2024) and the construction industry (Bau Industrie, 2022), as well as gas and oil (ZDFheute, 2024). This has led to price increases around the world, including here in Germany (Pinzler, 2024). Among the latest events that have helped to intensify the polycrisis are the policy changes in the USA under the Trump administration: questioning the long-standing security umbrella for Europe and military support for Ukraine or import tariffs as a means of exercising power (Bohrn & Walkenhorst, 2024). A polycrisis is difficult to define because of its diffuse complexity. In the midst of a polycrisis, there are hardly any overarching empirical analyses. Depending on one's perspective, there are therefore different views on who or what caused the individual elements of the crisis and how they could be overcome (HAdW, 2025).

What's changing?

In the current polycrisis, levels of uncertainty in relation to energy supply, economic stability and price trends, global supply chains and the ability of Europe and Germany to defend themselves are increasing (Brosig, 2025). The supply bottlenecks caused by this complex amalgamation of crises have highlighted the correlations between climate protection and Europe's resilience when it comes to the security of its resources, supply chains and defense (EEA, 2023). This was made clear by the speech that US Vice-President Vance gave at the Munich Security Conference in January 2025 (MSC, 2025). It highlighted the shifts in global power relations and geoeconomic conflicts with consequences for the climate and environment. These developments demand prompt political responses, in the first instance primarily in economic, energy and finance policy and also in foreign and defense policy — in close collaboration with Germany's partners in Europe. The political pressure to act is shifting the priorities within the political agenda, so there is a risk that long-term goals such as climate protection and the transformation of the economy will be neglected.

Figure 2 shows an overview of the currently interlinked events with the potential to create a polycrisis.

Figure 2: Interlinked critical events in the polycrisis



Source: Fraunhofer ISI and Öko-Institut, own illustration

Germany's Research Institute for Sustainability (RIFS, 2024) lists five features of polycrises that can be applied to the current situation globally. They comprise

1. the additional damage that a polycrisis can cause,
2. the great variety of causes,
3. deeper uncertainty regarding future developments,
4. the systemic context of the multiple crises, and
5. the inadequacy of established frameworks, institutions and practices for managing the interactions between crises.

These criteria are reflected in the current manifestation of the polycrisis, as the following development trends show.

- Concentration of crises: global events meet creeping crises

Developments since the COVID-19 pandemic have highlighted the close systemic correlations between healthcare, global supply chains, social cohesion, economic development, energy supply, the impacts of extreme weather events and other areas. Each area already has its own inherent challenges, such as an urgent need for systemic reforms or investments in infrastructure, which are being further exacerbated by the emergence of new crisis events. This means that the sum total of the causes of new crises and the risks of potential damage is increasing overall (see Fig. 2). Interacting crises of this nature cannot be attributed to individual causes, but rather arise from complex

causal interactions that demand multi-layered responses. This increases the pressure on politicians to take appropriate action to address the different aspects of the polycrisis.

- A state of permanent crisis and uncertainty is becoming normal

The perceptions of global and homemade elements of crises overlap. The latter include dysfunctional public infrastructure (e.g., Deutsche Bahn), a lack of investment in digitalization (e.g., failures to comply with the German Online Access Act (Onlinezugangsgesetz, OZG)), emerging shortcomings within education (e.g., a shortage of teachers in the short to medium term), and — in the minds of some of the population — an immature climate protection policy (e.g., presentation of the German Building Energy Act (Gebäudeenergiegesetz, GEG), cuts to subsidies for agricultural diesel). This overlap and repeated focus on crises can lead to a state of permanent crisis becoming normalized. The particular complexity of a polycrisis means it also throws up a high degree of uncertainty regarding what measures are best suited to solving problems, their effects and the expected material and immaterial costs for society and the state (HAdW, 2025). The complex interrelationships make it difficult for policymakers to identify where action needs to be taken and foresee the potential consequences and costs. This can lead to dissatisfaction with political decisions.

- Global systems are increasing dependencies and therefore risks

The globalization of value creation has seen companies relocate many production steps to faraway countries (Jackson & Shepotylo, 2024). They benefit from reduced costs through trading partnerships, the availability of raw materials and lower local labor costs, or even from being closer to sales markets, which means shorter transport times and lower transport costs. However, the increasing distribution and complexity of supply chains also makes companies dependent on suppliers, market regulation and trade tariffs. In the midst of the polycrisis, geopolitical and geoeconomic tensions are rising and global trade is becoming more volatile. Greater dependencies and having less control of their own supply chains present a higher risk for companies overall (Elsner et al., 2025).

- System complexity hampers crisis managementt

One driver of the global polycrisis is the growing complexity of the interlinked global systems. Once one system comes under stress, it can also have an impact on other systems. This is why to understand and tackle the polycrisis, the approach in developing the right measures also needs to encompass all systems. This hampers crisis management (HAdW, 2025)

- Global polycrisis overwhelms society and feeds populism

Interactions between crises and interdependencies between systems in the crisis may overwhelm people's ability to understand the causal relationships. The interdependencies are difficult to predict and it is hard to anticipate the consequences to a sufficient degree. This may trigger stress and a sense of feeling overwhelmed in the population. Although people recognize that the crisis exists, they find it hard to link it to their own actions (Lanzke, 2024). If they feel overwhelmed, this can increase the burden on their mental health (Frick et al., 2022) and in the long run the sense of feeling overwhelmed can manifest itself in crisis fatigue (Götze, 2024). This may increase the level of uncertainty within society and weaken confidence in the ability of political actors to take action (Edelman Trust Institute, 2025).

How might the polycrisis have escalated by 2040?

The struggle for global dominance between autocratic systems of government and democracies and the deterioration in the conditions people are living in as a result of climate change will be a constant source of acute conflict situations that manifest themselves in complex alliances of interests and hybrid forms of confrontation. Cyber attacks, disinformation campaigns and acts of sabotage on critical infrastructure such as the power supply, water networks or digital communication networks will now be part of everyday life.

It is possible that by 2040 Germany will be subject to direct military attack or be caught up in military conflicts, whether they are as a result of regional escalations within Europe or triggered by global tensions with unpredictable autocrats. The world will no longer be divided into two large blocs. Instead, multiple, interest-driven alliances will have been created to gain access to critical resources like drinking water, rare earths or strategic transport hubs. These alliances will only partially overlap and their stability will vary from one case to another. As a result, Germany will maintain strategic alliances with various countries around the world for whom climate protection is not a priority. Extreme weather events and the collapse of ecosystems will have serious consequences around the world, such as migration from the Global South to Germany and Northern Europe, but also within Europe. There will be a great increase in social tensions.

The constant disruption to the supply of raw materials will place the economy in Europe under severe pressure. Germany's national budget will be chronically overburdened by falling tax revenues, a high level of national debt, increasing social expenditure and the consequences of demographic change. This will mean a shortage of funds to invest in upgrading the decaying transport and supply infrastructures that have been destroyed by frequent extreme weather events. As a consequence, private aid organizations and civil-society initiatives will take on state tasks relating to supply and safeguarding security. However, this will be done in a fragmented way and only in the regions that can organize a coordinated approach, which will lead in turn to new social conflicts over resources, priorities and responsibilities.

- What is the relevance for climate protection?

In this complex situation, climate change and its consequences will compete for attention and political priority with other events and critical developments. What will it mean for climate protection if crisis normality becomes established within politics and hampers the implementation of measures to protect the climate? What will it mean if the requirements of parallel crises are not taken into account and the level of resilience to crises is weakened further?

- Less room for maneuver for climate protection policy

The polycrisis as a global challenge is hitting Germany in the midst of the transformation to achieve climate neutrality. The war in Ukraine and the threatened loss of the transatlantic security umbrella is demanding higher spending on defense. The consequences of climate change, especially extreme weather events such as floods, heat waves and droughts, will cause losses that become increasingly expensive. Large sums of money are needed to reduce the backlog in investment in infrastructure, and we are still very much in the middle of the energy transition and transport transition (Kimpeler & Marquardt, 2025). Political measures to combat the immediate impacts of the polycrisis such as price rises, a shortage of medications or a threat to jobs are the priority and will take up political and administrative resources and capacity. Previous political consensus on the urgent need for ambitious climate protection programs may be called into question (UBA & BMUV, 2023). This reduces the room for maneuver in implementing long-term climate protection measures. One example of this is the effect that many large companies in the USA are currently abandoning their originally ambitious climate targets, just as the Trump administration wants them to (Halper & Spring, 2025).

- Climate protection loses out in agenda setting?

It is not just that the human and financial resources required in the political sphere are becoming scarcer, but the level of public attention and perception of the continuing urgent need to do something to protect the climate is also diminishing in the polycrisis. Agenda setting is where certain topics are the focus of (media) reporting. It is influenced, among other things, by events that occur and the selection of topics by journalists based on how novel and relevant they are to the target group for the medium (Tschötschel et al., 2022). Then there are also the effects of topics being prioritized by algorithms used on platforms and personalized content on social media. These effects determine how present the topic of climate change is in the perception of the public and this dictates the level of attention that is paid to climate protection measures (Hoppe et al.; Tschötschel et al., 2022). The coverage given to climate protection in the media has fluctuated over the years, with a declining trend being seen around the world since the end of 2022

(Aoyagi, M. et al., 2025). There are two particularly relevant factors influencing this trend: firstly, the increasing frequency of events spanning multiple crises and, secondly, the increasing use of social media with more personalized content and a greater level of emotion and polarization of opinion in the filter bubble (Brüggemann & Pröschel, 2024). In Germany, for example, the Green Party in the traffic-light coalition government got a particularly hostile reception on social media, being portrayed as a party that wanted to ban and renounce everything (Donatsch, 2024).

- Individual responsibility for climate protection

In a polycrisis, the effects of individual people's behavior and actions on climate protection are also more complex. Inflation and price increases mean that consumers are having to make direct changes to their consumption habits. On the other hand, the implications of one's own actions for climate protection are not always clearly apparent. This makes it more difficult for people to recognize the need for them to change their own behavior and actually do so (Urner, 2024). This effect holds true both at the individual level of decisions made by consumers or an expressed preference for a sustainable lifestyle and at the level of municipalities or organizations (Reusswig & Schleer, 2021). What is more, a global polycrisis demands responses to acute moments of crisis at short notice, and these responses may override the more long-term thinking about climate protection through to 2030 or 2050 in people's everyday consciousness.

- Unequal distribution of climate-related sins and impacts

The current polycrisis, in which climate change, social inequality, economic crises and geopolitical tensions are all colliding, further reinforces this perception of injustice. Especially at a time of multiple crises, there is a risk that acceptance of measures to protect the climate will decline further if measures are perceived to be socially unjust or present a burden for population groups that are already disadvantaged anyway. This is why a socially just distribution of the impacts is a key prerequisite to persuade people to be willing to embrace transformation, particularly during a period of crisis.

- What are the connecting factors for climate protection policy?

Climate change is one of a number of interconnected crises with an increasing prevalence of critical events. Climate change is also acting as a driver of other challenges or crises, such as climate-related migration due to soil degradation. With this in mind, climate protection measures can be understood as a way to help boost security and strengthen resilience within society. The success of climate protection policy also depends on the measures being accepted by the population and their willingness to make changes to their behavior. In the polycrisis, it is also vital to link climate protection goals with other policy goals, and nexus thinking is a suitable way to approach this. It can highlight cross-departmental synergies in crisis policy and support the coordination of measures in different policy areas.

- Climate protection measures as a contribution to security and resilience

As the scope to take action to protect the climate diminishes, climate protection policy needs to focus more on achieving synergies with other policy goals. A successful transformation of relevant sectors in the interests of climate protection will also strengthen Germany's level of resilience in protracted crises (see EEA, 2023). If climate protection policy is successful, this will ease the burden on the national budget (lower costs as a result of damage to the climate), promote good health (less of a burden from extreme weather and environmental pollution), secure the country's energy supply (less dependence on fossil energy and imports of raw materials) and preserve or create new jobs (greater competitiveness thanks to efficient use of energy and resources). Any new crises that emerge should be reviewed continuously to establish whether they might present a window of opportunity for climate protection.

- Keeping climate protection on the agenda and in the public discourse

Keeping the public aware of the urgent need to take action to protect the climate is more difficult in the polycrisis, but is absolutely key to ensuring that climate protection measures are accepted. It is vital to take account of the differences within the media system, the huge relevance of social media and the

trends toward disinformation (see factors 2 and 3). This can be achieved by adopting targeted and continuous communication strategies that are based on information that is scientifically robust but is presented in a way that is easy to understand. If climate topics are regularly linked to specific examples from local contexts, they will be more relevant to people's everyday lives. In addition, it is possible to focus more on the correlations between climate protection and health or financial savings. Forms of dialogue in which different target groups, information disseminators from civil society, business and politics and trusted stakeholders or influencers also highlight the issue to people who have less of an interest in climate protection are also suitable.

- Balancing the distribution of climate impacts and reinforcing the social dimension of climate protection

If the unequal distribution of climate impacts continues to get worse, including globally, people will be more likely to refuse to tolerate measures intended to protect the climate. This is why there needs to be sufficient transparency about who and what is accelerating climate change and who or what is mitigating it. Another important aspect influencing the level of acceptance of climate protection policy is that the burdens of the transformation are shared broadly within society and inequalities are reduced. Climate-friendly behavior could also be encouraged with further incentives.

- Highlighting and promoting individual responsibility for climate protection

To enable people to recognize the need to change their own behavior and actually do so, they need to be given clearer information about the impacts that their individual decisions and behavior have on different areas of the polycrisis. For example, the challenges that municipal energy suppliers in Germany set for customers to save energy when there was a shortage of gas at the beginning of Russia's war of aggression on Ukraine provided an effective incentive for households. Expanding the number of consulting offices and providing training on strategies for managing crises and crisis communication for staff who work for government agencies may help boost confidence in the ability of politicians to handle crises. In addition, the ability to distinguish between facts and fiction is becoming ever more important. One approach for providing targeted offers of education and information to help people take responsibility is "Caring Education" (Seligman, 2015). This can start in schools and deliver positive impacts of self-efficacy, personal involvement in networks, and greater visibility of climate protection success stories (Schratz, 2023).

- Development of a new type of political capacity to act

The impacts of crises such as inflation, disrupted supply chains or an increase in the defense budget are increasingly stretching the governance of transformation to its limits. Shaping the way we seek to protect the climate and adapt to climate changes under these more difficult conditions demands a special level of political expertise and consensus on the great importance of climate protection. This includes a high degree of policy coordination across different policy areas, a reduction in bureaucracy and sufficient capacity to implement things faster at an operational level.

- Knowledge base for appropriate policy action in the polycrisis

Targeted empirical research that examines specific crisis interactions can help policymakers and other stakeholders to manage the polycrisis by identifying strategies to prevent crises from escalating, accelerating and synchronizing (Lawrence et al., 2024). To do this, consideration should also be given to building up expertise in crisis management within business and society. An important basis for taking appropriate political action is also to conduct a systematic, well-founded assessment of the realities of daily life for the population as a whole, but also their professional groups, their economically stratified layers, their social environments and their respective needs, willingness and ability to transform. And some of this knowledge — in particular in relation to positive effects and synergies between climate protection and other policy goals (especially security) — could be made available to people in a well-prepared form to enable them to take individual action. Equally, information about compromises that need to be made would add weight to arguments supporting changes in behavior and acceptance of climate protection measures.

- Crisis interventions under time pressure demand compromises in climate protection

To alleviate the stresses of the crisis, the pressure of the polycrisis may force climate policy increasingly to embrace risky technologies, such as geoengineering (BMWK, 2024; Jahn & Kersting, 2024). Although Germany has phased out nuclear energy, 100 reactors are still in operation in 12 of the EU's 27 member states, with plans for more (BMK, undated). The level of political interest in geoengineering or nuclear energy is increasing in Europe and around the world. For example, carbon dioxide removal (CDR) can be used to remove carbon dioxide from the air, bind it for a long time and store it safely, for example by planting forests in previously unforested areas or fertilizing the ocean with iron to generate more algae growth. Carbon capture and storage (CCS), on the other hand, is designed to enable carbon to be captured and stored in pipelines running along refineries, power plants and cement works, for example. The possible impacts of technologies have so far only been examined to a limited extent. For example, intervening in the climate in one part of the world could have an impact in other parts, which could trigger geopolitical conflicts. In addition to conducting a further technology impact assessment, close international coordination of geoengineering measures is therefore also recommended (Schröder, 2021).

Crisis intervention measures may also open up new opportunities for protecting the climate if, for example, technological sovereignty or a resilient energy supply is reconciled with climate protection.

- Nexus thinking for cross-departmental synergies in crisis policy

If policy focuses merely on isolated crises, it will only be possible to address the immediate threat in each case (Lawrence et al., 2024). The global polycrisis, on the other hand, demands an overarching, integrated consideration and assessment of the full spectrum of interlinked crises and interactions. In principle, this reflects what is known as nexus thinking, which has been propagated for some time in systemic environmental research and policy in order to reduce the level of complexity in the political debate surrounding climate protection and highlight systemic correlations (Asian Development Bank, 2023). The nexus approach is all about synergies, areas of tension and compromises that need to be made in relation to climate protection between different policy measures; for example, in security, economic or social policy. Examples of nexus issues include aspects of healthcare, food security or the supply of drinking water (Benini et al., 2023). These issues are becoming increasingly relevant in the polycrisis and are very important in relation to economic, social and climate policy (ESCAP, 2023; Özcan et al., 2024).

A successful climate protection policy will not only slow down climate change, but could also help to decouple various crises. It is vital that the cross-departmental strategy highlights the synergies between climate protection policy and other crisis intervention measures in the polycrisis and thus addresses fears of material loss, for example with joint communication strategies from different departments in order to help dispel some populist discourse tendencies. One way to achieve this is to implement measures in various departments to achieve overarching goals such as maintaining economic competitiveness or expanding and developing infrastructures with future viability (Münch, 2024).

Linking together different monitoring systems to analyze the impacts of crises and their consequences could make it easier for ministries to work together and provide greater legitimacy for political action.

The opportunities and risks that this trend presents are summarized in the box below.

Global polycrisis as the diagnosis of our times: opportunities and risks for climate protection

Opportunities

- Focusing climate protection policy on delivering synergies to strengthen resilience, economic stability, energy security and public health, thus generating a broad societal benefit that extends beyond the climate.
- Education that promotes greater responsibility and self-efficacy in climate protection can strengthen society's ability to manage a crisis and boost trust in the ability of politicians to deal with crises.
- Financial relief to support climate-friendly behavior at an individual level and also for companies and organizations can increase the level of acceptance of measures, especially at a time of crisis when people are facing greater financial burdens.
- A systematic, well-founded assessment of the realities of daily life for the population as a whole and their subgroups will enhance the knowledge base to provide options for making behavioral changes.
- Nexus thinking for an integrated consideration and assessment of the full spectrum of interlinked crises and interactions can create cross-departmental synergies in crisis policy.
- Expansion of policy coordination across different policy areas to address multiple crises simultaneously, making policies more coherent.
- Climate protection measures such as expanding the hydrogen infrastructure to supply energy to industry can be coordinated with other crisis interventions (e.g., technological sovereignty, resilient energy supply).
- Joint communication strategies across different departments regarding overarching goals of polycrisis intervention can counter populist tendencies to be mistrustful of (uncoordinated) government action.
- Interlinked monitoring systems spanning different policy areas can reinforce the binding nature and acceptance of climate protection measures.

Risks

- If the polycrisis progresses, political management of the crisis may result in climate protection being devalued, especially if the polycrisis poses a risk to prosperity.
- The scope for action in relation to climate protection is diminishing as different policy areas compete for funding, political priority and attention within society.
- Keeping the public aware of the urgent need to take action to protect the climate is more difficult in the polycrisis, but would be absolutely key to ensuring that climate protection measures are accepted.
- The complex nature of the polycrisis may result in a sense of feeling overwhelmed and crisis fatigue and encourage people to reject climate protection measures that will disadvantage parts of society in the short term.
- Given the complex interrelationships, the discourse surrounding the transformation may come across as elitist and technocratic, which in turn will feed mistrust.
- If the unequal distribution of climate-related sins and impacts persists or continues to get worse, including globally, people may be more likely to refuse to tolerate measures intended to protect the climate.
- Urgent crises force policymakers to adopt immediate, short-term solutions, which may potentially undermine the long-term strategies needed to mitigate climate change.

2.2. Increasing fragmentation in society

Societal disparities when it comes to income and prosperity, as well as attitudes to values and beliefs, threaten to grow wider at a time of crisis. Increasing fragmentation of society and polarization of opinions may weaken cohesion within society. There are different perspectives on whether or not Germany's society is already heavily polarized, i.e., whether there are two clearly opposing sets of beliefs that are diametrically opposed across different topic areas. However, different studies agree that there is a tendency toward polarizing statements in the public media. In a heavily fragmented society with clearly defined divisions between different subgroups, there can be a significant gap between the impact of climate change and people's attitudes toward climate protection. This makes it much harder to generate acceptance and support for climate protection measures.

Current facts and figures

The cost of living in Germany is rising, especially the prices of food and services (Federal Statistical Office of Germany, 2025). Although real-terms net household income has risen by an average of more than 30% since 1995, this rise has been much lower in the bottom income deciles (Grabka, 2024). The increasing disparities in income affect people's opportunities to engage in work and society as well as the differentiation between living environments and opinion-forming arenas. Although traditional news providers still dominate the way news is consumed on the internet — the most common source of news (Behre et al., 2023), the use of social media in Germany also continues to rise, most recently to 60% (Müller, 2024). In Germany, social networks are to some extent significantly segregated (Teichler et al., 2023), which means that the opinions and beliefs expressed on them also differ greatly. Studies show the highest level of affective polarization in relation to the topics of 'immigration', 'climate change' and 'pandemics such as COVID-19' (Herold et al., 2023). Network segregation and affective polarization are most pronounced among supporters of the Alternative für Deutschland (AfD) and Green Party, and among people with a high or low level of formal education and among people of Muslim faith (Teichler et al., 2023).

What's changing?

As crises escalate, a real loss of prosperity can be expected. This increases fears about the future and mistrust of political decision-makers. People could begin to feel increasingly disadvantaged, which provides fertile ground for populist or polarizing tendencies in the way public opinion is shaped. This is increasingly happening online, especially on social media. The AI-based mechanisms that are used by the operators of these platforms are increasingly influencing the way opinions are formed, which can also be used as a tool for political purposes, e.g., by groups opposed to democracy or more radical protest movements.

- Real loss of prosperity and fears associated with this

In Germany, low-income households will suffer much more from price increases relative to their income than higher-income households in the future, especially when it comes to the costs of food and energy (Bach et al., 2023; Fratzscher, 2023). This loss of prosperity is increasingly being felt in society and is fueling a sense of uncertainty and fears (Groh-Samberg et al., 2023; Spannagel & Brülle, 2024). These fears are expressed in political opinions, e.g., on social media, so it seems likely that there will be a divergence in people's social circumstances over the longer term (Deitelhoff et al., 2020; Helbig & Jähnen, 2018). Whether this is polarizing society in Germany and Europe or rather fragmenting it further is a controversial issue (Hedewig-Mohr, 2024; Mau et al., 2023). If a government includes climate-denying or anti-democratic parties, this could also intensify the polycrisis and further reduce the room for maneuver in coming up with policy responses and climate protection measures, e.g., by sealing off labor markets, eroding the separation of powers and attempting to influence the judiciary and the media.

- Segregation of society through social media

In any debate around controversial topics in society, people's fundamental attitudes and values constantly align along "systematic axes of conflict" (Mau et al., 2023). According to a meta-analysis of opinion polls, there is no evidence of "significant distributive polarization" here in Germany (Teney et al., 2024). Instead, Teney et al. identify increasing disinformation and a brutalizing culture of discussion in the public sphere (cit. from Hedewig-Mohr, 2024). People's personal attitudes are linked to socio-structural characteristics and the make-up of their immediate social circle (Unzicker, 2023). Social media is playing an increasingly important role (Behre et al., 2023). The percentage of the population over the age of 14 in Germany that now uses social media is 60% (Müller, 2024). An increase is being seen in particular among people aged 50 to 69 and, to a slightly lesser extent, among people aged 30 to 49, whereas the potential for growth among those under the age of 30 seems to have peaked at a high level (ibid.). Use of social media can support political engagement and collective action, but at the same time it can contribute to the spread of disinformation and the isolation of discourse spaces, known as filter bubbles (Mahrt, 2019). Multiple studies confirm that the use of social media reinforces existing camps of opinion and deepens differences (Kubin & Sikorski, 2021; Mahrt, 2024), but the mechanisms that make this happen remain unclear (Mahrt, 2024). In this context, what matters are the strategies based on non-transparent algorithms that the platform providers use to increase their reach and retain their users. But alongside use of the media, factors such as age, gender and level of interest in politics are also relevant to the way opinions are formed and expressed, i.e., the same factors that also play a role in media use itself (Boulianne, 2020; quoted in Mahrt, 2024).

- Use of fragmentation tendencies as a political tool

Every crisis and the impact it has on sections of the population may also spark protests and create new fault lines between subgroups within society (Breuer, 2023). It is therefore possible that a tipping point for protest may be reached and the fault lines could pose a threat to democracy as a whole (ibid.). This can be used as a tool by extremist and anti-democratic parties, e.g., to reject and devalue measures of climate protection policy through climate change denial or by espousing narratives such as jobs being threatened by the energy transition (Herold et al., 2023; Sommer & Schad, 2023). Fake news and deep fakes generated by AI are increasingly being used by anti-democratic organizations that want to influence people's political opinions or weaken democracy (BSI, 2025).

- Radicalization of groups in favor of and against climate protection

Social movements have the power to bring about large-scale social change, but there is uncertainty over what role radical action plays in this (Ostarek et al., 2024). There is also evidence of increasing radicalization of political groups in this country and this is testing social cohesion in Germany (Herschinger et al., 2018). Radical groups make intensive use of social media to gain followers and organize protests. Moderate protest groups with similar objectives can also benefit from this, as is revealed by a study into a blockade conducted by a radical environmental group in the United Kingdom and the so-called flank effects for their moderate counterpart Friends of the Earth (Ostarek et al., 2024). As there is an increasing sense of crisis overload within society (see trend 1) and growing acceptance of the use of violence in political protests (Edelman Trust Institute, 2025), it is possible for both advocates and opponents of climate protection to be radicalized, both at a local level and across a global network. This may be reinforced by populist campaigns by political parties or foundations and by the influence of foreign intelligence services on the opinions of citizens and the way they vote in elections. Activities and services like this are facilitated by segregated public spheres and the technical possibilities offered by AI and social media channels (see above).

How heavily fragmented might society be in 2040?

By the year 2040, society in Germany will be heavily fragmented in both socio-economic and cultural terms. It will be characterized by a deep, almost unbridgeable gap between different groups within the population. Technological advances as a result of AI and automation and persistent geoeconomic conflicts will have massively compromised the competitiveness of industry and led to a high level of unemployment. Only a small wealthy elite will benefit from all this economic turmoil, while large swathes of the middle class will have slipped into a state of constant precariousness because of the high costs of energy and accommodation. There will also be a technological divide in society: some of the population will be left behind digitally, which will make it much harder for them to participate in social and political life. Others will become lost in the digital world and live a life that is detached from reality.

The impacts of climate change will have affected different regions to differing degrees and will be exacerbating regional inequalities. This will give rise to competing local conflicts of identity, cultural differentiation, discrimination and a coexistence of subcultural identities with their own networks and digital platforms. There will be more separatist movements.

Democratic institutions will not just be viewed with increasing suspicion, but in some cases will actually be openly rejected. Populist and authoritarian movements will gain in popularity, while political decisions at a national level will struggle to achieve widespread acceptance. In addition, polarization agencies will have become established and will deliberately stoke emotional conflicts in society. These actors will operate both on behalf of foreign intelligence services and through domestic groups with a political and ideological motivation. Society as a whole will be defined by isolation, inequality and instability. It will be difficult to persuade people to embrace the idea of engaging and entering into dialogue with people who have a different view in a democracy. The crisis overload at the start of the polycrisis will have expanded into a sense of overload in social communication, with differences within society being made much more emotive.

What is the relevance for climate protection?

What does it mean for climate protection if the tendencies toward fragmentation in society increase? How will climate protection be addressed in the future in the context of an increasing number of issues of conflict? The consequences of climate change will also be clearly felt in Germany and inevitably lead to risks in maintaining the population's quality of life and prosperity. If the arenas of discourse and axes of conflict continue to drift further apart, then the issue of climate protection could be marginalized or used as a tool for other political issues.

- Consequences of climate change may exacerbate the loss of prosperity and social inequality

In the years ahead, the level of prosperity in Germany may decline as the sheer number of crises increases. This fuels fears of a loss of prosperity. Low-income households in particular will be affected by this as they are hit hardest by any price rises. Growing social inequality can reduce social acceptance of and support for climate protection measures (Schneller et al., 2020). If people feel that climate policy will exacerbate their already precarious financial situation, this can generate resistance to the necessary reforms (Staude, 2019). Alongside other crises, the consequences of climate change, especially extreme weather events involving flooding or drought or heat waves lasting several days, also contribute to the concentration of crises. In addition, less wealthy people are affected more by the consequences of climate change because they generally have fewer resources that they can use to protect themselves. Social inequality and distributional inequality have an impact on people's ability to access education, information and services. Compared to wealthy people, they contribute to climate change with less frequency or to a lesser extent through their consumption or mobility habits. These unequal living conditions and the associated fractures between groups within society are reflected in polarized political views and a loss of trust in politics.

- Dynamic of systematic axes of conflict on social media

Personal attitudes are shaped by socio-structural characteristics, a person's immediate social circle, choice of media and how often they use it. There are currently no indications of a polarization of society as a whole along one single axis, but rather there are

simultaneous debates on controversial topics, each involving opposing attitudes and sets of values along different systematic axes of conflict. This dynamic is accompanied by the increasing spread of misinformation and the culture of debate in politics and society becoming ever more brutal. Social media platforms are increasingly becoming the leading medium for political information and for people to express their opinions. They are a place where political engagement and collective action to support climate protection can be initiated in real time. At the same time, there is a risk that they will spread disinformation about climate change and the need to protect the climate. The companies that operate these platforms are gaining more and more power as the gatekeepers of topics and opinions. It may become increasingly difficult for people to feel like they belong to a social group with a stake in society and so feel that they can champion their own opinion publicly.

- Fragmentation tendencies also within climate protection discourse

Every crisis and its consequences can fuel protests and thus intensify conflicts between subgroups. Political movements can use these moments as a tool to achieve their goals. This can very much promote democracy in the case of peaceful protests, but can also reinforce fragmentation tendencies within society. Climate protection cannot be viewed as a uniform political axis, but is instead embedded in a complex mesh of social, political and economic axes of conflict (Mau et al., 2023). This means there is a risk of parallel debates on climate protection in different sub-discourses that are difficult to link together or that struggle to build on each other when it comes to their content. This may cause critical events to become trigger points and emotions to boil over. As the number of crises intensifies, the accumulation of triggers like these carries the risk that climate change will be perceived in more and more political and social arenas as just one threat among many, and climate protection will be seen as just one task among many that society needs to address.

- Various — including new — alliances for climate protection

Social movements play a key role when it comes to climate protection as they can spark social change and combine forces. To champion climate protection even more effectively, there will need to be new social alliances across traditional groups. There are currently a variety of dedicated groups, but within these movements there are different currents, ranging from moderate to radical groups. The latter are becoming increasingly confrontational in their forms of action, which on the one hand can increase the level of attention that the public pays to their concerns. On the other hand, radical forms of protest like this increase the risk of social rejection and new conflicts between different interest groups. Given that there is growing tolerance of violence in political protests within society (Edelman Trust Institute, 2025), there is an increasing risk that the threshold for violence could be crossed sooner — both on the part of the climate activists and their opponents.

- What are the connecting factors for climate protection policy?

What does it mean for the status and acceptance of climate protection policy if, as the number of crises expands, socio-economic differences in society become greater and pose a threat to prosperity? How can climate protection policy communicate and coordinate its goals and measures when the issue of climate protection is spread across different arenas of discourse? Having a more comprehensive understanding of fragmentation mechanisms and tendencies will be a key factor for the process of negotiation within society and the shaping of climate protection policy in the years to come. In the future, climate protection will need to highlight the contribution it can make to maintaining prosperity. In view of the fragmentation tendencies, arguments and debates need to be orchestrated in different arenas of discourse that are happening in parallel, increasingly also on social media.

- Climate protection policy to secure prosperity

Climate change is becoming more and more visible and apparent as a driver of intensifying crises, which means that climate protection measures can also alleviate the effects of other pressure points of the polycrisis. This includes the risk of a loss of prosperity, coupled with growing social and economic inequality. As people on a lower income are hit harder by the consequences of climate change than wealthier people, even though they contribute to it less in comparative terms, political tensions between

groups in society may intensify. The relationship between social justice and environmental sustainability is increasingly being recognized as a critical factor in the success of climate protection initiatives and is therefore becoming an important issue in the debates (Hennicke et al., 2025). To prevent climate protection from becoming a pawn for conflicts within society, it would be important to provide specific everyday examples as evidence to support the potential of climate protection policy to intervene in crises, to formulate this evidence clearly and communicate it widely. Preparing this information in a way that is suitable for specific target groups should also include offering education in schools because climate protection is a long-term task that spans the generations.

- Distributing the impacts of climate protection

People who are hit particularly hard by the consequences of climate change currently contribute much less to greenhouse gas emissions. People who have a low income would be more likely to accept a high CO_2 price if the revenue this generated were distributed or used fairly from their point of view. Although redistribution mechanisms have already appeared in climate protection policy, they have not yet been implemented.

- Presence of climate protection policy along the axes of conflict on social media

Personal attitudes are a crucial factor influencing consumption or voting patterns and are heavily influenced by social networks and media usage. For most people, social media platforms have become the primary medium for social belonging, political information and engagement. Their structures and mechanisms promote the tendency within society as a whole to differentiate between systematic axes of conflict in the way opinions are formed. If the political actors involved in climate protection policy have a strong presence on social media, this is one way to take account of the importance of this medium. However, critical developments such as disinformation and the way the culture of debate has been brutalized and used as a tool by extremist and autocratic movements also pose a threat to democracy as a whole and therefore climate protection policy as well. This can be countered through greater regulation of the power of the platform providers and non-transparent filtering algorithms and by continuously highlighting the disinformation created by AI.

- Shared narratives can counter discourse fragmentation

The polycrisis is leading to an increase in the number of protests overall, including for and against measures to protect the climate, and reinforcing lines of conflict between subgroups. For climate protection policy, it is vital that climate change continues to be perceived as a key threat and climate protection as a task for the whole of society in the debates taking place in parallel. A unifying narrative developed in a participatory way across lines of conflict for a climate-neutral Germany in the future may help to counter any fragmentation of the discourse on climate protection. In addition, target-group-specific measures to promote more political engagement and collective action to protect the climate can strengthen people's understanding of climate protection policy as a key tool in the polycrisis.

- Building trust through greater communication of policy successes

A growing sense of pessimism coupled with dissatisfaction with the priorities and key areas of focus of elected politicians has weakened trust in the ability of governments to act (Edelman Trust Institute, 2025). If examples of policies that have been implemented successfully do not become more evident in people's daily lives, the level of dissatisfaction will continue to rise. A loss of trust and willingness to resort to violence to achieve one's political goals may then increase in society. This could then lead to climate protests becoming more radical. This may have a detrimental impact on the level of acceptance and tolerance of climate protection measures within society as a whole and would then require policymakers to take additional measures to rebuild trust. Trust in climate protection measures can be strengthened if positive effects are demonstrated. This includes more target-group-specific, continuous communication of the level of progress in achieving targets which, in addition to providing measured variables for experts to assess, also highlights specific examples of how it is impacting the lives of different groups in a way that appeals to their emotions.

- Reframing climate protection with examples of success and activation of like-minded people

Another measure to curb the loss of trust in the ability of politicians to act and to create more moderate

political discourse could be to promote the willingness to engage in dialogue across conflict boundaries, e.g., with local and virtual forms of participation. A greater emphasis on everyone's responsibility and the range of possible options for ensuring the transformation is a success may increase people's willingness to actively engage to protect the climate. In a fragmented society, this could be achieved by integrating or promoting activities in associations and clubs or online networks, e.g., meet-ups. This means that groups that have so far not received much public attention can also be included and valued as stakeholders in the transformation, e.g., allotment holders to promote biodiversity, handicraft groups to promote upcycling or health-conscious cycling enthusiasts to promote nature conservation and climate-neutral mobility. Activating associations or other groups of like-minded people as stakeholders in the transformation could also strengthen the sense of community in society and thus counteract any fragmentation.

The opportunities and risks that this trend presents are summarized in the box below.

Fragmentation tendencies in society: opportunities and risks for climate protection

Opportunities

- Climate protection measures can also alleviate the effects of other pressure points of the polycrisis, e.g., prevent a loss of prosperity or promote climate justice.
- Highlighting the links between social justice and environmental sustainability can increase the level of support for climate protection measures.
- Citing more examples from everyday life could help to really emphasize the socio-economic benefits of climate protection policy, such as fewer disastrous floods with their devastating consequences for people's health and lives, prosperity and the huge costs they entail.
- As protecting the climate is a long-term task that spans generations, innovative forms of education for schools could be used to convey the urgent need for a climate protection policy and the benefits it can bring more specifically to the relevant target groups.
- A fair distribution of the financial burden resulting from the impacts of climate change can help to counteract any tendencies for society to become polarized. Expanding the redistribution mechanisms would be a very suitable way to do this.
- If the stakeholders involved in climate protection policy are heavily engaged on social media, this is one way to take account of the great importance of this medium in shaping opinions.
- Regulation of non-transparent filtering algorithms on media platforms and continuous highlighting of the disinformation created by AI will reduce the risk of climate protection being used as a tool in an attempt to create polarization for political or ideological reasons.
- Shared narratives across social groups can help to counter fragmentation in the discourse on climate protection along systematic lines of conflict in public opinion.
- Target-group-specific measures to promote more political engagement and collective action to protect the climate can strengthen people's understanding of climate protection policy as a key tool in the polycrisis.
- Reporting progress and success stories involving climate protection measures and the specific benefits they can offer people in their everyday lives, for example by enabling them to save money, in a way that is specific to the target group will boost the level of trust in climate protection policy.
- Local and virtual forms of participation will promote people's willingness to engage in dialogue across conflict boundaries and may help to create more moderate political discourse. Examples include municipal participation platforms or offers to arrange activities for associations, allotment holders or sports enthusiasts.
- Activating like-minded people as partners in the transformation could strengthen the sense of community in society and thus counteract any fragmentation.

Risks

- As people on a lower income are hit harder by the consequences of climate change than wealthier people, even though they contribute to it less in comparative terms, political tensions between groups in society may intensify.
- The increasing amount of disinformation and the way the culture of debate has been brutalized can be used as a tool by extremist and autocratic movements, which poses a threat to climate protection policy and democracy as a whole.
- The emotional nature of these debates can result in increased distrust of other groups in society in general and climate protection protagonists in particular.
- If the willingness to resort to violence to achieve one's political goals increases in society in general, climate protests could also increasingly become more radical. This may have a detrimental impact on the level of appreciation for climate protection measures within society as a whole.
- If tendencies toward fragmentation increase, then the lack of consensus building for climate protection policy measures could turn out to be an inevitable breaking point for the success of this transformation in the future.

2.3. Structural transformation of the public: from mass media to micro-publics

Public opinion is an important indicator of the way that individual opinions and attitudes are drifting apart. It is the result of individual opinions competing for attention in a public discourse, which ideally incorporates a wide range of individual opinions, and it provides guidance for the way individual opinions are formed (Neuberger, 2022). The public sphere manifests itself in media discourses, with publicly accessible media fulfilling key functions for participation through reception and communication that enable public and political opinions to be formed (ibid.). In a democratic country like Germany, the political public sphere is the result of active opinion forming.

Current facts and figures

In addition to state institutions, especially the government and parliament, opinion-forming stakeholders in society such as parties, associations, citizens' groups and NGOs and increasingly also individuals and institutional communicators on social media play a crucial role in defining and structuring the topics of public discourse. What is more, media providers such as broadcasters, publishers and big corporations that operate platforms have an influence on the topics that are discussed because they act as gatekeepers in prioritizing news, preparing it editorially and, increasingly, presenting it in a personalized way using user data and algorithms. The media landscape in Germany is changing. The internet dominates as the main source of news (Behre et al., 2023). In addition, user behavior continues to shift toward the use of social media and non-linear offerings, i.e., content that is available online and can be accessed at any time, for example, via media libraries, streaming services and websites or social media channels run by the media companies (Oehsen, 2024). The patterns of use of the population in Germany vary according to a person's age, trust in established media and political attitudes (Medienanstalten, 2025). Social media gives every person the opportunity to publicize their own opinion in a matter of seconds, whether it is based on scientific facts, a personal opinion or simply a conspiracy narrative (UBA, 2023). In Germany, almost half of people are unsure whether they should believe information they read on the internet (Quiring et al., 2024). The level of trust in daily newspapers, radio and television is higher here in Germany and trust in social media is lower than it is on average across the EU (European Commission, 2022). A long-term study into trust in the media in Germany reckons that there is not (yet) a crisis of trust in the media within German society, but that the proportion of people who are skeptical toward public service media is increasing from year to year (Jackob et al.).

What's changing?

What impact are AI and filtering mechanisms on social media having on the way opinions are formed? How is this changing the culture of debate in the public media and the formation of people's individual

opinions as well as trust in the media? AI and algorithms are becoming increasingly important in shaping political opinions and are reinforcing tendencies toward disinformation and erosion of trust in political communication.

- AI and filtering algorithms influence the formation of opinions on social media

On average, polarizing statements generate more resonance than balanced posts on social media, e.g., because the message is agreed with or reposted by users (Newman & Cherubini, 2025). This fact is exploited by the large corporations that operate these platforms because they use AI and algorithms to capture their users' attention, increase the frequency and duration of use and generate revenue from advertising. AI can be used to create and personalize content in an automated way. AI-based chatbots interact — including with each other — in real time. In addition, AI can be used to evaluate larger and larger volumes of unstructured data to identify trends and patterns in public opinion. On the one hand, these changes make communication more efficient and can enable more specific user targeting. On the other hand, AI uses content that already exists and, if in doubt, may also reproduce content that is discriminatory, manipulated or untrue. In addition, the use of AI is increasingly non-transparent for recipients, which makes it hard to review the results or adopt a critical stance toward them. An international survey shows that two-thirds of publishers use AI to convert text articles into audio, 70% use it to create summaries of articles, and 65% use AI to translate news articles into different languages (Newman & Cherubini, 2025). More than half of the media companies surveyed also work with AI chatbots and search interfaces (ibid.).

The news and reports shown on social media are therefore based on filtering algorithms and AI applications. This means that the filtering mechanisms can be used to influence the public discourse and the formation of opinions (Zick et al., 2023). This can even extend to influencing elections. Examples of this include the efforts by Elon Musk to support the Alternative für Deutschland (AfD) party on his platform X or attempts by the Russian state to influence elections in other countries (The Economist, 2024).

- More disinformation with fake news and deep fakes

The objective of fake news is to unsettle people, deceive them, spread lies or make them receptive to simplistic viewpoints and conspiracy theories. In the first quarter of 2023, almost half of internet users (48% of those aged 16 to 74) in Germany found information on websites or social media platforms that they felt was untrue or implausible (Behrends et al., 2024). For example, people who have a critical stance toward a topic perceive the news situation that is portrayed in the "quality media" such as public broadcasters to be distorted and tend to suspect that the content is being controlled by the state (Reusswig & Schleer, 2021). On the other hand, people who have a positive view of a topic and believe that action needs to be taken to protect the climate, for example, more frequently suspect that media reports contain attempts to discredit climate protection measures by providing disinformation and therefore often want the state and platforms to get more actively involved in monitoring the quality of these reports (Unzicker, 2023). False information can be reinforced using AI. On the one hand, this is done by fake user accounts created by AI bots on social media exploiting the filtering mechanisms to spread fake news. On the other hand, AI tools can be used to create deep fakes, which are deceptively realistic manipulated videos and audio content (BSI, 2025). The World Economic Forum believes that deep fakes pose the greatest (economic) risk over the next two years (Elsner et al., 2025). The software needed to create them is freely available on the internet. The risks and challenges that deep fakes pose to public opinion and the formation of political views are considerable. But at the same time, AI also offers the tools needed to reliably expose deep fakes (Fraunhofer AISEC, 2025). Against this background, a structural transformation of the public at the micro level, driven by social media and the digitalization of content, can be observed (Habermas, 2023).

- Hate speech is sharpening the tone of political debates

The internet and social media are now awash with what is known as hate speech. This is the term used to describe gravely offensive, hostile or discriminatory comments made toward groups of people or individuals based on their characteristics or views

(Bones, 2024). “Gravely” is a key characteristic needed for hate speech to be defined as such and not just to be covered by the principle of freedom of expression (ibid.). Hate speech in the sense of offending other people, spreading lies about people or being disparaging about people is a criminal offense in Germany, unlike in the USA, for example (Hille, 2025). A study conducted in 2023 revealed that around a quarter of people who use the internet say they have come across hate speech on websites or social media (Behrends et al., 2024). Younger internet users were more likely to encounter hate speech online than older ones. Around 80% of internet users who encountered hate speech indicated that the attacks pertained to political or social views (ibid.). The increased level of emotion in political communication, e.g., the rise in hate messages, can increase the willingness of people in society to resort to violence, especially toward people with different views, e.g., in the form of physical attacks on politicians or journalists.

- Trust in the media

The proportion of people with a high level of trust in the media is much greater in Germany than the proportion of those who have little trust in the media, and people with a greater interest in politics have more trust in the media (Jackob et al., 2023). The level of trust in reporting by the media varies by topic and level of education. In particular, the topics that traditionally cause great polarization divide media users (ibid.). These include topics that can be divided into ideological camps or where norms or values clash in an irreconcilable way. The long-term study on trust in the media in Germany can be summarized as follows (Jackob et al., 2023): trust in the media is higher among people with a higher level of education than it is among people with a lower level of education. People with a higher level of trust in the media often have a differentiated relationship of trust at the level of individual media or authors. So it may be the case that they trust the media system as a whole, as well as public broadcasters in general, but tend not to trust one of the broadcasters when it comes to representing the debate on a specific topic. People who are less trustful of the media often also have less trust in institutions and their fellow citizens. For them, alternative information available on the internet and in alternative media is often more credible, even if this information spreads extremist positions, conspiracy narratives, fake news or hate speech.

What might the structure of the public media be like in 2040?

AI bots, personal AI assistants and commercially motivated filtering mechanisms will shape the way opinions are formed by 2040. The providers of the most widely used platforms will be based outside Europe and will thus largely manage to evade regulation of their algorithms and business models. There will also be European applications on the market that will meet higher standards of safety and security. However, hardly any private users will use them because of their limited performance and user-friendliness. The small number of large providers will cooperate with different states, regardless of their interpretation of democracy, and there will be grounds to suspect that their algorithms run counter to any communication about certain issues in society or about their own commercial interests. Instead, disinformation campaigns launched on behalf of foreign intelligence services will regularly flood the internet. Users will trust their personal AI assistant to filter out these messages, but there will be no way of verifying this. The fact that many countries neighboring Germany will include right-wing nationalist parties in their government means that political decision-making processes in these countries will be autocratic, which will make it almost impossible to take a European line in relation to safeguarding the formation of public opinion. Climate protection policy will be pursued with a technocratic mindset, i.e., preference will be given to technical solutions such as geoengineering or nuclear power that involve as few restrictions on personal freedoms as possible, even though they carry great risks. Nevertheless, at a local level there will be digitally organized groups almost everywhere that develop specific solutions to their problems and help themselves by implementing them locally. They will receive state funding if they are relevant to public affairs. However, politically motivated violence to suppress critical opinions and protest movements and a culture of mutual intimidation will also be a regular occurrence. To counter the lack of transparency of AI models and the interests of commercial platform providers, a group of critical media activists will have formed, citing their experiences of fake news and cyber crime from the Trump era. They will no longer just be fearful of further fragmentation, but will be worried about the collapse of democratic society.

What is the relevance for climate protection?
Public opinion is a key pillar for successful transformation. What does it mean for the social backing needed for climate protection if a constructive, fact-based public discourse is heavily restricted or even rejected? If it becomes increasingly difficult to distinguish between what is valid information and what is disinformation, this may have serious consequences for the deliberative process of democratic opinion forming and decision making in relation to climate protection.

- Climate protection loses relevance as opinion forming is driven by AI

If polarizing statements have greater resonance on social media and this is exacerbated by AI and filtering algorithms, then this makes it more difficult to engage in critical discourse and to consider other points of view and opinions, including on the topic of climate change. As foreign platform providers dominate the German media landscape, the public media system is becoming less important. At the same time, there is more of a risk that not only will the commercial interests of the platform providers determine the content, but that autocratic states will also increasingly be able to expand the influence that they have on the political scene and elections in Germany. With all this going on, climate protection threatens to become a pawn for political interests.

- (Deep) fake news hampers the formation of opinions based on facts

If disinformation campaigns continue to increase and also gain traction with deep fakes, there is a risk that facts and scientific evidence detailing how climate change is progressing will lose credibility. This will be exacerbated if state or public sources of information in relation to climate protection are discredited in disinformation campaigns. Polarizing statements often resort to insinuating that their opponents are incompetent (Nassehi, 2024). This pattern is likely to continue to increase, e.g., in relation to appropriate measures to protect the climate. It is vital that any political discourse includes scientific evidence to support assumptions and justify measures, and science also needs public support. This is why disinformation campaigns are a real challenge for science communication.

- Hate speech curbs engagement in climate protection and increases willingness to use violence

The increase in the amount of hate speech on the internet and on social media threatens the formation of public opinion, makes political communication more emotional and may increase the level of acceptance of violent political actions. This may mean that people reduce or even stop their public commitment to climate protection because they perceive that there is a threat to themselves and their loved ones.

- A high level of trust in the media strengthens the discourse on climate protection

Trust in the media, especially the public media, is still high, but it depends on a person's interest in politics and level of education and also on the topic and its potential to be a polarizing issue. What this means for the discourse on climate protection is that it is most effective when it takes place in the public media, but also makes use of other channels that are preferred by people who have less trust in the media. Climate protection is also an issue that by its very nature is highly polarizing because it is highly normative and based on values. There is a risk that people who do not have much trust in the media and other institutions will perceive climate protection to be an issue championed by entities that they are increasingly angry with, e.g., the government or the wealthy (see Edelman Trust Institute 2025). The feeling of being powerless against "those at the top" is used as a populist tool by right-wing extremist groups to rail against the governing parties and against climate protection measures. This is why the social media approach of addressing complex topics in a simplified way is both a curse and a blessing for improving understanding of the need to protect the climate.

- What are the connecting factors for climate protection policy?

With social media becoming increasingly dominant as a source of news and the potential of AI to deliver personalized media content, we are also seeing a structural transformation of the public that is having a particular impact at the micro level of media communication, where personal opinions are formed. What does it mean for climate protection policy if more disinformation threatens the public discourse on climate protection? What impact will this have on

the level of political commitment to climate protection and trust in the ability of the government to take action to protect the climate?

- Regulation of AI and platform industry to stabilize climate protection policy

Dependence on foreign platform providers and their commercial interests, some of which are anti-democratic, increase the risk that climate protection will become a pawn for global and national political interests. To counteract this, there need to be significantly more far-reaching measures to regulate social media and AI applications based on European standards and values. It is equally important to strengthen cyber security and increase the level of resilience to cyber attacks in Germany as they are already being deployed with the specific purpose of weakening the ability of politicians to act. Climate protection policy remains a key policy area across different departments for the new German federal government and so it has the potential to be affected.

- Providing information about deep fakes and improving media literacy regarding climate protection policy

Given the various systematic lines of conflict that have been described above, climate protection policy is a topic with great potential for different areas of conflict to latch onto it, making it a potential target for polarization and disinformation campaigns. The effect of disinformation campaigns and deep fakes is that scientific evidence and facts as the basis for climate protection policy and its protagonists may lose credibility. State or public sources of information in relation to climate protection may be discredited. Studies show that people who are very much aware of the need to take action to protect the climate (and those with a higher level of trust in the media, see above) are in favor of more active checks on the quality of news. It can be assumed that there will also be internationally coordinated measures to tackle deep fakes as they can also cause a huge level of economic damage, e.g., when there are cyber attacks or attacks in the media against companies. This is why measures such as educational campaigns and fact checks to dispel disinformation as well as (AI-based) approaches to exposing deep fakes are key instruments for strengthening climate protection policy and communicating scientific knowledge about climate change.

- Hate speech wears down the commitment of policymakers and may incite violence

Hate speech does not just suppress the formation of public opinion, but also contributes to making people feel that violent political actions are acceptable. Hate speech along with violence as its possible consequence pose a danger to the wellbeing of the protagonists of climate protection policy. An increase in fear and violence as a result of opinions becoming more radicalized, even just in terms of language, in a fragmenting public sphere may paralyze the level of engagement in politics and people's willingness to accept responsibility. In addition, it is evident that the boundaries of what constitutes hate speech are also being crossed more frequently in debates in parliament. If people's willingness to take violent political action increases in the future, this will be detrimental to the acceptance of climate protection policy — regardless of which sides of the argument engage in it.

- Countering the use of climate protection as a tool through communication "on all channels"

Trust in the media is an important factor that shapes the successful formation of opinions on climate protection and therefore potential support for any policy on climate protection. Communication and information about climate protection policy is also most effective when it makes use of the public media (including their social media channels) along with platforms that are preferred by people who have less trust in the media. As climate protection is being used by right-wing extremist groups as a populist tool against governing parties and climate protection measures, it is important that complex aspects of climate protection are addressed in a simplified way and as many people as possible are reached by being present in different media channels. Complementary narratives and reframing of the debate on climate protection to combat any contributions that are simplistic and destructive could be promoted through participatory storytelling.

The opportunities and risks that this trend presents are summarized in the box below.

Structural transformation of the public through social media: opportunities and risks for climate protection

Opportunities

- People who are very much aware of the need to take action to protect the climate are in favor of more active checks on the quality of news through state regulation.
- Measures such as educational campaigns and fact checks to dispel disinformation as well as (AI-based) approaches to exposing deep fakes are key instruments for strengthening climate protection policy and communicating scientific knowledge about climate change.
- "Communication on all channels" can be used to counter the use of climate protection as a tool for provocation by extremist groups. This includes established media, their social media channels, and other channels, e.g., those of influencers.
- Trust in the media is an important factor that shapes the successful formation of opinions on climate protection and therefore potential support for any policy on climate protection.
- Complex aspects of climate protection can be communicated in a more target-group-specific way using participatory narratives about the positive impacts it can have on people's daily lives, thus promoting an understanding of climate protection measures.
- Using participatory approaches such as workshop formats with citizens and experts to tell the story of transformation narratives could make climate protection more understandable and simpler with reframing.
- The scientific community can do its bit by posting on social media to counter disinformation with scientific evidence.
- Those who can demonstrate successful examples of climate protection in action, e.g., conservationists or environmental working groups, could be actively involved in communication with the public as trusted "transformation witnesses" with their own "I-messages".
- Existing fact-checking services that are offered can be expanded and made easier for different target groups to access through media partnerships.

Risks

- The long-term nature of climate change and its consequences can quickly become less relevant in the battle for attention within the media, making it more difficult to provide information about climate protection policy and get citizens engaged with climate protection.
- Dependence on foreign platform providers and their commercial interests, some of which are anti-democratic, increase the risk that climate protection will become a pawn for global and national political interests.
- There are increasing cyber security threats in Germany, including with the aim of weakening the ability of politicians to act. Climate protection policy remains a key policy area across different departments for the new German federal government and so it has the potential to be affected.
- The effect of disinformation campaigns and deep fakes is that scientific evidence and facts as the basis for climate protection policy and its protagonists may lose credibility.
- The increased level of emotion in political communication due to social media may also reinforce hate messages and mediatized violence, triggering actual physical violence. Sabotage or terrorist activities could also increase.
- There may be a tendency toward a more activist scientific community, which increasingly mixes up facts and values because it is embedded within society.

2.4. Transformation governance is increasingly reaching its limits

Up until a few years ago, there was still broad consensus within society that there was a need for a long-term socio-ecological transformation in Germany. However, as the number of crises has intensified with Russia's war of aggression on Ukraine, there has been a constant demand for political responses that have not always been (or have been only partly) reflective of the goals of achieving climate neutrality, such as the decision by the German federal government in June 2022 to start generating more electricity from coal again because gas was in short supply. The German Act on the Maintenance of Substitute Power Stations (Ersatzkraftwerkebereithaltungsgesetz, EKBG) was intended to enable coal-fired power stations to return to the electricity market for a limited period until March 2024, without blocking the path to achieving greenhouse gas neutrality in the long term. The higher greenhouse gas emissions from the energy sector generated as a result of this should be offset by accelerating the reduction in gas consumption and the transformation of the energy sector (Wehinger et al., 2022). The general conditions for transforming these sectors and society to achieve climate neutrality are becoming more complex with the polycrisis, and ongoing measures in a range of different policy areas require constant adaptation. This means that the governance of this transformation is increasingly reaching its limits.

Current facts and figures

The European Green Deal is the EU's grand vision for tackling the greatest social challenge by 2050. It aims to achieve climate neutrality by 2050, reduce emission levels by 2030 by 55% compared to 1990, and produce 90% fewer emissions by 2040. In the last legislative period, this led to specific areas of action, each with their own measures in different policy areas, e.g., for the energy transition, implementing the circular economy and securing a socially just transformation. Having a vision like this is essential if major social changes are to be implemented successfully. However, since Russia launched its war of aggression in Ukraine with the resulting threats to national security, the supply of energy and supply chains, political priorities have shifted. In addition to the Green Deal, the current European Commission has now set Europe's technological sovereignty, economic competitiveness and the security of its supply chains and defense as overarching goals. Activities in the policy areas listed above will continue, but they will focus on these new goals with the aim of ensuring that, as Europe moves toward 2050, it does not just become climate-neutral, but at the same time also becomes more competitive, etc.

The situation is similar in Germany. In view of the uncertain trade and geopolitical outlook and weak domestic and external demand, the investment, employment and consumption decisions made by businesses and households are tending to be cautious (BMWK, 2025). This is why the governing coalition emphasizes multiple times in its coalition agreement that a key goal is to establish planning certainty for private households and business. Meanwhile, the general geopolitical and geoeconomic conditions for the transformation continue to deteriorate and the climate is changing at an ever faster rate.

What's changing?

The actions taken by government in the polycrisis are shaped by acute requirements for crisis intervention, challenges of infrastructure modernization that were not adequately addressed in the past, and transformation requirements that will need to be met in the long term. At the same time, these actions must address uncertainties caused by consequences of the crisis, emotional agitation, resentment, propaganda and fears of loss in the population that are increasingly perceived as a threat to democracy. Have the limits of political control of this transformation and climate protection been reached?

- Complex and acute need for action overwhelms stakeholders in politics and society

As the polycrisis continues to escalate, especially with climate change picking up pace ("Tipping points for climate change" (Kornhuber et al., 2024)) and following Trump's decision to revoke partnerships in the realm of defense, the urgent need for crisis intervention is perceived to be almost unmanageable. The impression created is that the whole situation is simply too much for those engaged in politics and other parts of the population to handle. Although a number of measures are being initiated, there is no consistent overall concept or overarching strategy that can be applied to all levels of government and to all ministries and administrations (Hertie Foundation, 2025). The measures intended to mitigate the crisis appear fragmented and not very well harmonized (ibid.),

which people find unsettling. Only 18% of Germans believe that the country is on the right track (IPSOS, 2024). The situation for the German economy is also rated much more negatively than it was before the end of the traffic-light coalition government. German people are particularly worried about migration (35%, but this is becoming less important), poverty and social inequality (33%), followed by inflation (31%), military conflicts (26%) and crime and violence (25%). Only after this do climate change (21%), the healthcare system (20%) and increasing extremism (21%) appear on the worry barometer (ibid.).

- Increasing criticism of weaknesses in administration and political implementation

The notion of reducing bureaucracy and streamlining the state to deliver greater efficiency and an ability for politicians to take action is becoming increasingly important to the public. In recent months, a number of studies and initiatives have highlighted the consequences that excessive bureaucracy can have for the ability of the government to act and the inhibiting effect it has on innovation and transformation. They include the interim report published in March 2025 by the "Initiative for a State Capable of Acting" with its 30 proposals, e.g., on reforming legislation, accelerating the digital transformation or simplifying official applications (Hertie Foundation, 2025). Germany's National Regulatory Control Council (NKR) advances a similar argument in the strategy paper it published in February 2025 and calls for reforms to deliver a more efficient state (NKR, 2025). Agora Energiewende is also calling for a new policy mix to manage the transformation despite all the crises.

- New conflicting goals lead to setbacks in climate protection policy

In the polycrisis, there is frequently a governance dilemma, where short-term political decisions in response to urgent crises jeopardize long-term political goals. For example, at the beginning of Russia's war of aggression on Ukraine, coal-fired power stations needed to be reactivated at short notice to secure Germany's energy supply, which inevitably led to an increase in CO_2 emissions and ran counter to the long-term goal of expanding renewable energies. Faced with this dilemma, decision-makers must weigh up whether they should prioritize the immediate needs of the population and economy or pursue long-term environmental goals (Kuzemko et al., 2022). This often causes tensions between different interests and can harm trust in political institutions.

- Lack of funding for the transformation and the polycrisis

There are signs that the new German federal government is shifting the boundaries of transformation governance and thus creating new scope to take action. It remains focused on climate protection alongside other key priorities and it plans to allocate 100 billion euros of funding to the issue. The government is also keen to secure a reliable, sustainable energy supply, tackle poverty and inequality, expand digital infrastructure and promote digital education, create affordable housing, oversee integration and migration, and strengthen Germany's international relations and national security. To allow it to raise the necessary financial resources, the area of defense is set to be exempted from the debt brake as soon as expenditure exceeds one percent of GDP (this would currently equate to 45 billion euros). This will cover spending on defense, civil protection, intelligence services and countries like Ukraine that have been attacked in violation of international law. The German federal states will be allowed to borrow a total of 0.35 percent of gross domestic product, and a special fund of 500 billion euros is earmarked for "additional investments" in infrastructure over a period of twelve years. These financial packages and investments required an amendment to the Basic Law of the Federal Republic of Germany (Grundgesetz, GG).

- Transformation reactance on the rise

A lack of support or acceptance of transformative measures can ultimately build into specific resistance when people's fears increase and they feel their livelihoods are threatened, for example. This can lead to an increase in what is known as transformation reactance. What this means in practice is that not just individual measures, but the whole transformation to climate neutrality is fundamentally rejected or denied by some groups or parties. Examples of this include the heated arguments within society surrounding the German Building Energy Act (Gebäudeenergiegesetz, GEG) and the protests by German farmers against the abolition of the tax rebate on agricultural diesel. Right-wing extremist and autocratic or

anti-democratic parties and groups are increasingly able to tap into such fears and stir up anger and resistance to change.

How might transformation governance have evolved by 2040?

By 2040, transformation governance in Germany will be under massive pressure. The escalating polycrisis with accelerated climate change, geopolitical tensions, economic disruption and social upheaval will pose huge challenges for political institutions, administration and society as a whole. Despite a large number of individual measures, there will still be no coherent, cross-departmental governance framework that can resolve conflicting goals and secure strategic long-term goals. Measures will often seem to be reactive, contradictory or unplanned. Growing transformation reactance will result in a decline in the level of acceptance of even basic measures to adapt to and mitigate the impact of climate change. Nevertheless, innovative governance approaches will emerge here and there. New digital governance networks will make it possible to coordinate decisions between municipalities, German federal states, the German federal government and the EU using real-time digital data analysis. The consultation and involvement of a broad range of groups within society will be expanded with deliberative citizens' assemblies to increase the level of legitimacy and connectivity. The Transformation Council 2040 will perform advisory roles to help with integrating the strategy in all ministries. However, the persistent nature of traditional political cultures and routines — such as having a silo mentality, competition between political parties and a distinctive culture of risk avoidance ("German angst") — will regularly prevent these approaches from being implemented consistently.

What is the relevance for climate protection?

What does it mean for climate protection if the pressure to act in transformation policy keeps increasing to a point where the policy reaches the limits of actually being feasible or is even abandoned?

- Finance package on its own will not relieve the burden on the actors

An excessive burden on political actors and other parts of the population as the crises continue to rack up may cause climate protection to become ever less relevant in the complex set of multiple crises. In addition, the priorities in the polycrisis may continue to shift or shift again, with the result that climate protection still has to compete with political responses to crisis events that are required at short notice, despite the issue receiving promises of increased funding. In addition to securing the required funding, it is also important that financial aid can be applied for and paid out in a straightforward way. Within the population as a whole, the issue of climate protection only comes sixth on the worry barometer, and developing trends such as crime and violence or increasing levels of extremism will probably become more relevant and push climate protection further down the list of priorities.

- Transformation governance is nexus governance and climate protection is no longer an isolated policy goal

Climate protection on its own is set to be awarded 100 billion euros to enable effective measures for reducing greenhouse gas emissions to be implemented. The close links between climate change and other challenges that exist because of crises mean that measures must not be adopted in isolation, but must be closely interlinked across policy areas. So it is not a question of how climate protection can be implemented despite what is needed in other areas that require action, but how it can be implemented in order to resolve the existing backlog in investment, increase security and defense capability and mitigate the consequences of intensifying crises, such as dysfunctionalities within systems, infrastructures and services, that also have an impact on people's daily lives.

- Transformation reactance also slows down climate protection

The use of transformation reactance as a tool by right-wing extremist and autocratic or anti-democratic parties and groups is linked as a theme to lines of conflict that particularly lend themselves to polarization. Climate protection belongs to this category and can therefore be used as a reason to blockade the whole transformation in society and in political parties. For climate protection policy, it is also important to adopt

a self-critical stance when promoting approaches intended to boost the level of trust that citizens have in their politicians.

- Coordination between different political levels is not enough

There is still no consistent political strategy that integrates the goals of climate policy right across the board — between energy, social and economic policy, for example. Vertical integration is also in need of improvement. Financing structures are in need of reform; at the same time municipalities are under increasing financial pressure (Destatis, 2025).

- Young people still think climate protection is an important issue

According to a survey, despite the polycrisis, protecting the environment and the climate is still an important issue for a large proportion of young people (78 percent) (Leven et al., 2024). At the same time, there are signs that the importance of the issue as a whole is declining in the face of other crises for society. Sustainable daily consumption habits and collective engagement in support of protecting the environment and the climate are also being practiced less frequently than they were two years ago (ibid.). Young people believe that responsibility for protecting the environment and the climate rests primarily with politicians, business and each individual person. Three-quarters of young people currently believe that industry and business are not doing enough to protect the climate and the environment (ibid.). This high level of importance that young people attach to the issue needs to be maintained, especially given that young people are underrepresented due to the demographic structure of society.

- Greater willingness to protect the climate by getting more involved

Instruments for participatory policymaking and governance such as citizens' forums, future dialogues, real-world laboratories, etc. are increasingly being used in politics and society. They are a very suitable way of developing long-term visions and narratives for successfully implementing climate protection, as was mentioned above, because they bring together different stakeholders and their differing perspectives and support a creative approach to solving problems at a local level. If citizens, stakeholders and other key actors are actively involved in the process, this increases their willingness and engagement to implement the measures designed to protect the climate.

What are the connecting factors for climate protection policy?

The linking together of all sectors and wider society to embrace the change that is needed for successful governance of the transformation has not yet worked, or has only worked to some extent (German Council of Experts on Climate Change, 2025). Will the new German federal government succeed in starting afresh here? How can conflicting goals between the different transformation areas and between the transformation and crisis interventions be identified and formulated as tasks for the government? To support the actions that the government needs to take, new approaches are now being sought to establish a firm link between the envisaged transformation processes and climate neutrality and pursue them effectively under the conditions created by the new shocks and crises that keep emerging.

- Think about climate protection policy in an integrated way

Ever since the polycrisis began, there have been regular reforms to climate policy in Germany that are understood as a short-term response in the context of risks such as an energy shortage or disruption to supply chains. Although these reforms are usually very well prepared and coordinated by the departments (e.g., the German Climate Protection Plan 2050), they are followed by debates about the formulation of targets, prospects for success or the legality of the measures that political parties engage in publicly. This gives the impression that decisions are uncoordinated, which weakens the image of how the government is acting in the transformation (Hertie Foundation, 2025). However, this transformation is a major task for all sectors and for society as a whole. Climate protection as a task that spans all departments has the potential to be linked to all policy areas. This may be an opportunity to avoid becoming disconnected in the transformation process. However, it also carries the risk that any attack on climate protection as an area for action would impact and block the whole of the transformation at different stages.

- Modernizing administration and governance, including in relation to climate protection

It is vital that the growing level of criticism of the weaknesses in the bureaucracy and governance of the transformation is taken on board, especially as this criticism is expressed and supported by a range of different stakeholders. Widespread support within the population for measures designed to reduce bureaucracy in favor of transformation can be expected.

- Interministerial coordination of the need for action and measures

When the amendment to the German Federal Climate Change Act (Klimaschutzgesetz, KSG) was introduced in 2024, responsibility for ensuring that the annual emissions for each sector are met shifted from the individual departments to a situation where the German federal government has overall responsibility across all sectors. Germany's Council of Experts on Climate Change views this as a softening of departmental responsibility, with the risk of getting stuck on long-established technological paths (Council of Experts on Climate Change, 2024). One way to counter this would be to reintroduce a climate cabinet (Hertie Foundation, 2025). This would enable conflicting goals between the departments to be addressed directly, which would make it easier to plan, pass, implement and review appropriate measures. The financial package for climate protection for the incoming government is an important first step in ensuring that the transformation continues. It would also be useful to have a central transformation model for the action that the government needs to take and, based on this, an overarching roadmap as a guide for implementation at the different policy levels and at the interministerial level. Politicians at a German federal state and municipal level should also be included.

- Partnerships with climate protection initiatives for joint activities

If the crisis continues to intensify, there may be more radical protests, including advocating for greater protection of the climate. These protests might be more likely to divide rather than unite society when it comes to the need to act to protect the climate, especially if they are increasingly associated with fear and rage. One consequence of this would be that the climate protection movement would also become increasingly fragmented. Measures designed to facilitate supra-regional and local networking of different groups and movements with similar areas of focus could help to stop this from happening. For example, citizens' initiatives from different regions could enter into partnerships to deliver linked local campaigns, support one another and learn from one another.

- Young people are not just concerned about protecting the climate

Despite the polycrisis, young people really care about protecting the climate and environment. This means that they presumably also support a climate protection policy. This high level of importance that young people attach to the issue needs to be maintained. However, as the importance of the environment and climate is on the decline compared to other issues that are becoming increasingly important in the context of the crisis, there is a risk that climate protection policy will also become less important for the young people who support it as the crisis gets worse. One way to counteract this would be to communicate the close links and interactions between climate protection and other policy goals and for climate protection to be understood as an integral part of crisis intervention measures.

- Narratives developed through participation to deliver climate protection as a symbol of hope at a time of crisis

It would be important for climate protection no longer to be described in isolation as a visionary objective, but for the narrative to link it closely to other central tasks for government and missions for society to strengthen resilience (Grünwald et al., 2021). It is a question of highlighting the close links that climate protection has and the contribution it makes to securing supply chains and food security, national defense and civil security, competitiveness and technological sovereignty. Based on this, potential conflicting goals and compromises that need to be made can be specified and addressed at the implementation stage. If citizens, stakeholders and other key actors are actively involved in the process with citizens' forums, future dialogues or real-world laboratories in relation to climate protection, this will address local challenges and encourage the development of solutions and their implementation. This approach involves working with visions and narratives for the future. With

regard to climate protection policy, they may serve as the key to successfully communicating climate protection measures and the specific impacts they will have on people's everyday lives.

The opportunities and risks that this trend presents are summarized in the box below.

Transformation governance is reaching its limits: opportunities and risks for climate protection

Opportunities

- A central model with a vision of transformation for the action that the government needs to take and an overarching roadmap could serve as a guide for implementation at different policy levels and at the interministerial level.
- Supra-regional and local networking of different groups and movements with different areas of focus for protecting the climate could prevent the climate protection movements from fragmenting and promote mutual learning from one another.
- As the core element for the transformation, climate protection can be linked to all policy areas.
- Despite the polycrisis, young people really care about protecting the climate and environment. This means that they presumably also still support a climate protection policy.
- Climate protection is not simply an isolated task for politicians, but is closely linked to securing supply chains and food security, national defense and civil security, competitiveness and technological sovereignty.
- Visions and narratives for the future that are devised through participation in citizens' forums and future dialogues may serve as the key to successfully communicating climate protection measures and the specific impacts they will have on people's everyday lives.
- Involving citizens or private stakeholders in the development of an attractive shared model for the transformation would help to work out the conflicting goals and make the required measures easier to understand.
- An overarching long-term vision for climate protection in Germany could be developed by conducting future dialogues to enable local requirements and specific issues to be addressed and to make better use of the resources and capacity available from society, science and business at each location.

Risks

- Assigning leadership on the issue of climate protection based on the traditional departmental principle with tasks being split between different ministries runs the risk of creating conflicting goals in the planning, adoption, implementation and review of appropriate measures.
- As the level of crisis intensifies, there may be more radical protests in support of climate protection, which might be more likely to divide rather than unite society when it comes to the need to act to protect the climate and would also cause the climate protection movement to become increasingly fragmented.
- Debates that political parties engage in publicly about the formulation of targets, prospects for success or the legality of reforms under climate policy, which are usually very well prepared and coordinated by the departments, give the impression that decisions are uncoordinated and weaken the image of how the government is acting in the transformation.
- The use of transformation reactance as a tool by right-wing extremist or anti-democratic parties and groups is increasing and does not just apply to climate protection policy.

- Climate protection can be linked to all policy areas, so any attack on climate protection as an area for action would impact and block the whole of the transformation at different stages.
- The environment and the climate are very important to young people, but this trend is on the decline compared to other issues that are becoming increasingly important in the context of the crisis.
- If the polycrisis continues to progress, both transformation fatigue and transformation reactance may become more prevalent in society and, as the level of crisis sensitivity and crisis normality increases, this may also create a new complex situation that continues to act as a brake on transformation policy.
- If it appears that the state is unable to take the action that is needed to implement climate protection policy, this could enable individual organizations or people, such as powerful entrepreneurs, to seize the initiative, increase their level of influence and weaken democracy, as the example of the USA demonstrates.

2.5. Digital governance: more polycentric and more efficient

Administrations and authorities are still undergoing a process of digital transformation that is transforming not just the issues and programs they work on, but also their structures and processes. A digitized administration will have tools for coordinating, planning and measuring the success of climate protection policy in real time. This can also improve collaboration across state and national borders, as can the involvement of a wide range of different stakeholders.

Current facts and figures

The polycrisis is shifting the priorities for action by government in Germany and making cross-departmental coordination and integration of climate protection measures, which was already a difficult task, even more difficult because the capacities and financial resources for climate protection are now becoming ever more scarce. When it comes to the digital transformation of its administration and political institutions, Germany is only in the middle of the pack compared to other European countries. This is primarily due to a reluctance on the part of the authorities to embrace technical implementation, some of which has been inconsistent, as a result of complex administrative processes and regulations governing responsibility as well as tight budgets (Initiative D21 e. V., 2024; Röhl, 2023).

What's changing?

Digitalization is transforming all phases of governance. This ranges from strategic foresight and risk analyses, the formulation of policy goals and missions to the development of measures, monitoring and evaluation and impact analysis. In all phases, there is scope to improve the knowledge base and support communication and cooperation between different policy levels and areas as well as the involvement of external actors from the world of science and society.

- Implementation of digital governance is faltering

Digital governance means using digital technologies and information systems to design, implement and monitor government and administration processes. It aims to improve the level of efficiency, transparency and citizen participation in public administration. There are still shortcomings in the way that the digital transformation of political action is being implemented because of the unresolved complexity of administration and decision-making processes, the pressing demand to intervene in a crisis through policy action, insufficient expansion of digital infrastructures, high requirements in relation to data protection and security and the increase in the amount of disinformation.

- More collaboration and networking

It is evident from the nexus of climate protection with other transformation policies in the polycrisis (see trend 1) that transformative government action requires close coordination between all levels of governance and policy areas. What is more, citizens and political groups are demanding more opportunities to participate, including at an international level. They believe it is increasingly important to be involved in the political decision-making process at a time when the level of crisis is escalating around the globe. Formats such as participation portals, e-participation, online consultations and participation via social media enable citizens to have a stake in democracy — even though these options are generally only utilized by certain groups, while other groups find it difficult to use digital options or are excluded from participating.

- New ways of communicating

One way to support the communication of policy goals and measures is to use digital technologies, especially virtual reality (VR) and augmented reality (AR). Digital storytelling, e.g., in the form of animation videos depicting future scenarios or guides on how to behave in a way that protects the climate, can boost people's understanding of climate protection. Dashboards or situation rooms enable data and knowledge system environments to be displayed in real time and based on personal preferences (UNEP, undated).

- Limits and risks of governance digitalization

Despite the progress that has been made, the process of digitalization is still being slowed down by fragmented responsibilities, concerns about data protection, a shortage of skilled workers and insufficient financial resources. In addition, the polycrisis is revealing that digital solutions also harbor new risks — because of a reliance on tech providers or cyber security vulnerabilities, for example.

What might digital governance of the transformation look like in 2040?

By 2040, digital governance in Germany and Europe will have changed profoundly, driven by the advancing climate crisis, economic disruption and social instability. Digital governance of politics and administration will have become a highly dynamic area of innovation. Digital platforms, interoperable data spaces and AI-based help with decision-making processes will be established at all levels of administration. The European Union will have amended its legislation on data protection again, with the motto being a high standard of data protection meets practical feasibility. Planning, monitoring and crisis management will take place in real time, with citizens, business and science all being involved. Government administration will no longer just act as a service provider, but will be the orchestrator of social transformation. Definitions of goals and decisions on climate protection policy will be coordinated at different policy levels. In terms of its content, governance will focus on strengthening resilience through climate-neutral technological and resource sovereignty. This will allow region-specific challenges to be addressed by providing local capacities and the transfer of knowledge between different regions to be supported in networks. Intersectoral activities to assess consequences with real-time models of the Earth will contribute to anticipatory crisis identification and management. It will be possible to model highly complex relationships between governance options, identify specific windows of opportunity for political intervention and, as a result, also facilitate international climate governance. However, dependence on a few powerful corporations that operate platforms, digital system failure in certain areas and hybrid attacks on digital governance processes and structures will be a major challenge.

What is the relevance for climate protection?

At a time of crisis, short-term measures need to be developed and implemented quickly, without losing sight of long-term goals such as climate neutrality. What does this mean for digital governance in the context of the polycrisis? Digital technologies offer the potential to improve the way that climate protection policy is coordinated, the targeting of specific measures and the measurement of success. Examples of this include the potential that AI offers for increasing efficiency, knowledge management, or better recording, simulation and control of environmentally relevant parameters all over the world (Erdmann et al., 2024; Tan & Crompvoets, 2022).

- Better database for environmental research and governance

Digital technologies offer the potential to achieve better coordination of climate protection between science, society and the world of politics. Real-time monitoring, models and simulation can improve the knowledge base, enabling a faster response to events or new developments, especially in the context of international research collaborations. The potential to increase efficiency exists, but it is by no means certain that it can be leveraged due to the complex nature of administrative structures and decision-making processes. As climate protection requires and generates large amounts of data, there are risks involving data security and reliance on platform providers, especially in an international context.

- Climate protection governance is becoming more polycentric

The need for different departments and authorities to cooperate on climate protection (Roth et al., 2021; Schwaag Serger et al., 2023) is increasing, as is the requirement for technical engagement with NGOs and new alliances to support climate protection, such as Scientists for Future. This is supported and driven by digital governance approaches and real-time data analysis. Civil society and political alliances such as the World Social Forum WSF, Fridays for Future and Extinction Rebellion are taking advantage of this and supporting local initiatives worldwide. Social and environmental justice are core elements of the transformation and, with the global digital networking of transformation actors that are different at a local level, climate protection governance is becoming more polycentric (Directorate-General for Research and Innovation, Dixson-Declève, Sandrine et al., 2023).

- Turning climate protection into a virtual experience

Digital storytelling, e.g., in the form of animation videos depicting future scenarios or guides on how to behave in a way that protects the climate, can boost people's understanding of climate protection. One example of this is the German Environment Agency's interactive narrative formats focusing on how AI is in the public interest (Erdmann et al., 2022). Dashboards or situation rooms also enable data and knowledge system environments to be displayed in real time and based on personal preferences (UNEP, undated).

- Green digitalization and sustainable competitiveness

If the digital transformation is consistently linked to the circular economy and climate protection as a way of championing a green transition, business will view climate protection as being increasingly in its own interest. Examples such as sustainable finance and the new requirements stipulated in the CSRD/sustainability reporting show that companies are ready to do their bit. If this link is not made, then the digital transformation could exacerbate the burden on the environment as an unsustainable driver of growth and accelerate the pace at which planetary boundaries are crossed (Ekardt, 2022; Hofmann et al., 2023).

What are the connecting factors for climate protection policy?

How will more digital governance transform climate protection policy? What opportunities and risks do digital applications offer in delivering successful transformation at a time when the level of crisis is intensifying globally?

- Integrated impact assessments and monitoring

Central, internationally linked databases and dashboards for monitoring the progress of climate protection while ensuring compliance with high quality standards may support coordination across different departments and policy levels, reduce the level of complexity and encourage individual action (Hofmann et al., 2023). International research collaboration may be a way to establish monitoring systems that could measure not just the local impacts of

climate change, but also support analysis of the links between local crisis events and their global contexts. However, funding and implementing systems like this and coordinating them internationally present a major challenge. Recognition that climate protection is a key element for mitigating the polycrisis could increase the level of willingness to participate internationally. Regulation of the platform industry and the use of AI based on European and German standards could also have a positive impact and establish a level of certainty that enables industrial stakeholders to make plans for their business.

- Coordination of climate protection policy across departments

Digital governance structures also offer great potential for climate protection policy, but the hurdles to implementing these structures across the board are very high. If these hurdles could be lowered, this could increase the efficiency of interministerial coordination and improve the knowledge base for making decisions and the exchange of information. As climate protection policy is closely linked to other policy areas, such as security and geopolitics, trade and the economy, which are vital for delivering the transformation in the polycrisis, it is crucial to make sure that data and networks are protected. In addition, reliance on platform providers, especially in an international context, needs to be reduced.

- More digital networking of politics and society for climate protection policy

Civil society and political alliances for climate protection are forming networks internationally and are no longer committed solely to climate protection measures, but also to a transformation that is socially and environmentally just in its entirety. Coordinating matters with them and allowing their voices to be heard will add additional perspectives to the knowledge base for climate protection policy.

- Early crisis detection and real-time management

Digital early warning systems and simulation models (e.g., to highlight climate impacts, supply bottlenecks or migration) are key to the political decision-making process. A national “crisis compass” will link together data in relation to the climate, infrastructure, health, security and social cohesion — managed by a Digital Governance Center at the federal level.

- Digital engagement as a democratic standard

Digital participation will be established in law. Political decisions in key areas such as energy, mobility or urban development will regularly involve deliberative processes with digital support. New formats such as digital citizens’ assemblies with live simulations in digital twins will be an integral part of politics at a municipal level.

- Turning climate protection into a virtual experience

Digital storytelling, in the form of animation videos depicting future scenarios, serious games or guides on how to behave in a way that protects the climate, can boost people’s understanding of climate protection and the associated need to take action. In addition, there is scope to highlight the links between climate protection measures and other activities to illustrate how climate protection policy crosses over into other areas in the polycrisis. One example of this is the German Environment Agency’s “scrollytelling” focusing on how AI is in the public interest (Erdmann et al., 2022). Dashboards or situation rooms also enable data and knowledge system environments to be displayed in real time and based on personal preferences (UNEP, undated).

The opportunities and risks that this trend presents are summarized in the box below.

Digitalization is making governance more polycentric and more efficient: opportunities and risks for climate protection

Opportunities

- Central, internationally linked databases and dashboards can support monitoring and impact assessments across different departments and policy levels.
- International research associations can use monitoring systems to measure and investigate the local impacts of climate change and how they interact with other transformation indicators globally.
- Climate protection policy is closely linked to other important policy areas for delivering the transformation in the polycrisis, such as security and geopolitics, trade and the economy, so it is crucial to make sure that data and networks are protected. Greater regulation of the platform industry and the use of AI based on European and German standards could establish more planning certainty.
- Digital storytelling and serious games can be used to promote education, information and participation to support protection of the climate.
- A clear focus on transformation by linking together the green and digital transformation in environmental and economic policy would be a positive sign of a long-term political strategy for businesses and could accelerate the green transformation of the economy.

Risks

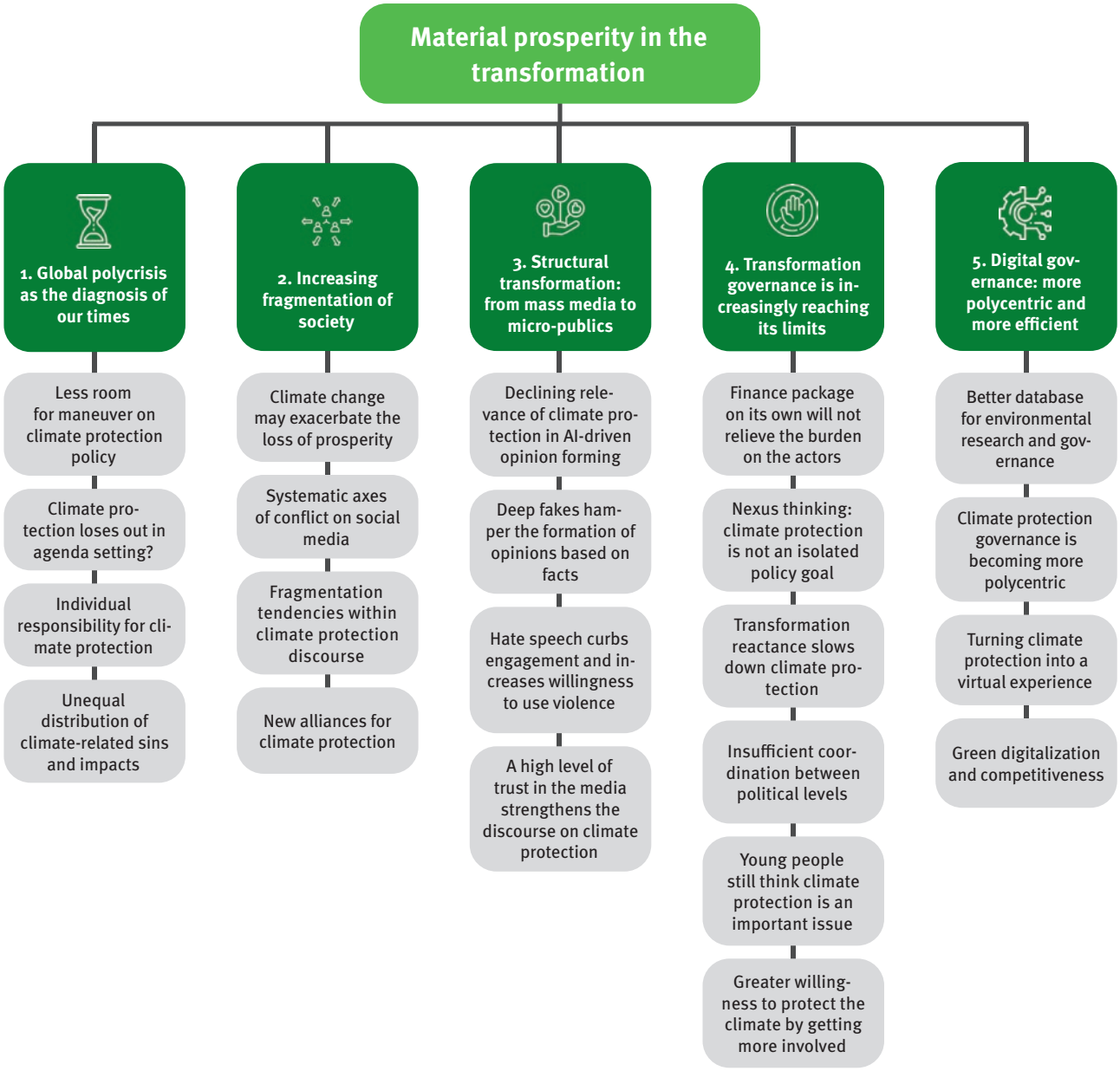
- Introducing digital governance systems is costly and time-consuming and this could place a strain on the budgets allocated to climate protection policy.
- Different standards of digital systems and applications can make cooperation more difficult, both between ministries and policy levels but also internationally.
- The introduction of digital tools in climate protection policy may increase the level of cyber security threats and establish a reliance on platform providers.
- Administrations may lack the flexibility to implement new governance approaches in an agile and digital way.
- Digital governance approaches involving AI run the risk of discriminatory bias.

3. Ability of politicians to act to deliver climate protection policy in the polycrisis — recommendations

The ability of politicians to act to protect the climate is being greatly challenged by the polycrisis. This has been illustrated by the five trends presented here with the impacts they have on climate protection and their relevance to creating a successful climate protection policy.

Figure 3 summarizes the relevance of the trends to climate protection.

Figure 3: The five trends and their relevance to climate protection



Source Fraunhofer ISI

The five main trends that have been evaluated in relation to the ability of politicians to act in the polycrisis cover a wide range of both opportunities and risks for climate protection and therefore offer political room for maneuver across different departments for climate protection policy and for accelerating the transformation of society.

Over the coming years, the five highlighted trends will shape the German federal government's ability to act to deliver a consistent transformation to achieve climate neutrality. They will have different impacts on the potential options for climate protection in an era of escalating crisis. They entail both opportunities and risks for climate protection policy.

How can politicians respond appropriately to the complex challenges that the polycrisis presents and yet still pursue a transformation strategy for delivering climate neutrality that is as consistent as possible across legislative periods? What new approaches to governance are needed to ensure that climate protection policy becomes the key to unlocking this transformation in an era of escalating and interlinked crisis phenomena and strengthens the population's confidence in the ability of its politicians to take action?

This study cannot provide all the answers to these questions. However, the five trends can highlight important areas for policy measures to focus on. The innovative approach of transformative resilience offering specific capacity for governance in the polycrisis is used as the conceptual framework and is first presented in section 3.1. The areas of action are then presented (section 3.2) and finally four areas of action are prioritized (section 3.3).

3.1. Transformative resilience as a goal and framework for action

To protect the climate in the global polycrisis, the ability of the German federal government to act needs to evolve. The ever increasing number of global crises with ever closer links between them are impinging on a society in Germany that is itself characterized by tendencies toward fragmentation and a structural transformation in the public realm. The previous transformation governance is increasingly reaching its limits in the midst of the global polycrisis. A suitable way to meet this challenge is to adopt a new approach to governance that has increasingly gained favor in recent years: transformative resilience (Rohne Till et al., 2024).

In a study conducted by the European Environment Agency, transformative resilience was highlighted as a crucial capability of governance in the polycrisis and defined as follows: transformative resilience is the ability of systems within the sustainability process to successfully handle major changes, i.e., to move toward the desired sustainability goals and pursue effective paths despite or even because of increasing stresses and strains, sudden shocks or crises (EEA, 2023; Erdmann & Kimpeler, 2025). Accordingly, specific capacities for transformative resilience can be found in all phases of the traditional governance cycle. This starts with foresight and strategic planning as well as the technology impact assessment, followed by the development of measures, coordination across different policy areas and policy levels, implementation of the measures, monitoring and evaluation (EEA, 2023).

3.2. Areas requiring action for climate protection policy in the era of the polycrisise

An analysis of the five trends for climate protection reveals the following overarching areas requiring action to enable the opportunities and risks to be addressed in the best possible way.

Six overarching areas requiring action

- Strengthening nexus thinking to establish cooperation structures that span policy levels and policy areas, especially when there is a need to intervene in a crisis at short notice.
- Setting up a climate cabinet for interministerial coordination and agreement of all climate protection measures.
- Priority of climate protection criteria in crisis intervention.
- Expansion of digital governance and environmental research to improve the knowledge base, enable international cooperation and boost the efficiency of political processes and governmental action.
- Participatory development of a model and narratives for specific target groups in order to maintain the transformation to climate neutrality within society as a whole over the long term.
- Institutionalization of strategic foresight for the transformation and early detection of signals that the crisis is intensifying.

3.3. Conclusion: climate protection policy as a test case for democratic resilience

With the dynamics of social, environmental, economic and geopolitical crises overlapping, climate protection policy is increasingly proving to be a litmus test for the ability of politicians in modern democracies to act effectively. Analysis of the trends shows that it is not a lack of knowledge or technical solutions that presents the central obstacle, but the wrangling over political coordination, social integrability and legitimate forms of implementation.

Climate protection is not just one policy area among many, but an issue that cuts across many areas and is defined more than almost any other issue by the weaknesses (but also strengths) of political governance processes, social cohesion and public communication. This means that climate policy is not just environmental policy, but also social policy, economic policy, security policy and increasingly also an area for democratic affirmation.

In an era of increasing fragmentation, digital polarization and dwindling trust in political institutions, an integrated climate policy that is well communicated and designed in a participatory way can become a model for democratic action in the polycrisis. It has the potential to form new alliances, strengthen the ability of society to act and combine transformative forces at a municipal, national and global level.

However, this requires a political self-conception that no longer relies on reaction, but on strategic resilience and co-creative governance. This is the only way to take advantage of the opportunity to view climate protection not as a victim of the crisis, but as the engine that can drive the future of a learning democracy.

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