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Interim Report

Action for Climate Empowerment in Germany

From Public Concern to a Climate-Ready Society

by:

Sophia Dasch, Julius Rauber, Christian Thorun
ConPolicy – Institut für Verbraucherpolitik, Berlin

Christopher Schrader
Hamburg

Carel Mohn
klimafakten, Berlin

Mirjam Jenny
Universität Erfurt

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

Report performed by:
ConPolicy – Institute for Consumer Research
Neue Grünstraße 17
10179 Berlin
Germany

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Christian Tietz

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Abstract: *Action for Climate Empowerment* in Germany

This report examines how Action for Climate Empowerment (ACE) can be implemented and strengthened in Germany. Rooted in Article 6 of the UNFCCC and Article 12 of the Paris Agreement, ACE highlights education, training, public awareness, participation, and access to information as key elements of effective climate action.

The study describes international practices of ACE, then analyses the current status of ACE in the German context through expert interviews and desk research. It finds that while Germany is active in areas such as Education for Sustainable Development (ESD) and climate communication, ACE remains little known and not systematically embedded in policy. Activities are fragmented, lacking an overarching strategy or shared understanding of ACE's importance.

The report proposes a five-year plan with five goals: (1) establishing ACE structures, (2) strengthening monitoring, evaluation and reporting, (3) embedding ACE in policies, (4) improving coordination across governance levels, and (5) providing resources and tools. Ultimately, the report concludes that Germany has many existing strengths but needs better coordination and integration. Strengthening ACE is essential to make climate action more democratic, participatory, and resilient—and to counter misinformation and polarization.

Kurzbeschreibung: *Action for Climate Empowerment* in Deutschland

Der Bericht untersucht, wie *Action for Climate Empowerment* (ACE) in Deutschland umgesetzt und gestärkt werden kann. ACE, verankert in Artikel 6 der UN-Klimarahmenkonvention und Artikel 12 des Übereinkommens von Paris, betont Bildung, Training, Öffentliches Bewusstsein, Partizipation und Zugang zu Informationen als zentrale Voraussetzungen für wirksamen Klimaschutz.

Die Studie erläutert internationale Beispiele von ACE und analysiert auf Basis von Expert*inneninterviews den Status Quo in Deutschland. Zwar existieren verschiedene Aktivitäten, wie in den Feldern von *Bildung für Nachhaltige Entwicklung* (BNE), Klimakommunikation und Beteiligung, doch ACE ist kaum bekannt und nicht systematisch verankert. Es fehlt eine übergreifende Strategie und ein gemeinsames Verständnis seines Mehrwerts.

Der Bericht schlägt ein fünfjähriges Umsetzungskonzept mit fünf Zielen vor: (1) Aufbau von ACE-Strukturen, (2) Stärkung von Monitoring, Evaluation und Berichterstattung, (3) Integration in Politikfelder, (4) bessere Koordination und (5) Bereitstellung von Ressourcen. Deutschland verfügt über gute Ansätze, doch es braucht eine stärkere Vernetzung, Sichtbarkeit und strategische Steuerung. Ohne ACE drohen Polarisierung und Akzeptanzverlust – mit ACE kann Klimapolitik demokratischer und widerstandsfähiger werden.

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Abbreviation	Explanation
ACE	Action for Climate Empowerment
BIBB	Federal Institute for Vocational Education and Training
BNE	Bildung für Nachhaltige Entwicklung/ Education for Sustainable Development
COP	Conference of the Parties
ESD	Education for Sustainable Development
IKI	Internationale Klimaschutzinitiative/ International Climate Initiative
IPCC	Intergovernmental Panel on Climate Change
NDC	Nationally Determined Contributions (in Paris-Agreement)
NGO	Non-Governmental Organization
MER	Monitoring, Evaluation and Reporting
SDGs	Sustainable Development Goals
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

Summary

This research report explores how Action for Climate Empowerment (ACE) can be implemented and strengthened in Germany. ACE, rooted in Article 6 of the UNFCCC and Article 12 of the Paris Agreement, emphasizes that education, training, public awareness, public participation, access to information and international cooperation are not optional, but essential to advancing climate action. The working package was part of a broader project to develop communication concepts for international climate action for the German Environment Agency (UBA), with this specific work package focusing on the domestic implementation of ACE.

The report follows a four-step approach. It begins by outlining the foundations of ACE, its international context, and its six core elements. It then draws on international case studies from selected countries to identify promising practices and lessons for Germany. The analysis shifts next to the German context, where expert interviews and desk research provide an overview of the current status of ACE-related activities. Finally, the report synthesizes these insights into an implementation concept for strengthening ACE in Germany over the next five years.

The findings reveal that while Germany is already active in areas closely related to ACE—such as Education for Sustainable Development (ESD), climate communication, and participatory initiatives—the term "ACE" itself is still little known and not systematically embedded in policy. Activities often occur in silos, linked to individual projects or sectors, without a unifying structure. Overall, our analysis finds that there is no overarching strategy to implement the mandate of Article 6 of the UNFCCC and 12 of the Paris Agreement into government policy; perhaps even more importantly, there also is no understanding that this would be desirable. Strengths include Germany's advanced ESD architecture, internationally its elaborate monitoring system of ESD. However, significant challenges remain: fragmentation across governance levels, a lack of coherent national structures, resource disparities between municipalities, and limited integration of communication and participation in policy design.

To address these gaps, the report proposes a five-year implementation concept, structured along five goal areas: (1) establishing overarching ACE structures, (2) strengthening monitoring, evaluation, and reporting, (3) embedding ACE into climate and sectoral policies, (4) improving coordination across government levels and with civil society, and (5) enabling support through tools, resources, and communication. Each year is designed with a specific focus—from laying foundations and building networks, to institutionalizing and scaling successful practices, to finally evaluating and feeding lessons learned into a national ACE strategy.

In sum, the report highlights that Germany already has many of the ingredients for effective ACE but lacks strategy coordination, visibility, and integration and a shared understanding among policy-makers of the benefits and potential of ACE as an integral element of climate policy. In fact, strengthening ACE is not only about creating new structures but about connecting existing initiatives, securing resources, and ensuring that climate empowerment becomes a cross-cutting pillar of climate policy. The overarching message is clear: without ACE, climate policy cannot succeed, as it risks leaving citizens behind. But there are further serious consequences: without ACE, climate debates risk becoming unnecessarily polarized and, out of fear of public backlash or protests, may not take place at all. Moreover, ACE is urgently needed precisely because disinformation and anti-climate narratives are increasingly being used to deliberately undermine climate policy. For this reason alone, inaction or neglecting ACE is simply not an option. With ACE, however, Germany has the chance to make climate action more democratic, participatory, and resilient.

Zusammenfassung

Dieser Forschungsbericht untersucht, wie Action for Climate Empowerment (ACE) in Deutschland umgesetzt und gestärkt werden kann. ACE, verankert in Artikel 6 der Klimarahmenkonvention (UNFCCC) und Artikel 12 des Übereinkommens von Paris, betont, dass Bildung, Ausbildung, Öffentlichkeitsarbeit, Partizipation, Zugang zu Informationen und internationale Zusammenarbeit keine optionalen Zusatzthemen sind, sondern wesentliche Voraussetzungen für wirksamen Klimaschutz. Das Arbeitspaket ist Teil eines größeren Projekts zur Entwicklung von Kommunikationskonzepten für den Themenbereich internationaler Klimaschutz des Umweltbundesamts (UBA). Dieses Arbeitspaket richtet den Blick jedoch auf die nationale Umsetzung von ACE.

Der Bericht folgt einem vierstufigen Ansatz. Zunächst werden die Grundlagen und der internationale Kontext von ACE sowie seine sechs Kernelemente erläutert. Anschließend werden anhand internationaler Fallstudien aus ausgewählten Ländern Good Practices und übertragbare Erkenntnisse für Deutschland herausgearbeitet. Der Fokus richtet sich dann auf den deutschen Kontext, wo Expert*inneninterviews und Desk Research einen Überblick über den aktuellen Stand der ACE-bezogenen Aktivitäten liefern. Abschließend werden die Ergebnisse in einem Umsetzungskonzept für die nächsten fünf Jahre zusammengeführt.

Die Analyse zeigt: Deutschland ist bereits in vielen ACE-nahen Bereichen aktiv – wie der Bildung für nachhaltige Entwicklung (BNE), der Klimakommunikation oder partizipativen Verfahren. Doch der Begriff ACE selbst ist wenig bekannt und ACE ist nicht systematisch in Politik und Strukturen verankert. Aktivitäten erfolgen häufig isoliert, projektbasiert oder sektoral, ohne verbindendes Dach. Insgesamt zeigt die Analyse, dass es keine übergreifende Strategie zur Umsetzung der Vorgaben von Artikel 6 des UNFCCC und Artikel 12 des Übereinkommens von Paris in die Regierungspolitik gibt; vielleicht noch wichtiger ist, dass auch kein Verständnis dafür vorhanden ist, dass dies wünschenswert wäre. Zu den Stärken von ACE in Deutschland zählen die gut ausgebaute BNE-Architektur, inklusive des nationalen BNE-Monitorings. Gleichzeitig bestehen erhebliche Herausforderungen: fragmentierte Zuständigkeiten zwischen Regierungsebenen, fehlende nationale Koordination, ungleiche Ressourcenverteilung zwischen Kommunen sowie eine bislang begrenzte Integration von Kommunikation und Partizipation in die Politikgestaltung.

Um diese Lücken zu schließen, schlägt der Bericht ein fünfjähriges Umsetzungskonzept vor, das auf fünf Zielebenen basiert: (1) Aufbau übergreifender ACE-Strukturen, (2) Stärkung von Monitoring, Evaluation und Berichterstattung, (3) Verankerung von ACE in Klima- und sektoralen Politikansätzen (4) Ausbau der Koordination zwischen staatlichen Ebenen und mit der Zivilgesellschaft sowie (5) Bereitstellung von Werkzeugen und Ressourcen. Jedes Jahr setzt dabei einen eigenen Schwerpunkt – von Grundlagenarbeit und Netzwerkbildung über Institutionalisierung und Skalierung erfolgreicher Ansätze bis hin zur Evaluation und dem Transfer der Ergebnisse in eine nationale ACE-Strategie.

Zusammenfassend wird deutlich: Deutschland verfügt bereits über viele Bausteine für eine wirksame ACE-Umsetzung. Es mangelt jedoch an einer übergreifenden strategischen Koordinierung, an Sichtbarkeit und Integration sowie an einem gemeinsamen Verständnis unter politischen Entscheidungsträger*innen über die Vorteile und das Potenzial von ACE als integraler Bestandteil der Klimapolitik. Tatsächlich geht es bei der Stärkung von ACE nicht nur darum, neue Strukturen zu schaffen, sondern bestehende Initiativen besser zu vernetzen, Ressourcen zu sichern und sicherzustellen, dass Klimabefähigung zu einer querschnittsorientierten Säule der Klimapolitik wird. Die zentrale Botschaft lautet: Ohne ACE läuft die Klimapolitik Gefahr, Bürger*innen nicht mitzunehmen. Hinzu kommen weitere schwerwiegende Folgen: Ohne ACE besteht die Gefahr, dass die Klimadebatte unnötig polarisiert

und aus Sorge vor öffentlichem Gegenwind teilweise gar nicht mehr geführt wird. Darüber hinaus ist ACE allein deshalb dringend erforderlich, weil gezielte Desinformation und Anti-Klimaschutz-Kommunikation zunehmend dazu eingesetzt werden, Klimapolitik zu schwächen und ihre Akzeptanz zu untergraben. Schon aus diesem Grund ist Untätigkeit oder das Unterlassen von ACE keine Option. Mit ACE jedoch hat Deutschland die Chance, Klimaschutz demokratischer und resilienter zu gestalten.

1 Introduction: Why This Project – and Why Now?

Public concern about climate change in Germany is high. Clear majorities among the supporters of every political party, except for potential AfD and FDP voters, want more climate action from the party they support than they currently perceive from policymakers of that party (Betsch et al., 2025). Moreover, 83 percent in Germany are concerned that natural disasters will increase because of climate change, while 71 percent believe that policymakers should do more to address climate change (Teichler et al., 2025). Despite the often polarising tone of the climate debate in the media and politics, societal support for climate protection runs far deeper and broader than is commonly assumed. People consistently underestimate how willing others are to take climate action and how seriously they regard the issue, a pattern observed worldwide (Andre et al., 2024). This perception gap, also described as 'pluralistic ignorance' in social psychology literature, has proven to have a profound negative impact on societal readiness to act against climate change. It is against this background that the Yale Center for Climate Communication has recently suggested to include the statement that 'others care' about climate change in the list of the six so-called 'key truths' that serve as gateway beliefs predicting support and readiness to engage in political advocacy for climate action (Badullovich et al., 2025).

The challenge — and opportunity — is to bridge the gap between public concern and collective climate action. This means ushering in a new era of climate policy that is closer to the people: a democratic, participatory approach that not only listens to citizens but equips them with the knowledge, skills, and agency to shape the transition themselves without offloading government responsibility to tackle climate change to individuals. In such an approach, climate action is co-created from the ground up and with policies that strengthen democracy by returning opportunities and decision-making power to citizens and with policies that prioritize system-level changes over individualizing climate action. **Action for Climate Empowerment (ACE)** offers exactly this framework.

1.1 Background

Action for Climate Empowerment is a global call to involve every member of society in the effort to tackle the climate crisis. Implemented nationally, ACE wants to ensure that civil society plays a central role in addressing climate change. Simply put, "*the overarching goal of ACE is to educate, equip and empower all members of society to engage in climate action.*" (UNFCCC, 2024b).

Its foundations lie in two landmark agreements: Article 6 of the United Nations Framework Convention on Climate Change (UNFCCC), adopted at the 1992 Earth Summit in Rio de Janeiro, and Article 12 of the Paris Agreement (2015). The latter explicitly recognizes that education, participation, and access to information are not "nice-to-have" extras — they are essential to achieving the Agreement's core goal: limiting climate change.

Article 12

Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing actions under this Agreement.

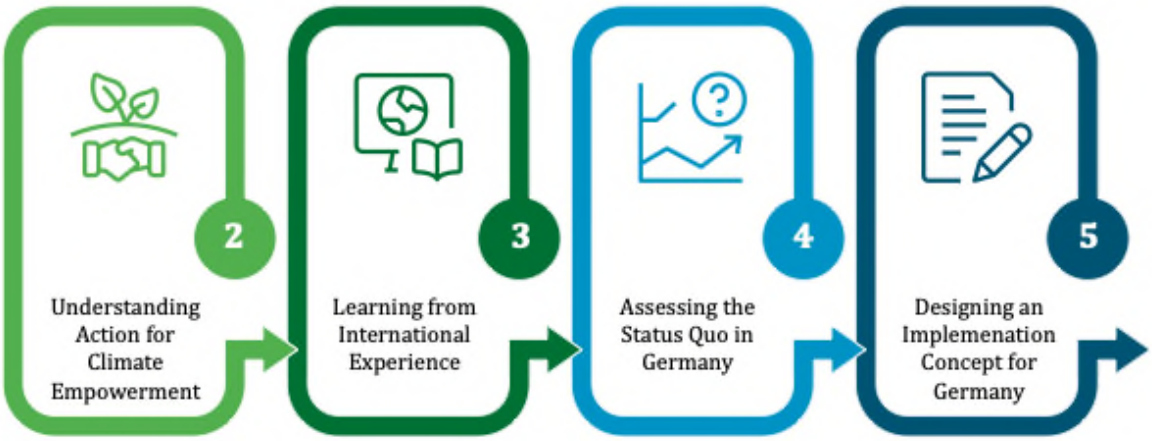
Adoption of the Paris Agreement (UNFCCC, 2015a)

1.2 Approach of this work package

This interim report focuses on **Work Package 4** of a project commissioned by the German Environment Agency (UBA). While the broader project primarily develops a communication

strategy for topics of international climate action at UBA, this specific work package broadens the perspective to all elements of ACE like participation, education, and training and thus, moves far beyond climate communication. The aim of this work package is to develop a concept for how ACE can be effectively implemented and strengthened in Germany.

Figure 1: Steps of the Work Package



Four Steps Toward an Implementation Concept for Action for Climate Empowerment in Germany (Numbers refer to the corresponding chapters).
Source: Own illustration, Conpolicy, using the illustration tool Napkin.ai and MS PowerPoint

To achieve this aim, the work is structured into several steps:

- We begin by taking a closer look at the **term of ACE** itself — outlining what ACE entails and where its international foundations lie (see Chapter 2).
- We then present case studies from selected countries to explore how they implement ACE. These **international examples** help identify insights that can inform the German approach (see Chapter 3).
- Shifting the focus back to Germany, we analyse the **current state of ACE** through in-depth expert interviews. This step also examines whether and how lessons from international practice can be transferred to the German context (see Chapter 4).
- Finally, we bring these strands together to outline a **concept for implementing and strengthening ACE** in Germany (see Chapter 5).

2 What is Action for Climate Empowerment?

ACE encompasses six elements that provide the foundation for a society that is both informed and ready to act, giving people the means and opportunities to help shape a fair climate future. Table 1 presents these six elements, their purposes, and the vision they seek to realise.

Table 1: ACE elements – objectives and societal vision

ACE Elements	Objectives		Societal Vision
Education	Change habits in the long-term	Foster a better understanding of, and ability to address climate change and its effects	People understand the causes and consequences of climate change, make informed decisions and take appropriate actions to address it.
Training	Develop practical skills		Target groups have the core technical and soft skills as well as advanced knowledge that is needed to support the transition to green economies and sustainable, inclusive climate-neutral and resilient societies.
Public Awareness	Reach people of all ages and walks of life	Promote community engagement, creativity and knowledge in finding climate change solutions	Communities and individuals are engaged in the common effort needed to foster climate-friendly behaviour, sustainable lifestyles and implement national, regional, sectoral and international climate change policies.
Public Access to information	Make information freely available		There are strong connections between knowledge production, knowledge sharing and decision-making. People have the tools they need to play an active role in addressing climate change.
Public Participation	Involve all stakeholders in decision-making and implementation	Engage all stakeholders in debate and partnership to respond collectively to climate change	People are attentive to policy-making and participate in the implementation of climate policies.
International Cooperation	Strengthen cooperation, joint efforts and knowledge exchange		Governments and organizations support each other with resources, technical expertise, ideas and inspiration for developing climate action programmes.

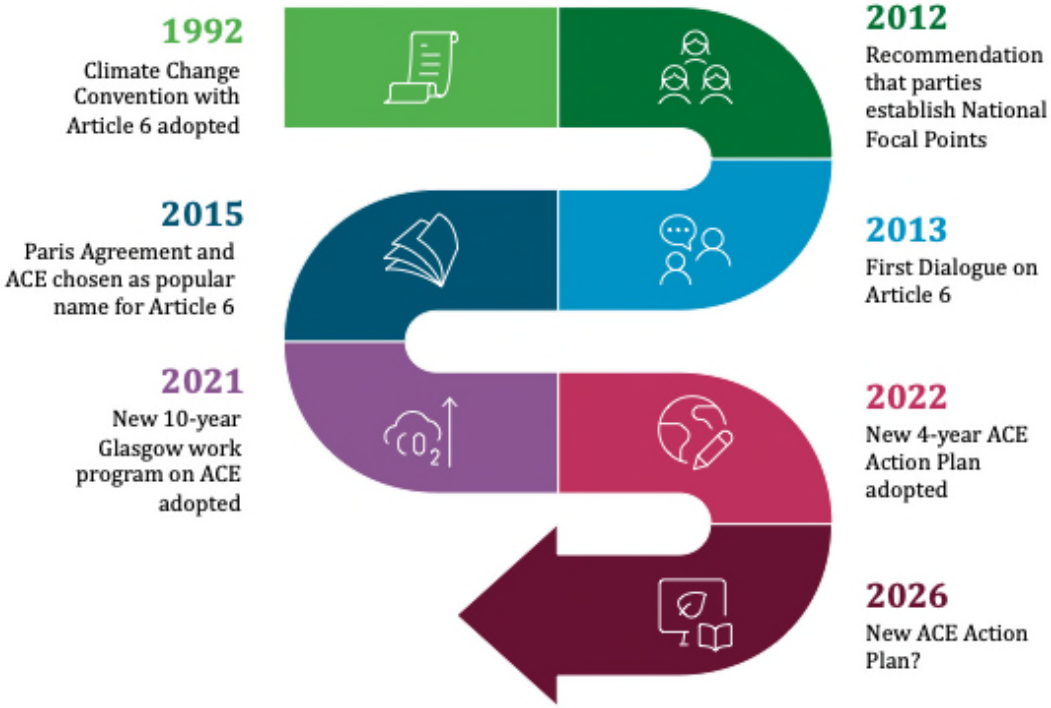
Source: Adapted Table and text from p. 3 & 4, UNESCO (2020)

2.1 History of ACE

The roots of ACE reach back several decades. Looking at the origins of ACE helps to better understand its current relevance because it shows how long the international community has been working towards climate empowerment, which public commitments are tied to it, and how ACE has become a continuing obligation embedded in the very beginnings of international climate policy. The foundation was laid in 1992, when Article 6 was written into the UNFCCC as it was adopted on 9 May that year (UNESCO & UNFCCC, 2016). Even then, the Convention recognized that tackling climate change isn't just about technology and emissions — it's about people. The Kyoto Protocol, adopted in 1997, reinforced this by highlighting in Article 10(e) the

importance of international cooperation in achieving the goals of Article 6 (UNESCO & UNFCCC, 2016).

Figure 2: Key Milestones in Advancing ACE



There are several important milestones in the history of ACE (UNESCO & UNFCCC, 2016; UNFCCC, 2013, 2015b)
Source: Own illustration, ConPolicy, using the tool Napkin.

Fast forward to 2012: at COP18 in Doha, governments adopted the eight-year Doha Work Programme on Article 6 (2012–2020). Among other things, it recommended Parties to designate a National Focal Point — a dedicated contact person responsible for coordinating national activities under Article 6 — and to provide them with the technical, financial, and informational support they need (UNFCCC, 2013). Moreover, COP18 also set the stage for the very first ACE Dialogue, held in the next year, 2013.

In June 2015, the term Action for Climate Empowerment was introduced (UNFCCC, 2015b). The reason was to avoid confusion with Article 6 in the draft text of the Paris Agreement — which, as negotiations made clear, would deal with carbon markets, not public engagement (UNFCCC, 2015a). Later that year, at COP21 in Paris, governments agreed to cooperate in taking measures to enhance climate change education, training, public awareness, public participation, and public access to information — recognizing these as essential for implementing the Paris Agreement.

The most recent chapter in this story came in 2021 at COP26 in Glasgow, with the adoption of the **Glasgow Work Programme** (GWP)(UNFCCC, 2021a). The GWP calls on countries to weave ACE more tightly into their national climate policies and to develop dedicated ACE strategies covering all six elements. It sets out guiding principles — ACE should be country-driven, cost-effective, flexible, phased, systematic, and holistic — and urges attention to gender equality, intergenerational perspectives, and sustainable development. It also underlines the value of using social science insights to inspire behaviour change. In 2026, progress will be reviewed to see how well these commitments have been met and a new ACE action plan will be prepared.

Figure 3: Six ACE elements and four priority areas of the Glasgow work programme

Source: Own illustration, ConPolicy, using the tool Napkin.

The Four Glasgow Priorities and Why They Matter

Under the Glasgow Work Programme, Parties agreed on four priority areas to guide ACE from 2021 to 2031. Together, they form a roadmap for making ACE both effective and sustainable.

- **Policy Coherence**: ACE works best when it is not an isolated initiative, but integrated in a country's broader climate strategies. Thus, ACE should be aligned with national climate policies, adaptation plans, and sectoral strategies.
- **Coordinated Action**: Climate empowerment requires teamwork. The GWP calls for stronger coordination between all stakeholders, ensuring that resources are used efficiently.
- **Tools and Support**: Ambition alone is not enough; those implementing ACE need the right instruments, resources, and capacity-building opportunities, in particular at the subnational and local level.
- **Monitoring, Evaluation and Reporting**: Regular evaluation and reporting helps identify what works, what needs adjustment, and how impact can be increased over time. And parties need the participation and support of stakeholders who are involved in ACE activities in assessing the progress of their work.

In addition to the directly relevant agreements, such as the Glasgow Work Programme, there are also other international frameworks that play an important role in the implementation of Action for Climate Empowerment.

Other Internationally Relevant Agreements

ACE intersects with at least two other key global agreements: the Sustainable Development Goals (SDGs) and the Aarhus Convention.

- **Sustainable Development Goals (SDGs)**: Adopted in 2015 at a UN summit in New York, the 17 SDGs aim to be achieved by 2030 and are collectively referred to as the *2030 Agenda* (UN, 2025b). Several goals are directly connected to ACE — most notably Climate Action (Goal 13), but also Quality Education (Goal 4), Clean Water and Sanitation (Goal 6), Affordable and Clean Energy (Goal 7), and Decent Work and Economic Growth (Goal 8). Each year, the UN Secretary-General reports on progress toward the goals; in 2024, he warned that implementation is "severely off-track to achieve the 2030 Agenda"(UN, 2025a).
- **Aarhus Convention**: Signed in 1998 in the Danish city of Aarhus and entering into force in 2001, the Aarhus Convention grants the public the right to access environmental information, participate in environmental decision-making, and seek justice in environmental matters (Aarhus Konvention, 2024).

2.2 Vision for an Empowered Climate-Ready Society

Figure 4: Community Gardening as an Example for Climate Empowerment

The photograph shows two community garden members cropping leeks, one aged seven, another retired.
Source: NCVO London (CC BY 2.0)

Throughout the history of climate change, active citizens have been at the forefront of driving change for a future within the planetary boundaries. As the IPCC (Creutzig et al., 2022) puts it, "Civil society social movements are a primary driver of social and institutional change." This is especially true in Germany: Fridays for Future, for example, mobilised extraordinary public attention and participation. In 2019 alone, it brought up to 1.4 million people into the streets across 500 towns in Germany (Selzer & Rademacher, 2021). While these moments might capture the public's attention, they are only one part of the picture.

Active citizenship in climate action goes far beyond mass demonstrations: it is made up of countless roles and strategies. *Change agents* focus on innovation, creating and testing positive and constructive solutions that can serve as models for wider adoption (Moyer, 2001). *Reformers* work from within institutions to shift policies, laws, and systems toward more sustainable and equitable outcomes. Informed *citizens* support social change towards a fair climate future. All those roles are essential and they can create change in many ways. Transformation happens through the interplay of broad societal shifts, established systems and institutions, and protected niche-spaces for innovation (see Multi-Level Perspective, Geels & Schot, 2007). Sometimes new ideas slowly grow within the system, sometimes they are pushed by public pressure or sudden crises, and sometimes they break through from the margins to reshape the mainstream. In each of these pathways, empowered people are essential — whether they are creating niche innovations, working inside institutions to reform them, or challenging dominant narratives.

For citizens to be truly equipped and adaptable enough to respond to change and able to contribute meaningfully to a positive climate future, the right structures must be in place. People need access to the tools that enable them to act: education and training that build skills, awareness that sharpens understanding, climate information that is clear, reliable, science-based and publicly available, opportunities to participate in policy development and climate action, and cooperation both locally and globally.

When these conditions are met, people can play their part in numerous ways. They might experiment with new, low-carbon ways of living in niche communities, pioneer sustainable mobility or food systems, follow and contribute constructively to the public climate debate, or work within established institutions. Most importantly, they are empowered to take part in the democratic process and build the society they are living in.

This is precisely the **vision of Action for Climate Empowerment**: creating the conditions in which every person, supported by enabling institutions, effective governance and inclusive policies, has the knowledge, skills, agency and opportunity to contribute to shaping a fair and climate-resilient future. The aim of this project is to better understand how Germany can move toward this vision – not only by empowering individuals, but also by strengthening the systemic, educational and institutional frameworks that make collective climate action possible and creating a climate-ready society.

3 What Insights Can Be Drawn from International ACE Practices?

As Action for Climate Empowerment (ACE) is a task anchored in Article 12 of the 2015 Paris Agreement (United Nations, 2015), and thus all signatory states should engage in it, a first step to a German ACE strategy could be a look around at international partners. Therefore, the project team analysed a sample of eight other countries to identify common patterns and good practice examples from countries with an ambitious climate policy as well as an economic power comparable to Germany. The choice fell on a number of EU member states: France, Italy, the Netherlands, Denmark and Austria. They were joined by the UK and the USA as well as Chile, as one of the few countries highlighted by the UNFCCC for its comprehensive ACE strategy. This chapter contains the research status at the end of March 2025. A more detailed report on the findings can be found in the Annex of this study.

Sampling was necessary because there are no comprehensive reports in international climate policy that specifically address ACE. Information can be found in the *National Communications* of the Parties to the UNFCCC in the chapters on "Education, Training and Public Awareness" and for some countries in the *Biennial Transparency Reports* under the Paris Agreement. The former turned out to be a major source for research on international good practice. The documents provided few answers, however, about some questions the project team was interested in: Those concerned the structural set-up of ACE policies in the sample states: Was there a government-wide coordination for example or did the responsible personnel build on social science input? Answers were sought through e-mail contact and a few interviews; most the information gained there was classified as off-the-record in the sense that facts and explanations could be used but not attributed. It turned out that neither coordination nor science input was found in all but one of the eight countries, namely Chile.

In a document on good-practice examples, UNFCCC (UNFCCC, 2024) lists only a few countries which so far have succeeded to some extent in integrating ACE into their climate policy under the Paris Agreement in a systematic ("holistic") manner. Almost all are in the Global South, such as Cape Verde, Zambia, Chile and Peru. The only European country in this category is Andorra. However, many more nations, including OECD countries, had according to the report already included individual keywords from the ACE elements in their Nationally determined Contributions (NDCs, the central instrument under the Paris Agreement). A UNFCCC synthesis report for COP28 in Dubai 2023 (UNFCCC 2023) contains high percentages: 93 percent of states mention public participation, 65 percent talk about awareness-raising measures, 54 percent report training and 49 percent education, 36 percent cite access to information on climate issues. In summary, 98 percent of the state parties have taken ACE elements into account in their NDCs.

3.1 Results of the research for *International Good-Practice* examples

The reporting will start with **two examples of outliers** (from a German perspective) **that together span the spectrum of ambitious ACE policy from theory to practice**. On the one hand the USA where a civil society initiative had developed and presented a comprehensive ACE Strategic Planning Framework. On the other hand Chile where an interministerial effort led to a comprehensive ACE strategy published in 2024.

3.1.1 USA

In the United States of America a group of about 150 interested and dedicated individuals started deliberating an ACE planning framework during the end of Trump's first presidency and

the beginning of the Covid-19-pandemic, i.e. primarily in 2020 (Bowman & Morrison, 2021). This preliminary work was not taken up by the Biden administration, and needless to say, neither did the second Trump-government make any use of the ideas of the initiative. Still, this concept can be used as an example to explain much of what ACE policy could look like.

The group of experts saw ACE is "*the fastest and most efficient way to accelerate a transition to a low-carbon world that is equitable and just*". ACE could then redirect the focus from technocratic CO_2 accounting "*to the lives of the people whose behaviours and choices will determine what the world becomes in the next few decades*" (quotes from chapter 1). The concept outlines comprehensive change on the individual level and in society with diversity and climate justice as essential prerequisites for a successful climate policy. The involvement of particularly disadvantaged groups should go beyond consultations, effectively giving BIPOC communities (Black, Indigenous, People of Color) and Native American tribes veto power.

The actual planning framework in Chapter 4 of the book formulates demands, including:

- Weaving ACE into all aspects of national climate policy and always taking it into account in budgets and procurement;
- In all types of schools, approaching the teaching of climate issues from a climate justice perspective;
- Assessing all working conditions through a climate lens;
- Tackling misinformation with a coordinated and robust strategy;
- Developing communication strategies based on targeted social science research to drive behaviour change (Paas, 2016).

The National Focal Point (NFP) was to play a central role in this. According to the concept it will become a powerful institution with a corresponding budget and staff (still quoting chapter 4). The office would have influence throughout the country on all legislation and spending of government institutions, on education, training and career paths while monitoring progress in the implementation of ACE measures and setting priorities in communication.

However, the authors of the concept were aware of some of the limitations of their own work. Their concept of climate justice led them to focus on disadvantaged groups, but representatives of small and medium-sized enterprises, predominantly white rural communities and religious organizations were missing among the experts involved. These groups are expected to overwhelmingly have very different political views, be more likely to vote Republican and would presumably fiercely resist an influential federal NFP that they might feel would have a say over their schools, careers, budgets and laws.

The US concept – in what it contains and what it lacks – therefore is an exercise in what ACE might need to fulfil the purpose of carrying climate policy into the society and make the Paris Agreement work out.

3.1.2 Chile

Chile stands at the other end of the spectrum. Where the US-concept is full of theoretical ideas that came to naught, the Chilean government found a pragmatic and coordinated way to bring ACE into its country's reality. In 2024, it adopted a comprehensive and coordinated "*Estrategia de Desarrollo de Capacidades y Empoderamiento Climático*" (Ministerio del Medio Ambiente, 2024).

The authors of the strategy paper emphasize that reaching climate targets has prerequisites that reach far into the social order and democracy and must bring about changes there (loc cit, p. 8): *"Starting a project of this kind requires the promotion of social cohesion, the strengthening of democracy, dialog and the search for consensus on the interests of the general public."*

The central element of the strategy is a working group of four ministries (Environment; Education; Science and Technology; Labor and Social Welfare). It steered the process of public participation and continues to monitor progress today. A total of ten people are working on what ACE means for their ministry's scope of competence (in addition to other tasks there).

The strategy was forged under intense public participation: Regional dialogues were held in all 16 administrative districts. The Ministry of the Environment launched a program called „*Re-acciona por el Clima*" (Re-act because of the climate) to bring citizens into action. This included climate talks and citizen workshops, surveys among teachers, a municipal environmental education program, a festival of documentary films, and the song *Ama la Tierra* (Love Earth) sung jointly by well-known artists and activists. After summarizing the ideas and social involvement, in 2022 a draft strategy went into a second round of public input and workshops before being finalized. And public participation didn't end there: Regional and local *Mesas Territoriales de Acción por el Clima* (regional climate action meetings) are planned, which will be made up of representatives of civil society and, in particular, representatives of groups deemed vulnerable to societal and climatic change (Ministerio del Medio Ambiente, 2024).

Work isn't finished, either. Vocational education (training as the second ACE element) appears to be missing from the strategy as far as it takes place outside of formal educational institutions while the Ministry of Education is still adapting to the planned mainstreaming of climate issues. In addition, the Chileans have not yet defined any indicators and targets to measure their progress in implementing measures and programs under ACE. This is in progress, but it is still unclear which institutions at which level of public administration and government can and should set meaningful targets. Regular surveys to record changes in the attitudes of the population are also being discussed.

During the process of creating the strategy, Chile developed a mission statement (loc cit, p. 8). It explicitly names the proactive participation of civil society in climate policy as a goal:

> *Chile will be able to count on a society and capable institutions to face the challenges of climate change, on an informed, sensitized and proactive citizenry that contributes to the development of public policies and participates, from its personal and organizational scope, in the changes necessary to achieve carbon neutrality and resilience of the country by 2050 at the latest.*

3.1.3 European Countries

In none of the European countries an effort on the scope of Chile's strategy is recognizable. The elements of ACE from education to international cooperation are all part of the established tasks of the state and distributed over it levels and institutions. The National Focal Points for ACE for the most part are officials in a bureaucracy without much power to shape policy. They need personal contacts at this working level across ministries and departments to stay abreast of ACE activities in their countries.

Most of the six states in the sample went through public participation in form of a citizens' climate council or assembly, the propositions of which were then mostly ignored by the governments. Most also put a heavy focus on education mostly for children and youths in the work that falls under ACE. Here only a few details will be presented; further research results can be found in a more thorough treatment in the Annex.

Austria had and has two helpful preconditions for strategic ACE policy. The first was Burgenland Declaration adopted in the fall of 2019 (UNFCCC, 2019) in which representatives from Austrian politics, a sample of company managers, representatives of associations and envoys from the governments of Hungary, Slovenia and Italy declared their "*determination and commitment to make Action for Climate Empowerment fundamental in the planning and actions of our government, organization, agency, company or personal or public enterprise".* This had no discernible influence on Austria politics (nor for the purpose of this research for Italian politics). However, this in itself is no indication of lacking climate ambition as the country has committed to achieving climate neutrality by 2040 (oesterreich.gv.at 2025).

The second prerequisite for the involvement of civil society ans ACE is the Klimaaktiv initiative, which was founded in 2004 (Klimaaktiv, 2024). It connects all information and funding programs on the topic in Austria, and also offers climate education and climate communication in a climate dialogue guide (Klimaaktiv, 2022), among other things. The explanations and tips presented there are based on extensive research into social and communication science including the handbook "Über Klima sprechen" published by Klimafakten (Schrader, 2022). According to experts, what there is in terms of structural planning on ACE topics in Austria is taking place at klimaaktiv – it is seen by observers as a "milestone".

Italy is considered a leader in facilitating the participation of young people and adolescents, or at least in creating opportunities for them to engage actively. The country co-leads the Youth4Climate initiative together with UNDP and has financed it since its launch in 2022 among other such initiatives. At the national level, Italy established the National Youth Council (*Consiglio Nazionale dei Giovani* – CNG) by law in 2018 (Gazzetta Ufficiale della Repubblica Italiana, 2018) to represent young people and promote their participation in decision-making processes. Finally, the focus on young people is reflected in school curricula, where there has been a school subject called *Educazione Civica*, or civic education, since 2019. It contains sustainability as one of its three topical areas (Italian Ministry of Environment and Energy Security, 2022).

In the **United Kingdom**, a net zero policy document contains some elements of ACE without actually being an ACE strategy (Department for Energy Security and Net Zero & Department for Business, Energy & Industrial Strategy, 2021). It aims to help people make climate-friendly decisions more easily and cheaply. As an instrument for public participation, the government has since 2012 regularly surveyed people's awareness of climate issues several times a year (Department for Energy Security and Net Zero et al. 2013). A series of workshops and dialog forums are also used to listen to interested parties on political decisions and topics such as buildings and heating, low-emission transport and nutrition.

A new education strategy was adopted in 2022 for England (Department for Education, 2022), which accounts for more than 80 percent of the UK's population and economic power. It aims to prepare pupils for future changes as part of the goal of net zero by 2050 and to give them a voice in political decisions. According to the *National Communication* of December 2022, the goal is for the education system to become the best in the world for sustainability and climate change by 2030 (Department for Business, Energy & Industrial Strategy 2022, p. 405). Training, for example in crafts, and further education should also be geared towards sustainability and the net zero target and "green careers" should be supported.

The *National Communication* of the **Netherlands** declares that the country is in the midst of a transition to a sustainable, environmentally conscious society and a circular economy that deals responsibly with the climate (Ministry of Economic Affairs and Climate Policy of the Netherlands 2022). This includes integrating sustainability into all school curricula with the basic idea of inspiring young people rather than obliging them to act in specific ways.

The government sponsors a number of websites with tips for consumers on how they can make their lives more sustainable and save energy. Regular action days and weeks and other events are intended to raise public awareness. The organization *Milieu Centraal* was founded to combat misinformation and disseminate accurate, reliable information. In 2022, a kind of National Climate Council (*Nationaal Klimaat Platform*) was founded, which talks to citizens, companies and politicians and advises the respective Minister for Climate and Energy several times a year.

Denmark's population is highly aware of climate change, very well informed and engaged in the debate on how to manage climate change, the country's *National Communication* of 2023 states (Danish Ministry of Climate, Energy and Utilties, 2023). The country is working on aligning the entire education system, including vocational training, more closely with the green transformation (Denmark 2024). This includes a legal expansion of the general training objectives to include transformation and the establishment of three vocational schools that prepare students for particularly ambitious tasks in the context of the green transformation.

Denmark not only has a general Youth Council (DUF), which represents around 80 youth organizations and manages a budget derived from state lottery revenues. In 2019, a Climate Youth Council (*Ungeklimarådet*) was established, which advises the Minister for Climate and Energy. The country also has a 2030 panel on sustainable development and the SDGs, which includes representatives from civil society organizations. The DUF Youth Council has a seat here. The panel advises the members of a parliamentary, non-partisan 2030 network.

France has been collecting data on the population's concerns about environmental issues since the 1990s via the National Statistics Institute Insee (Ministères Aménagement du Territorire Transition Écologique, 2025). Climate change has been at the top of the list since 2012, but the large gap to other concerns has recently narrowed after peaking in 2022. The French *National Communication* to UNFCCC of 2023 attributes this awareness of the risks to good government information campaigns (Ministère de la Transition Énergétique, 2023). The population's level of knowledge translates into expectations of the authorities and politicians and, in some cases, high approval rates to measures possibly unpopular elsewhere, for example for obligations to renovate houses or higher taxes on cars with high emissions. At the same time, France has begun restricting commercial advertising claims on products that cause high greenhouse gas emissions like fossil energy and prohibits greenwashing techniques, thus trying to prevent dis- and misinformation. The expansion of renewable forms of energy was welcomed by 90 percent of citizens, with solar energy ahead of expansion and renewal of nuclear power plants.

3.2 Individual measures worth mentioning

3.2.1 Chile: Gender and Climate Change Roundtable

In many countries, women are more affected by the climate crisis than men but often have fewer opportunities to decide on adaptation and mitigation measures (UNDP, 2023). This is why the Glasgow Work Programme explicitly provides for gender aspects to be considered when working on ACE (UNFCCC, 2021). Chile has therefore set up a Gender and Climate Change Roundtable, whose members meet and work directly with the interministerial working groups on climate policy (Gobierno de Chile 2024, p. 35). According to various sources, a special focus has been placed on gender issues in climate policy instruments and expenditure, and people have been trained to pay greater attention to possible inequality.

3.2.2 Italy: River Contracts

Although the idea is older than ACE, Italy lists the great number of river contracts in its *National Communication* as an example of civil society participation and cooperation in dealing with the

consequences of climate change (Italian Ministry of Environment and Energy Security, 2022). The agreements are made between interest groups and stakeholders along a river catchment area, for example to manage flooding and balance out irrigation requirements. In Italy, there are more than 200 such agreements and an umbrella organization (ISPRA, 2023). There is also experience with the instrument in other countries; some German municipalities in regions bordering Belgium, for example, have become parties of such agreements.

3.2.3 UK: MacKay Carbon Calculator

The UK has condensed the function of its national energy system into a website where users can try their hands at leading the country to its net-zero target by 2050 in an online simulation (Department for Business, Energy & Industrial Strategy, 2022). The ambition level of policy interventions can be adjusted in six categories with a total of 45 individual points, while information boxes show what level 1 or level 4 would mean for the promotion of electric cars, nuclear power plants or biomass cultivation. The effects on emissions are then shown in graphs in which the curves and proportions of different forms of energy or branches of industry are bending down accordingly. The website is supposed to form a rational basis for discussions and can be used both for individual experimentation and in workshops or lessons.

3.2.4 France: Eco-delegates and teacher training

One innovation in the country's highly centralized education system are the so-called eco-delegates ("*éco-délégués*"), who are appointed among the pupils in school classes (Ministère de la Transition Énergétique, 2023). Since 2020 they are responsible for projects and campaigns on the topic, coordinate with the teaching staff and external partners and take part in a national competition (*Prix de l'action éco-déléguée de l'année*). In 2023, a plan with 20 measures for schools was also published, which, for example, provides for all education staff to be trained in the challenges of ecological change by 2027 (Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche, 2023).

3.3 Conclusion: Common patterns and lessons learned from the research

Research in eight nations has revealed some common patterns and shared problems that can be condensed into theses for the process of developing a national ACE strategy for Germany.

3.3.1 Common Patterns and shared problems

3.3.1.1 Distributed responsibilities

The elements of ACE are all established tasks of the state, so there are already ministries and authorities tasked with them. The internal, possibly federal or otherwise layered political order of a country can also play an important role here, so that responsibilities distributed across different levels of government or partners of a coalition must be taken into account.

A coherent ACE program then usually means having to see the wood for the trees. This would be a prime task for a National Focal Point. This person or these persons, often attached to one of the relevant departments and tasked also with other responsibilities, can only get an overview of everything that is part of ACE if they receive information from the other government institutions responsible for ACE elements. Personal contacts at working level probably often play an important role here, so that the task is made more difficult by staff changes and changes in the structure of ministries.

3.3.1.2 At best half-hearted mechanisms for public participation

Most of the countries examined have convened citizens' councils on climate policy, which have drawn up many recommendations – and then have been largely ignored by parliaments and governments after polite listening. It is precisely this demand for public participation that would make ACE a highly political issue, if it were taken seriously. The way in which the respective Citizens' Council was set-up seemed not to play a decisive role, but the more distant from the central state institutions it was appointed, the easier it might be to ignore it. In Germany, for example, although the "Bürgerrat Klima" was under the patronage of Horst Köhler, a former German president, had no official mandate and was then essentially ignored even by the "Ampel" government of SPD, FDP and Green party, which was initially sympathetic to the endeavour.

Governments are more likely to be influenced by organized interest groups or stakeholders than by such deliberative bodies from the citizenry. In principle, taking the voices of citizens seriously by making the recommendations of citizens' councils politically binding or at least requiring serious debate and parliamentary decision, would help to anchor climate policy more firmly in society and unleash their power, imagination and initiative. Ultimately, the entire ACE concept embodies precisely this approach.

3.3.1.3 Singular focus on youth and education

A strong focus on education, professional qualifications and the effective involvement of young people (if it is more than a facade), while necessary and helpful, can make ACE work one-sided. On the one hand, education is an important lever, but on the other hand, changes here are more likely to be effective in the long term. In other areas untouched by an ACE-policy of this design, it reinforces the impression that the transformation is not urgent. It should also be emphasized that the concerns of particularly vulnerable, disadvantaged groups were only specifically mentioned in the concepts from Chile and the USA (and there to a perhaps excessive extent).

3.3.2 Ten theses and recommendations for an ACE strategy

Based on the preceding analysis of the current state of ACE, the international examples, and the identified challenges and opportunities, we have derived ten guiding theses. They serve as a bridge between the findings presented so far and the recommendations that follow, providing orientation for how ACE can be strategically anchored, strengthened, and further developed.

1. Make ACE the headline in climate policy

The goal that the international community has associated with *Action for Climate Empowerment* is to bring climate action to all corners of civil society. Climate issues must therefore always be considered in all areas – and not just in energy policy; in other subject areas this is called "mainstreaming". For this to succeed, ACE must no longer be a sub-item of climate policy, but must become a heading preferably with a catchy term that evokes and encourages the shaping of an attractive future. Similar to "health in all policies" approach, a "planetary health in all policies" approach could be followed.

2. Provide ACE with a vision and mission statement, describe co-benefits

The Chilean mission statement of the ACE strategy shows very clearly what role civil society and citizens can and should play in future climate policy – and how necessary it is to rally that power. In one form or another this should be emulated elsewhere and combined with attractive visions of a sustainable future that people can actively shape. So-called co-benefits of climate policy, i.e. desirable side effects such as improved health, play an important role here. Many in the health sector have long since recognized that human health can only be achieved and maintained on a healthy planet. Such organizations can be strategic allies in an ACE strategy.

3. Place responsibility for ACE with high-ranking officials

To ensure that cooperation works via the established, distributed responsibilities for the various ACE elements, the respective heads of departments and agencies should come to an agreement and set up a joint coordination committee modelled on the Chilean approach. Its individual members remain anchored in their respective organization, but do not represent its position in the committee; instead, they carry the ideas and initiatives discussed there back to their original areas of responsibility and implement them there.

Centralization in one person, organization or authority does not seem advisable, because the broad influence of such a body may trigger unease or even resistance among the people – even if a country is not characterized by libertarianism and rejection of an effective state as the USA are. Centralizing in one organization might also lead to diffusion of responsibility where all areas of government except that one organization deflect responsibility to implement ACE policies.

4. Guarantee that participation functions reliably and is sustained

Climate policy can only be sufficiently successful in the long term if it is supported and even demanded and driven by the population. The necessary legitimacy of far-reaching decisions that are not overturned every time there is a change of government can be improved if all political actors undertake to listen to and implement recommendations from bodies such as citizens' councils, for example, or at least to provide detailed reasons if they deviate from them.

In this context, it is probably important to point out that climate policy is above all a process of constant change and improvement, not a straight road taken once and for all. There must be milestones and targets that are achieved on time, which in turn are realistic and relevant, appropriate and measurable. An ACE strategy can then be part of an analytical grid for this progress.

5. Recognize climate justice as a guiding principle in ACE

The climate crisis generally affects disadvantaged groups more, even though they have contributed less to its emergence. This is true not only at the global level, but also within western societies. Further, climate policies such as subsidizing private electric vehicles have mainly favoured the privileged. It can be safely assumed that in most countries the public takes a very close look at possible social injustices in climate policy. Data from Germany show that climate policies that are perceived to improve social justice, receive more support (Jenny et al. 2022). In many cases, however, commitments to equitable or social implementation of climate policy must be backed up by financial resources. The guidelines of the Glasgow Work Programme on ACE also stipulate that issues of gender and intergenerational equity should be considered.

6. Conduct regular, detailed and standardized surveys on attitudes

Since ACE has public awareness raising as one of its elements, there should also be a way to measure it. Several of the countries considered here have commissioned government agencies to regularly survey the attitudes of the population and to evaluate and publish the data in a standardized way. Such data presumably works best when it delivers comparable results over the long term, is credibly removed from political influence and is independently financed.

7. Integrate social and communication sciences

Social change, behavioural change and effective communication have long been central topics in subjects such as psychology, sociology, political science and communication science. The Glasgow Work Programme also recommends incorporating this expertise (UNFCCC, 2021).

8. Focus on standards and initiative in education

Many other countries differ from Germany in that the national government has a greater influence on curricula. Concepts such as Unesco's Whole School / Whole Institution Approach (Gibb, 2016) should provide suitable common guidelines. A good idea from France can stimulate the initiative of students and teachers: The election of class climate spokespersons whose task it is to drive actions for awareness-raising and transformation in the teaching institution. This would also create a nationwide network of committed individuals.

9. Let ACE offer something for the whole society

Instead of focusing one-sidedly on youth, ACE measures should also address people who are already in the job and possibly have positions of responsibility. They could be offered further training for green jobs, for example. It is especially important to address those actors who do initially neither feel particularly drawn to climate protection nor see themselves as a marginalized group but rather understand themselves as a pillar of society and the economy, for example the many small and medium-sized enterprises and their workforces. Finally, target seniors who are highly effective climate actors, as Switzerland's *Klimaseniorinnen* show. They often have more free time, wield significant voting power, and benefit personally (e.g., reduced social isolation) from climate engagement.

10. Take seriously the advice development cooperation gives other countries

Chile's ACE strategy has benefited greatly from the Euroclima program, which combines changes in the social sector with more technical climate issues (European Union, 2024). Zambia has set up a national coordination office with the help of the German government (IKI, 2022). The underlying German strategy (IKI, 2023) repeatedly mentions the link between social and ecological issues in the desired transformation. In addition, it advises that global decisions should be broken down into regional and local factors in order to facilitate implementation and stabilize successes.

Such principles drawn up in the realm of development cooperation should resonate for a national domestic ACE strategy. It may sound obvious, but it can also be helpful to look at your own priorities from a different perspective. The principles of this and other such aid programs should therefore also be applied to the German ACE strategy.

4 How Is ACE Implemented in Germany and What's Missing?

Having explored the international context, we now turn the focus to Germany to see how ACE is implemented here and where key gaps exist. Chapter 4.1 outlines the methodology and the selection of interview partners, while Section 4.2 summarises the key findings on Germany's ACE status today.

4.1 Methodology and Selection of Interview Partners

To establish a well-grounded understanding of the current state of ACE in Germany, the study began with a desk research phase. Building on this background, a series of nine semi-structured interviews with key stakeholders involved in ACE in Germany was conducted, some of them with individual participants and others in small groups. Interviewees were selected to represent different areas of expertise. All interviews were conducted between June/2025 – July/2025 via video conferencing.

The following individuals are listed in the sequence in which their interviews took place:

- **Viola Muster** is a Professor of Social Sciences of Sustainability in national and international contexts at the University of Applied Sciences Erfurt.
- **Barbara Hemkes** heads the Department for Innovative Further Education, Permeability, and Pilot Projects at the Federal Institute for Vocational Education and Training (BIBB). Her work focuses particularly on advancing vocational education and training for sustainable development and education equity.
- **Daniel Willeke** is Climate Protection and Adaptation Manager and the Chairperson of the German Climate Protection Association (Bundesverband Klimaschutz, BVKS).
- **Helene Hoffmann, Matthias Pühringer** and **Nora Schlagenwerth** are project managers at *Zukunft – Umwelt – Gesellschaft* (ZUG). They work in the funding program International Climate Initiative (IKI), focusing—among other topics—on youth engagement in international climate and biodiversity protection projects.
- **Amelie Paassen** and **Phillip Gutberlet** are students who are part of the German Youth Panel on Education for Sustainable Development (youpan), which is the official youth participation body in the implementation process of the National Action Plan on ESD in Germany.
- **Tina Völker** heads the division for climate protection policy and municipal climate action at the Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia (NRW), which also includes the cooperation with the United Nations Framework Convention on Climate Change on the ACE Hub[1].
- **Bianca Bilgram** heads the Task Force Education for Sustainable Development at the German Commission for UNESCO.

[1] The Action for Climate Empowerment Hub (ACE Hub) is a collaboration launched in 2022 between the Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia (NRW) and UN Climate Change. The ACE Hub aims to strengthen public support for and active engagement in climate action.

- **Ann-Kathrin Schlieszus** is a Research Associate in the National Monitoring of ESD at Institut Futur, Department of Education and Psychology, Freie Universität Berlin.
- **Silke Ramelow** is Head of the Division for Environmental Education and Youth Policy at the German Federal Environmental Foundation (DBU) within the Federal Ministry for the Environment, Climate Action, Nature Conservation, and Nuclear Safety (BMUKN).

The interviews were flexibly tailored to each participant and, depending on their role and expertise, covered up to three core topics:

1. The **current status** of ACE in Germany (see Chapter 4.2)
2. The **transferability of international good practices** to the German context
3. **Measures to improve** the implementation of **ACE** in Germany (see Chapter 5)

The interviews were analysed by categorizing the statements according to the six ACE elements, distinguishing between reflections on the current status quo and recommendations for the implementation of ACE. The results were then derived from this thematic structuring. The findings from these expert interviews, together with the results of the desk research provide the basis for the status quo analysis of ACE in Germany, which is presented in the next section.

4.2 Current Status of ACE in Germany

This section begins with a general overview of how ACE is implemented in Germany. The following subchapters then explore each of the six ACE elements in turn, examining their current status and gaps in greater detail based on the findings of the interviews and the desk research.

Figure 5: Structure of the Status Quo Analysis of ACE

Source: Own illustration, ConPolicy, with Napkin.ai and MS PowerPoint.

4.2.1 General Overview and Structural Conditions

Before we zoom in on the ACE-specific picture in Germany, it's worth taking a step back. After all, ACE doesn't operate in a vacuum — it's embedded in the broader machinery of climate policy. To understand where ACE stands today, we first need to look at the general structural conditions that shape how climate action happens in this country.

4.2.1.1 Structural capacity for action in climate policy

A recently published analysis from the Kopernikus Project Ariadne (Schlacke et al., 2025) takes a close look at the structural challenges shaping Germany's ability to act in climate and energy policy. At its core, the issue concerns the coordination of government action in planning and deciding on climate and energy measures.

The Ariadne analysis responds in part to and builds upon the much-debated 2025 report from *the Initiative für einen handlungsfähigen Staat* (Jäkel et al., 2025)[2], which offered its own diagnosis and set of recommendations about German politics. The report from the *Initiative für einen handlungsfähigen Staat* (Jäkel et al., 2025) identified excessive complexity and fragmentation in Germany's overall governance structures as a central problem. Legislative processes, it argued, are too lengthy, insufficiently integrative, and lack a focus on implementation. It assessed both horizontal coordination between federal ministries and vertical coordination between levels of government as inadequate in multiple respects. In the field of climate and energy policy, the report only briefly diagnosed the absence of a coherent overarching strategy — a missing "red thread" running through all levels of government and across ministries, as summarised in the Ariadne report (Schlacke et al., 2025). Measures often appear fragmented, poorly coordinated, and insufficiently harmonised in their implementation.

The Ariadne project builds on these results by critically examining them and applying them specifically to the climate policy context. In the following, the key findings of the Ariadne project are presented in more detail. The report distinguishes between two key dimensions: **horizontal coordination** within the federal government and **vertical coordination** between federal, state, and municipal levels.

4.2.1.1.1 Horizontal Coordination

The Ariadne Project's (Schlacke et al., 2025) analysis highlights that the ability to act effectively in climate policy depends heavily on how well ministries coordinate with one another because climate policy is a deeply crosscutting, transformative task.

Two challenging factors stand out:

- **Partisan competition** – Rivalries between political parties do not only run along government–opposition lines, but also within coalition governments and, importantly, within ministries, i.e. the executive branch of government. This makes it harder to agree on shared long-term goals, develop and implement joint strategies, and prioritise measures.
- **The "Ressortprinzip"** (ministerial autonomy) – Each federal ministry acts as an independent political actor with broad decision-making powers. This fosters a fragmented, "siloed" approach making it difficult to build coherent strategies across departments. The prevailing mode of interministerial work is what political scientist Fritz Scharpf calls "negative coordination" (Scharpf, 2000): one lead ministry drafts a proposal, which is then circulated to other ministries for review, mainly to check for objections. This process prioritises conflict avoidance and preservation of ministerial interests over the joint creation of ambitious, coherent policy concepts. Consequently, agreements often collapse to the lowest common denominator, or policy initiatives stall entirely.

4.2.1.1.2 Vertical Coordination

German federalism is not necessarily an obstacle to climate governance. Its multi-level and decentralised structure offers real advantages for transformative policy (Schlacke et al., 2025):

[2] The *Initiative für einen handlungsfähigen Staat* was launched in 2024 by Julia Jäkel, Andreas Voßkuhle, Thomas de Maizière, and Peer Steinbrück, under the patronage of the Federal President of Germany. Its final report reflects eight months of work, during which 54 experts from academia and practice developed concrete policy recommendations in response to growing doubts about the performance capacity of state institutions (Bundespräsidialamt, 2025).

- **Experimentation and learning** – Federal states (Bundesländer) and municipalities can serve as policy laboratories, piloting innovative climate measures that can later be adopted nationally.
- **Legitimacy and public acceptance** – Local and regional representation ensures policies reflect concrete, place-specific realities, and can foster local acceptance.
- **Tailored implementation** – Different structural, economic, and geographic conditions require flexibility. Local actors often have better information and networks than central authorities, enabling them to adapt policies effectively.

However, these strengths only materialise when there is effective coordination, clear division of responsibilities, and adequate financial and human resources. In practice, vertical coordination often suffers from structural tensions:

- **Lack of shared strategic vision** – Disagreements over goals, responsibilities, and implementation paths slow progress.
- **Diverging political priorities** – States may reinterpret or slow federal plans, leading to fragmented implementation, which might even lead to lack of funding for municipalities (e.g. federal Heat Planning Act).
- **Resource asymmetries** – Smaller or financially strained municipalities might struggle to implement ambitious measures.
- **Lack of coordination** – Poor coordination leads to a lack of alignment between federal, state, and local levels.

These structural conditions in Germany form the landscape within which ACE must be strengthened.

4.2.1.2 General Status Quo of ACE

There are two layers to the "status quo" of ACE:

- What is explicitly negotiated and implemented under the banner of "ACE" (see section 4.2.1.2.1.).
- What is already happening in practice to enable citizens to take climate action — across ACE's six thematic elements — regardless of whether it's labelled "ACE" or not (see section 4.2.1.2.2)

When it comes to the first point, the picture is rather limited.

4.2.1.2.1 Status Quo under the banner of „ACE"

Right at the stage of reaching out for our expert interviews, we ran into a first challenge: the term *Action for Climate Empowerment* has very low recognition in Germany. Even some of our experts did not know the term. Moreover, its background, history, and added value are largely unknown. Even if ACE is known, it is not necessarily completely understood due to the complexity of the term. This already is the first hint of the fact that little is actually carried out under the label of "ACE."

At present, ACE in Germany is primarily the responsibility of two ACE Focal Points, who are also tasked with preparing the ACE sections of Germany's National Communications[3] to the UNFCCC.

[3] Countries listed under *Annex I* of the UN Climate Convention — including those that are also part of the Kyoto Protocol — are required to submit a National Communication (NC) to the UNFCCC every four years (UNFCCC, 2025b). These National

Moreover, there are individuals who represent ACE in the international climate negotiations. However, beyond this small group of actors, the concept has barely taken root in Germany's national structures.

In practice, this means:

- **Limited networking:** The network of actors engaged in ACE under the UNFCCC is only loosely connected to relevant national structures.
- **Personal dependence:** Much of what happens under the ACE label depends on the personal networks and commitment of the Focal Points and other actors.

Germany's ACE Focal Points

Germany is represented by two official ACE Focal Points who have also closely accompanied this project:

- **Larissa Kleiner** - Scientific Officer, Section for International Climate Action, German Environment Agency (Umweltbundesamt)
- **Dina Sielbeck** - Policy Officer on behalf of the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety, Division "UNFCCC and Paris Agreement, International Negotiation" at ZUG (Zukunft - Umwelt - Gesellschaft)

A full list of National ACE Focal Points worldwide and their contact details can be found at the UNFCCC Website.

Apart from the aforementioned actors, only a handful of German initiatives explicitly position themselves as "ACE projects" — for example, the ACE Hub, which is a collaboration launched in 2022 between the *Ministry of Economic Affairs, Industry, Climate Action and Energy* of the federal state North Rhine-Westfalia and *UN Climate Change* (UNFCCC, 2025a) and a project in Zambia about a facility for ACE, which is funded by the International Climate Initiative (IKI, 2025). Both projects will be discussed later in chapter 4.2.6 on international cooperation. In short, while there is some activity under the label of ACE, it remains niche, fragmented, and largely invisible to the broader climate policy community.

4.2.1.2.2 Status quo independent of the label „ACE"

Considering ACE's six thematic elements – regardless of whether they are called „ACE" – there is actually a lot happening on the ground in Germany. In practice, the scope of activities depends on three superordinate factors, illustrated in Figure 6.

Communications are official reports in which countries outline their climate policies, actions, progress toward their targets, and other relevant information, such as how they are implementing *Action for Climate Empowerment*. The most recent National Communications were published in 2023 (BMWK, 2023).

Figure 6: Factors influencing the level of ACE implementation

Source: Own illustration, ConPolicy, using the tool Napkin.ai.

Factor ACE element

It is important to understand that all ACE elements have one thing in common: Across all six elements, ACE is treated as an add-on rather than as a core, mandatory part of policies or action measures. However, there are bright spots — particularly in the areas of education and training, where Germany already has some well-developed structures, many of them linked to *Education for Sustainable Development* (ESD, see chapter 4.2.2). But in other ACE elements, such as public participation, public awareness or access to information, the picture is far less complete. Here, established systems and resources are often missing, making progress patchy and uneven across regions and sectors.

ACE vs. ESD — How They Differ

During our interviews, it became clear that one source of confusion around ACE is how it relates to — and differs from — *Education for Sustainable Development (ESD)*.

Education for Sustainable Development
"Education for Sustainable Development empowers people with the knowledge, skills, values, attitudes and behaviors to live in a way that is good for the environment, economy, and society." — UNESCO (2025a)

ESD covers all 17 Sustainable Development Goals (SDGs), making it thematically much broader than ACE.

Action for Climate Empowerment (ACE)
ACE focuses specifically on climate change — but within that scope, it goes beyond education and is broader in the types of activities. It spans six elements, including public participation, public awareness and international cooperation. These go further than learning alone, aiming to empower citizens to actively take part in decision-making and climate action.

Factor Region and political level

Second, the **political level** (federal, state, municipal) and the **specific region** are decisive for the implementation of ACE in Germany. The patterns we saw here echo what the Ariadne Project analysis (Schlacke et al., 2025) also found. Nationally, the structures are relatively stronger, with clearer responsibilities and more stable funding. Locally, on the other hand, many municipalities

lack the systematic support they would need to embed ACE in their everyday work. Structures that are key to advancing ACE are often funded through temporary project grants — making them less stable and frequently burdened with the search for new funding.

Regionally, wealthier municipalities and federal states have far more resources to invest in ACE-related activities than structurally disadvantaged areas, creating a patchwork of opportunities and gaps. And yet, there is no shortage of potential starting points — from established platforms like the RENN network[4] to dedicated services such as the Servicestelle Kommunaler Klimaschutz. The challenge is less about inventing something entirely new and more about connecting and expanding what already exists.

Excursus: The Structural Asymmetry of Municipalities and Climate Protection Managers

The unevenness of regional structures becomes even clearer when looking at the role of climate protection managers (Klimaschutzmanager*innen). These positions could be pivotal for advancing ACE at the local level.

Germany counts more than 10,000 municipalities, which are central actors for both national and international climate action. But the data on local climate structures is incomplete, and the rough estimates of our experts suggest that currently only around 2,000–2,500 municipalities employ one or more climate protection managers, while just 200–300 have a climate adaptation manager. In other words: the majority of municipalities still lack dedicated staff for climate-related responsibilities.

The picture is shaped by Germany's municipal realities: according to our experts more than two-thirds of municipalities are small, rural, and financially constrained — many even deeply in debt. For them, ACE is a "nice to have" rather than a "must." They already struggle with their legally mandated tasks, leaving little room for voluntary ones such as citizen empowerment. Even when funding is provided, it is often delayed, limited in scope, and tied to short project cycles. The result: a municipality hires a climate protection manager with external funding, but after a few years — once the funding runs out — the position is cut again. In wealthier municipalities, the situation looks very different. With stronger budgets and more personnel, they can create permanent positions and even assemble entire teams.

Some states, like Baden-Württemberg in the southwest, have built finely woven support networks, with regional climate agencies extending down to the county level. In this state there are currently — in addition to KEA-BW as the state energy agency — 37 regional energy agencies operating at the district level (KEA-BW, n.d.). Others, such as Brandenburg in the northeast, lack comparable structures and have no climate protection agencies, leaving their municipalities reliant on federal networks and less tailored guidance.

Factor Target group

Third, the reach of ACE across **different target groups** remains highly uneven. Some groups are already engaged relatively well, especially through existing ESD-structures — for example, many schools and young people in certain regions benefit from established programmes. In practice, climate engagement is often dominated by well-educated white women, who are more likely than others to take advantage of opportunities such as participation programmes. Thus, large gaps remain. Youth in structurally disadvantaged areas often fall through the cracks, as do groups outside the traditional education sphere, which might have huge multiplication potential if successfully reached. Businesses, for instance, are not addressed enough, even though their role in the transition is central. Journalists, too, are only sporadically involved, despite their importance in shaping public discourse. And even within the so-called "climate bubble," many

[4] The Regionale Netzstellen Nachhaltigkeitsstrategien (RENN) e.V. is committed to advancing the implementation of the global 2030 Agenda and Germany's National Sustainability Strategy (RENN, n.d.).

initiatives still lack the social science expertise needed to translate technical measures into effective communication and participation strategies.

4.2.2 Education and Training

Most of what's happening in Germany under ACE's umbrella of education and training elements, falls under the well-established field of Education for Sustainable Development.

A key milestone came in 2017, when the National Platform (NP) on ESD adopted Germany's National Action Plan for implementing UNESCO's Global Action Programme (BNE-Portal, 2025b). This was a big moment: for the first time, there was a coordinated roadmap to anchor sustainability in all parts of the education system.

Who is part of the National Platform on ESD?

At the heart of Germany's efforts to anchor Education for Sustainable Development lies the National Platform – the highest steering body for ESD (BMBF, o. J.-b). Around 40 high-level representatives from politics, science, business, and civil society come together here to set the course. They include several federal ministries (such as BMFTR, BMUKN, BMFSFJ, and BMZ), all 16 federal states (responsible for formal education), and leading societal institutions. Meeting twice a year, members act as both advocates and multipliers, bringing ESD into their own organizations and networks.

The Platform doesn't work alone: it is supported by six Expert Forums, each with 15–20 members who dive deep into specific topics and provide evidence-based proposals. And crucially, it also listens to the Youth Panel youpan – the official youth forum, where young people articulate their perspectives and demands for sustainable education.

In 2023, the same platform released an "Impulse Paper" to accelerate the rollout of UNESCO's ESD 2030 program (*Nationale Plattform BNE beschließt Impulspapier zur Umsetzung des UNESCO-Programms "BNE 2030" - BNE-Portal Kampagne*, 2023). Developed through a broad multi-stakeholder process, the paper laid out "levers for change" — practical entry points for action. Its message was clear: the official ESD bodies (such as the NP BNE, the thematic forums, and the partner networks) cannot do it alone. It's an open invitation for everyone, educators, institutions, and civil society, to become part of the transformation.

The goal is ambitious but straightforward: to embed ESD structurally across Germany's education landscape, so it becomes part of the DNA of teaching and learning. The strategy focuses on five key areas (BNE-Portal, 2025a):

- Early childhood education
- School
- Vocational training
- Higher education
- Non-formal and informal learning

4.2.2.1 Landscape of ESD Actors

Beyond the members of the National Platform – such as federal ministries and state representatives – Germany's ESD landscape is shaped by a wide array of additional actors. The *Fachstelle Bildung für nachhaltige Entwicklung in Kommunen* (FABINEK), for example, is part of the BMFTR-funded specialist network for municipal education management and builds on the

findings of the completed project of an competence centre for ESD (2020–2025) (FABINEK, n.d.). Student-driven initiatives like *netzwerk n* play an equally vital role, creating platforms across universities to promote sustainability and anchor it in academic life.

In addition, the ESD Actor Map helps visualize this diversity: more than 1,000 organizations have already registered, making it possible to explore the landscape by region or educational sector (BMBF, n.d.-a). Moreover, the *Institut Futur* at Freie Universität Berlin stands out as the body responsible for Germany's official national ESD monitoring (see section 4.2.2.2).

Of course, there are also important international actors shaping the field of ESD. One example is the European Working Group "Leading for Sustainability", which brings together policymakers and practitioners across Europe (European Commission, 2025). However, the group has recently faced growing political headwinds, and its continuation remains uncertain.

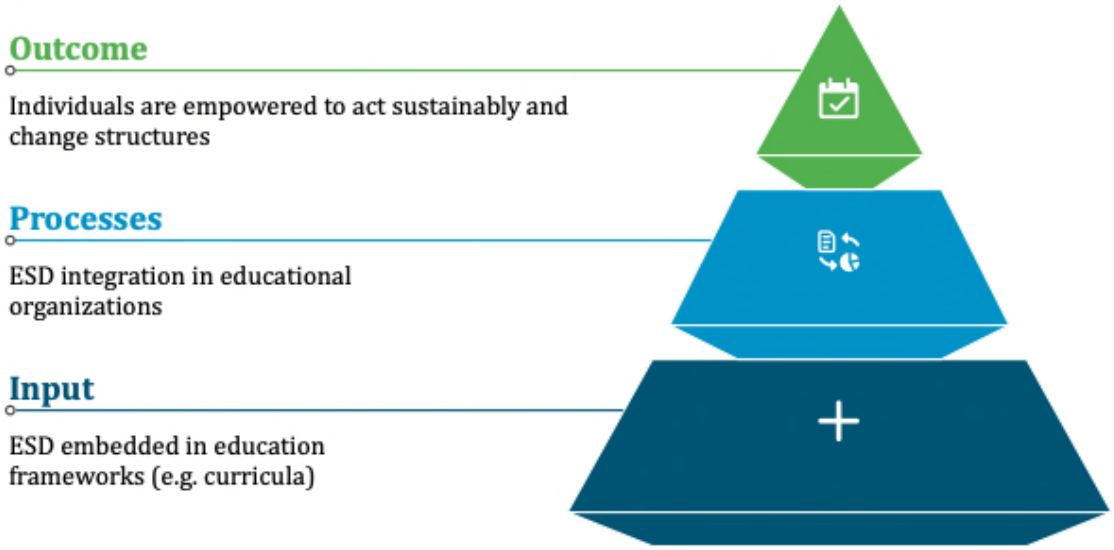
Another noteworthy initiative is the Greening Education Partnership (GEP), now jointly led by UNESCO and the UNFCCC (UNESCO, 2025b). This global alliance focuses on schools, education, training, and international cooperation. Taking a whole-of-system approach, the GEP supports countries in harnessing the power of education to respond to the climate crisis and accelerate transformation worldwide.

Additionally to the actors already mentioned, there are many others who play, or should play, a stronger role in advancing ESD. In the vocational sphere, for example, business associations, professional associations, chambers of industry and commerce, and especially trade unions remain underrepresented. To date, there is no nationwide body dedicated to sustainability or climate action in vocational education and training, despite longstanding calls for a central clearinghouse or similar structure. At the same time, across other levels of society there are numerous stakeholders with multiplier potential who could help embed sustainability more deeply into education and practice.

4.2.2.2 Monitoring ESD

Germany's national monitoring of ESD, conducted by the *Institut Futur* at Freie Universität Berlin, examines how education enables people to recognize the challenges of sustainable development and actively shape solutions. What makes this effort stand out is its regular and institutionalized monitoring process — scope and depth that remains unique in the international landscape.

Figure 7: Three Levels of Monitoring for ESD



National Monitoring of the Institut Futur (2025).
Source: own illustration, ConPolicy, using the tool Napkin.

How is ESD Monitoring Conducted in Germany?

Germany's national monitoring of Education for Sustainable Development looks at how well people and institutions are being equipped for sustainable thinking and action. It does so across three core levels (Institut Futur, 2025):

- **Input:** How firmly is ESD embedded in the rules and frameworks of the education system (e.g. laws, curricula, exams)?
- **Processes:** How is ESD actually implemented in formal and non-formal education, and where are the gaps?
- **Outcomes:** To what extent are citizens already capable of acting sustainably, both individually and by shaping wider structures?

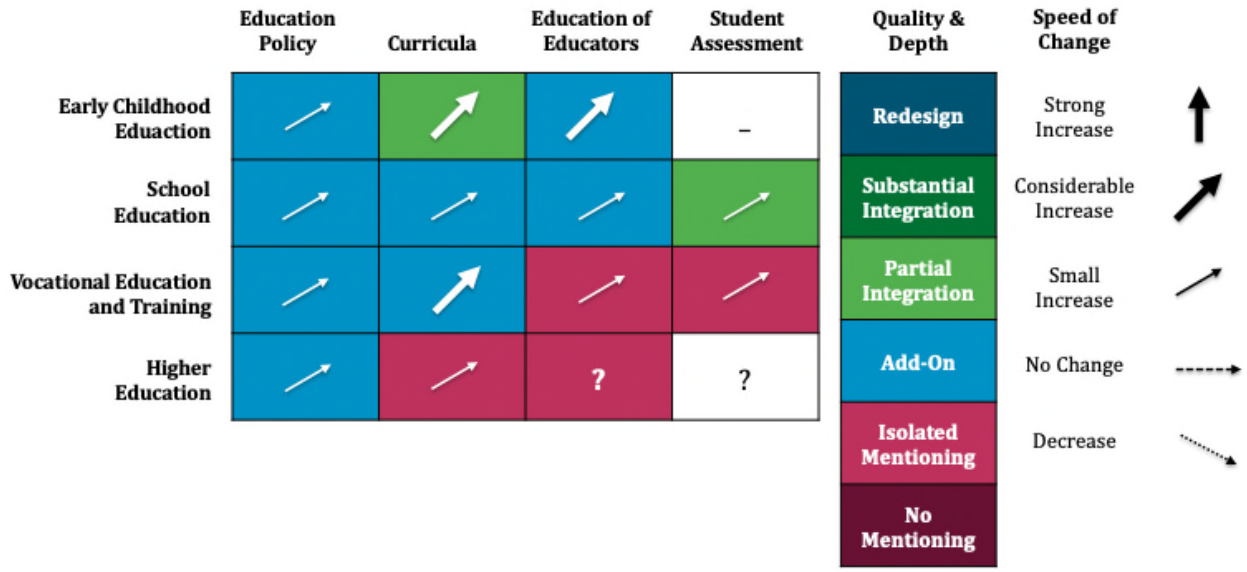
To capture these dimensions, the monitoring uses a broad mix of methods: analysis of more than 11,000 documents, representative surveys, mixed-method studies in educational institutions, a Delphi study with decision-makers, and surveys of actors in non-formal and informal education (Institut Futur, 2025).

In a comprehensive input-level analysis recently published (Holst et al., 2024), the researchers examined how far ESD has been integrated across different indicators – policies, curricula, teacher training, and student assessment — and across all formal education sectors in Germany, from early childhood to higher education (excluding the non-formal field). The study draws on 10 years of data.

The findings show a mixed picture: while ESD is increasingly present, it is still too often treated as an "add-on" rather than a fully integrated part of the education system. Across most areas, teacher training stands out as the weakest link, with only limited and fragmented inclusion of sustainability-related competencies. At the same time, the analysis also reveals a dynamic upward trend: all indicators have been moving forward over the past decade, suggesting

growing momentum even if progress remains uneven and too slow. The detailed results are presented in the figure below.

Figure 8: Status and Progress of ESD in Germany



The status of and progress with the implementation of Education for Sustainable Development (ESD) in the German education system. Colors and arrows refer to the rounded mean external expert evaluations of quality and depth of implementation as well as speed of change. No data exists for student assessment in Early Childhood Education and no data was collected for student assessment in Higher Education. Speed of change could not be evaluated for training of educators and student assessment in HE due to a lack of appropriate data (indicated with a question mark).
Source: Figure adapted from Holst et al. (2024).

In another large-scale monitoring study, the research team at *Institut Futur* examined how young people and teachers in Germany engage with sustainability and ESD (Grund & Brock, 2022). Based on responses from around 2,500 young people and 500 teachers, the study shows a mixed picture: while awareness of sustainability challenges is very high, less than a quarter of young people feel that formal education actually equips them to help solve these problems. Half of the youth surveyed describe themselves as highly committed to sustainability, yet many lack confidence that a sustainable future is still achievable.

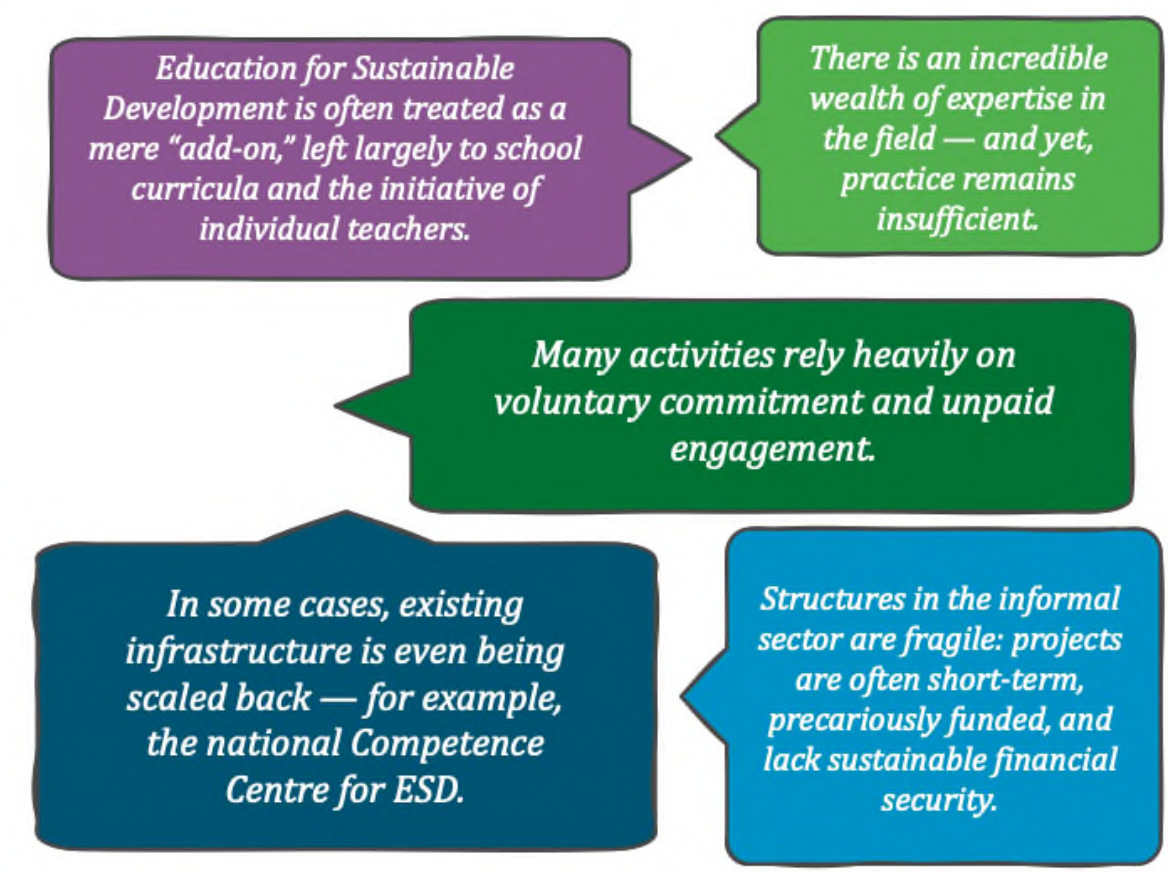
Although references to sustainability in everyday life have increased across media, family, and peer groups, the schools lag behind: only 14% of total teaching time now includes sustainability topics, mostly in a few related subjects like geography, biology, and politics. Both students and teachers express a clear wish for more, ideally 40–50% of teaching time with a sustainability focus. Yet major gaps remain in teacher training, with most educators never encountering ESD during their own studies. Key barriers include weak curriculum integration, a lack of professional development opportunities, and an education system already overloaded with competing demands.

A monitoring study on the non-formal and informal education sector is currently underway and is expected to be published in 2026. Drawing conclusions about the status quo in this field is challenging, given its highly heterogeneous nature. Still, several recurring challenges can be observed: financing is often unstable, staff spends a disproportionate amount of time on grant applications, many positions are part-time, and a significant share of the work relies on voluntary engagement.

4.2.2.3 Challenges and Good Practices

Looking across the interviews and desk research, several recurring patterns for implementing ACE in the field "Education and Training" become visible.

Figure 9: Insights from the Interviews



This figure illustrates trends, themes, and challenges that surfaced in the interviews — not necessarily as direct quotes, but as recurring patterns.
Source: own illustration, ConPolicy.

First and foremost, both the interviews and the monitoring show that ESD is still too often treated as an **"add-on**." In schools, this means its presence depends heavily on curricula and, even more, on the personal initiative of individual teachers. In vocational education, sustainability has entered the mainstream rhetorically, yet in practice it remains an add-on as well — with only a handful of sectors showing deeper, structural integration of climate and sustainability issues into training pathways (for example, in the vocational training of bakers).

A second challenge is the persistent **lack of coordination**. On the one hand, there is an incredible wealth of expertise in the field; on the other hand, practice remains insufficient. The problem is not a lack of initiatives, but rather the lack of guidance. Interviewees described "incredible amounts" of projects, programs, and teaching materials on environment, nature, and climate. Yet without coordination and clear entry points, this wealth risks producing confusion rather than impact.

The federal system adds another layer of complexity. Because formal education falls under the responsibility of the *Länder* (i.e. the federal states) there are no uniform, nationwide standards for school curricula. Guidelines and recommendations exist, but in practice their implementation often depends on the commitment of individual teachers. Some federal states have built

networks, dedicated websites, and ESD actors/institutions, but taken together, the national picture remains fragmented.

Across all educational areas — from schools to informal learning spaces — another pattern emerges: **activities rely heavily on unpaid engagement** and voluntary commitment. In schools, this often means teachers working unpaid overtime; in informal contexts, it translates into volunteer work. On top of this, structures in the informal sector are especially fragile: projects are frequently short-term, precariously funded, and lack financial stability, leaving staff tied up in constant grant applications.

There are also signs that **positive momentum of ESD is slowing** — and in some cases even reversing. Existing infrastructures are being scaled back, as seen with the closure of the National Competence Centre for ESD.

Finally, **unequal reach of target groups** is a recurring theme. Youth networks such as *youpan*, *netzwerk n*, or *DG HochN* provide important spaces, but they mostly attract already privileged and well-educated young people. Young people in structurally weaker regions, by contrast, remain underrepresented and underserved. The result is an uneven landscape in which ACE opportunities are far from equitably distributed.

Despite the many challenges, there are encouraging examples that demonstrate how education and training of ACE can be advanced.

Good Practices: ESD

A number of good practices point to what is possible when ACE/ESD is taken seriously.

The most significant website on ESD in Germany is the BNE-Portal, which provides a wide range of information as well as numerous materials on the topic (BMBF, o. J.-c).

In education, the Whole Institution Approach is gaining traction, supported by programmes in some federal states and a 2024 recommendation by the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) (Kultusministerkonferenz, 2024). This recommendation promotes the so-called *Whole School Approach*, which views ESD as a task for the entire school community. It calls for aligning all school activities and operations with the guiding principle of sustainable development and provides concrete guidance on how ESD can be embedded both in classroom teaching and in broader school development. Schools are encouraged to work with external education partners and local communities to create innovative learning formats that actively involve students in shaping their learning environment, while orienting curricula toward the Sustainable Development Goals.

The Federal Environment Ministry's platform *Umwelt im Unterricht* offers high-quality open resources with teaching ideas and background information on climate, nature, and sustainability (BMUKN, n.d.-b).

Universities such as *Leuphana University Lüneburg* and the *University for Sustainable Development* in Eberswalde are often highlighted as frontrunners in the German higher education landscape when it comes to ESD. They also stand out for promoting greater student participation in decision-making processes.

Another inspiring initiative is the *Public Climate School (PCS)*. Organized annually by *Students for Future* and *Klimabildung e.V.*, the PCS brings climate education into schools, universities, and the broader community for an entire week each year. What makes it unique is the collaborative energy: local actors from museums, universities, and NGOs join forces with student groups to offer an open, diverse program of lectures, workshops, and public discussions.

In the vocational training context, there are also good practices as mentioned in interviews: In certain sectors — such as the bakery trade, where strong networks of organic producers and a sustainability-minded clientele already provide fertile ground — tangible shifts in training practices have taken hold. Recent analyses further illustrate how vocational education can contribute to climate change adaptation and how relevant competences can be embedded within training systems, for instance in professions such as roofing, water supply and wastewater management, and landscape architecture (Rausch-Berhie et al., 2025).

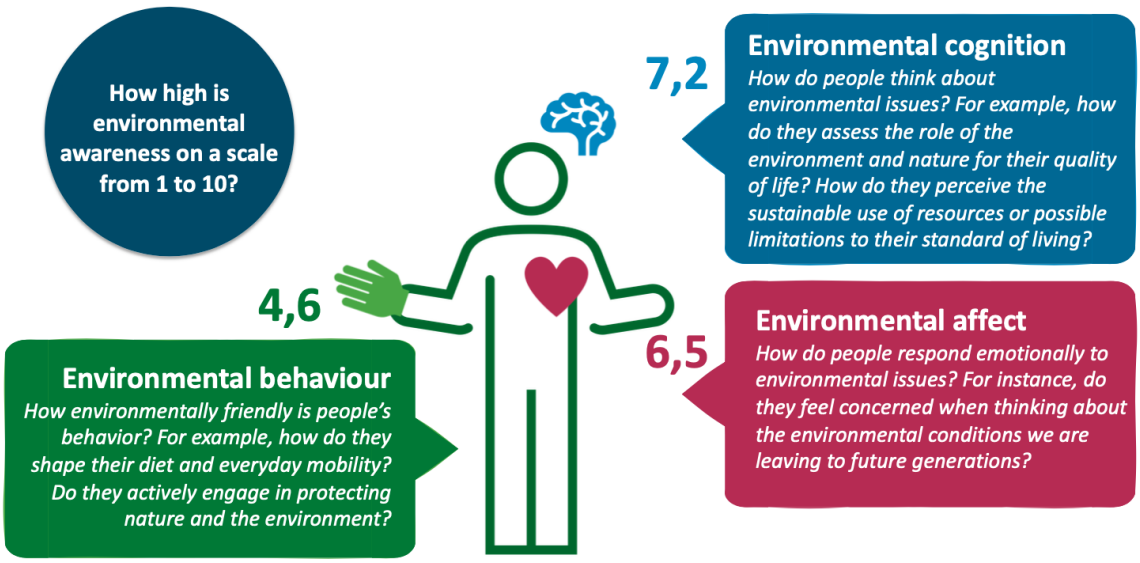
4.2.3 Public Awareness

In line with ACE's broad and integrative approach, public awareness of climate change is conceptualised broadly in the following. In Germany, several survey-based studies capture different aspects of this concept. One of the most prominent is the Environmental Awareness Study (Umweltbewusstseinsstudie), which provides a comprehensive assessment of environmental awareness. Environmental awareness in this study has been operationalised through three standardized indicators: environmental cognition, environmental affect, and environmental behaviour (see Figure 10). In addition to the findings of the Environmental Awareness Study, the following section also draws on results from related studies that capture complementary or similar concepts of public awareness, such as perceived impacts, concern about climate change, and willingness to act.

Public awareness of climate change and environmental protection in Germany remains high but the trend is slipping. In 2024, 54% of people still considered environmental and climate protection "very important" and 34% "somewhat important" (Umweltbundesamt, 2025b). Yet, when stacked against other pressing issues such as healthcare, education, or economic stability, the priority of climate has dropped (Umweltbundesamt, 2025b). This decline shows up not only in surveys but also in political will, as several of our interview partners noted.

At the same time, the burden of environmental impacts is unevenly distributed. People with lower incomes report feeling more strongly affected by environmental stressors (Umweltbundesamt, 2025b). Two-thirds of respondents said they felt health impacts from heatwaves. Only 62 percent of Germans worry about the impacts of climate change within their country, however, 78 percent express concern for effects abroad in other countries (Ipsos, 2025). In countries facing greater risk from climate change, such as the Philippines or Turkey, public concern about the impacts of climate change in their country is higher than in countries that are less affected (Ipsos, 2025). Although, scientific evidence shows that climate change is already affecting both natural and human systems across all world regions, including Europe and Germany (Pörtner et al., 2022).

Figure 10: Environmental awareness



Since 2018, environmental awareness has been measured using three standardized indicators. Based on various questions, a score ranging from 0 = low environmental awareness to 10 = high environmental awareness is calculated.
Source: illustration adapted from Umweltbundesamt (2025b)

What drives people's concern for climate change is complex: it is connected to many factors and there are demographic patterns. When it comes specifically to willingness to take climate action, measured as a combination of individual behaviours, acceptance of policy measures, and willingness to participate politically, demographic differences exist: Those with lower readiness tend to be younger, male or non-binary, have less formal education, or live in smaller towns (Institute for Planetary Health Behaviour, 2025). However, those differences shrink once psychological variables are accounted for.

Higher willingness to act is linked to factors such as (Institute for Planetary Health Behaviour, 2025):[5]

- perceiving climate change as a more serious health risk,
- having a sense of self-efficacy in climate-friendly behaviour,
- possessing greater knowledge about climate change,
- trusting in institutions, and
- experiencing strong social norms around climate action.

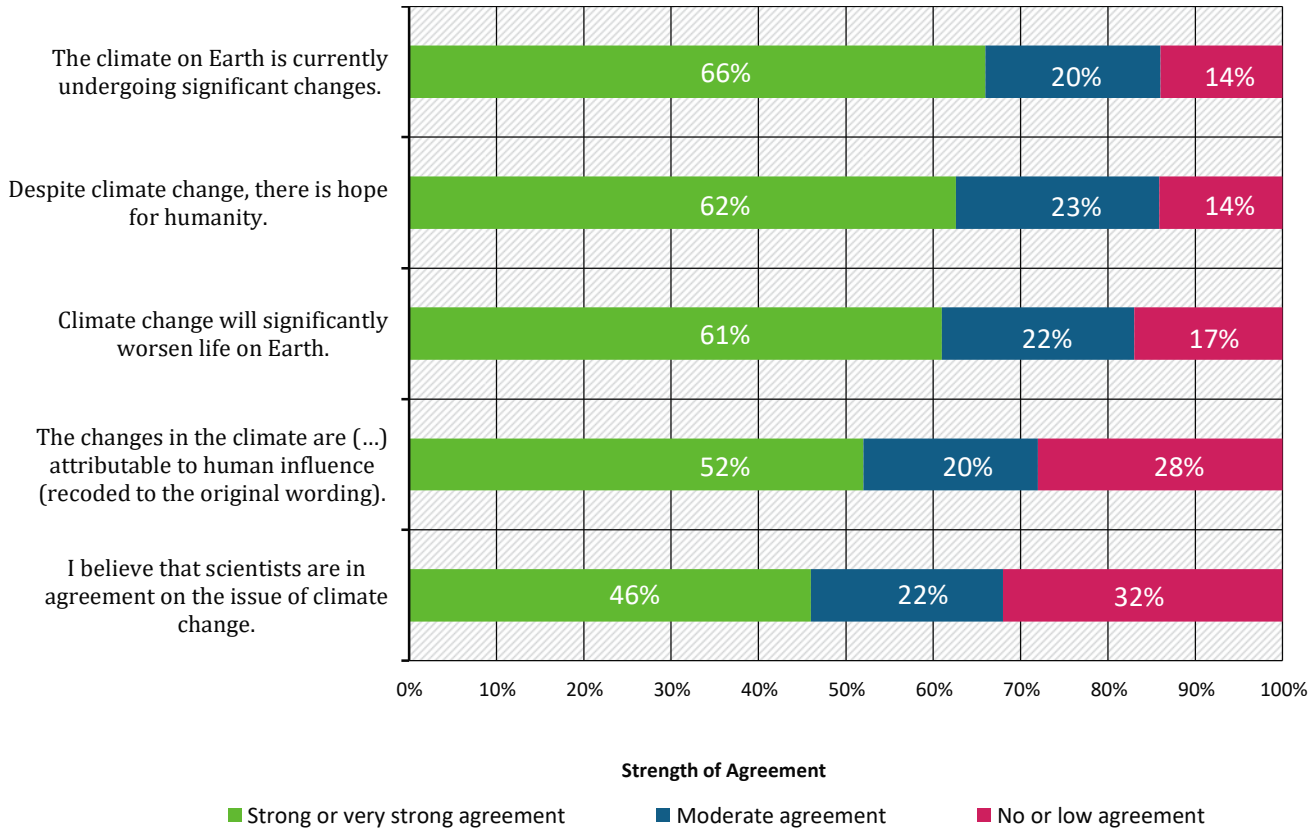
When it comes to environmental and climate knowledge, the picture is mixed. People in Germany are well informed on some topics, but clear gaps remain in others (Institute for Planetary Health Behaviour, 2025). On average, participants answered 64% of knowledge questions correctly. Many were confident about the causes of climate change, the risks of heat, or the meaning of mitigation and adaptation (over 70% correct answers). But gaps showed up

[5] It is important to note that the data referenced in this chapter so far comes from the Environmental Awareness Study and the PACE Survey, both of which are based on survey research. This means the findings show correlations, not causal relationships — in other words, they identify patterns of association between variables, but they do not prove that one factor causes another.

when it came to sector-specific emissions in Germany, e.g. from traffic or buildings: only about 41% answered correctly here.

Concerning the essential knowledge about climate change, the Yale Program on Climate Change Communication (YPCCC) argues that the complexity of the issue can be distilled into five core facts (also called "gateway beliefs", as the affirmation of these core facts is associated with a higher willingness for climate action): "*Scientists agree. It's real. It's us. It's bad. And there's hope.*" (YPCCC, n.d.). These five statements capture the heart of the matter in plain language. In Germany, roughly half to two-thirds of respondents strongly agree with them. Yet, uncertainty still lingers—particularly when it comes to recognizing the human role in climate change and the level of scientific consensus (see Figure 11, Institute for Planetary Health Behaviour, 2025).

Figure 11: Agreement with the Five Core Facts on Climate Change



Survey from 06th of May 2025, n = 1,092
Source: illustration adapted from Institute for Planetary Health Behaviour 2025

Compared with 2022 data, awareness and confidence have shifted. Fewer people now recognize changes in the climate (66% in 2025 vs. 74% in 2022), fewer see them as primarily human-driven (52% vs. 62%), and fewer believe life will worsen because of climate change (61% vs. 70%). On a more positive note, hope is slightly on the rise: 62% now believe there's still a chance for a positive future, up from 58% three years earlier.

4.2.3.1 Opposition and Counter-Narratives

When analysing public climate awareness, it is equally important to look at the forces of active opposition. A new and troubling trend in Germany is the rise of resistance to sustainability projects — particularly visible in parts of Eastern Germany, according to experts. Internationally, opposition is also on the rise, with misleading narratives such as "climate change is good" resurfacing in some countries. However, outright denial is not necessarily the dominant

strategy of the opposition. Opponents of climate action have shifted from denying the reality of climate change to promoting narratives that delay or obstruct mitigation efforts (Metzen et al., 2025). There are at least twelve "discourses of climate delay," which often surface in advertisements, media reporting, and political debates (Lamb et al., 2020; Metzen et al., 2025). Recent research in Germany has shown worrying correlations: endorsement of these delay discourses was negatively associated with pro-environmental behaviours, with the strongest negative link found in relation to policy support (Metzen et al., 2025). This makes it all the more crucial to closely monitor such narratives and understand how they shape and potentially undermine public awareness and climate empowerment.

Figure 12: Overview of twelve discourses of climate delay

Discourses from Lamb et al. (2020).
Source: own illustration, ConPolicy, using the tool Napkin.

Discourses of climate delay in detail

The following discourses of delay are directly cited from Lamb et al. (2020):

- **Change is impossible:** Any measure to reduce emissions effectively would run against current ways of life or human nature and is thus impossible to implement in a democratic society.
- **Doomism:** Any mitigation actions we take are too little, too late. Catastrophic climate change is already locked-in. We should adapt, or accept our fate in the hands of God or nature.
- **Appeal to well-being:** Fossil fuels are required for development. Abandoning them will condemn the global poor to hardship and their right to modern livelihoods.
- **Appeal to social justice:** Climate actions will generate large costs. Vulnerable members of our society will be burdened; hard-working people cannot enjoy their holidays.

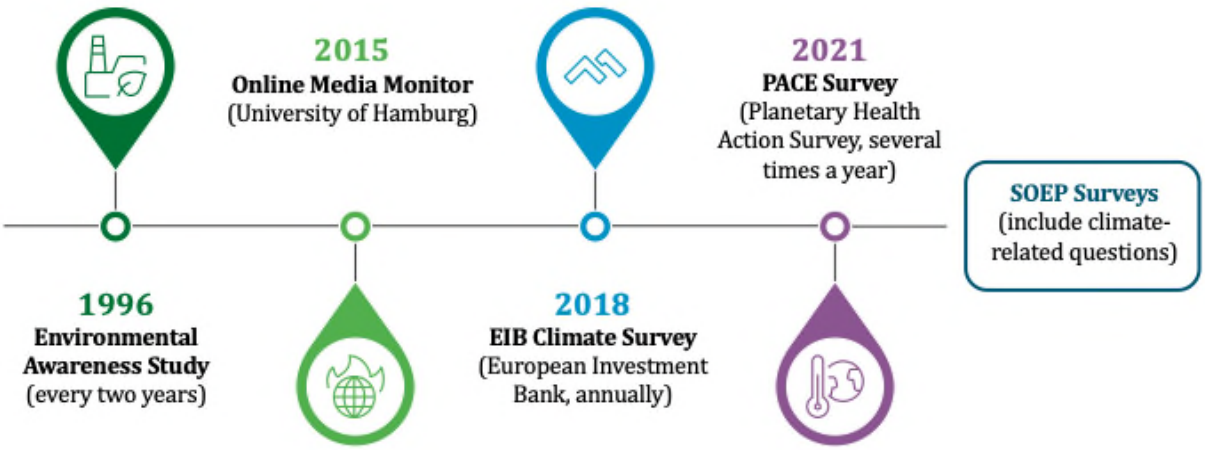
- **Policy perfectionism:** We should seek only perfectly-crafted solutions that are supported by all affected parties; otherwise we will waste limited opportunities for adoption.
- **Fossil fuel solutionism:** Fossil fuels are part of the solution. Our fuels are becoming more efficient and are the bridge towards a low-carbon future.
- **No sticks, just carrots:** Society will only respond to supportive and voluntary policies, restrictive measures will fail and should be abandoned.
- **Technological optimism:** We should focus our efforts on current and future technologies, which will unlock great possibilities for addressing climate change.
- **All talk, little action:** We are world leaders in addressing climate change. We have approved an ambitious target and have declared a climate emergency.
- **The 'free rider' excuse:** Reducing emissions is going to weaken us. Others have no real intention of reducing theirs and will take advantage of that.
- **Whataboutism:** Our carbon footprint is trivial compared to [...]. Therefore, it makes no sense for us to take action, at least until [...] does so.
- **Individualism:** Individuals and consumers are ultimately responsible for taking actions to address climate change.

Yet, despite the rise of active opposition and a slight decline in environmental concern, it is essential to emphasize that the majority of people in Germany still support climate action. What is often overlooked is that individuals consistently underestimate how willing their fellow citizens are to engage in climate protection — a phenomenon known as pluralistic ignorance (Andre et al., 2024).

4.2.3.2 Key Monitoring Tools for Public Awareness

To understand how public climate awareness in Germany evolves over time, a set of monitoring tools has been established.

Figure 13: Monitoring tools for public awareness across time



Source: own illustration, ConPolicy, using the tool Napkin.

The most well-known and long-standing tool is the Environmental Awareness Study (Umweltbewusstseinsstudie), published by the Federal Ministry for the Environment and the

German Environment Agency (Umweltbundesamt, 2025b). Since 1996, it has been conducted every two years as a representative population survey, asking recurring questions to track environmental attitudes and awareness as time series data. Each survey also focuses on a specific theme; in 2024, the spotlight was on how people in Germany perceive the links between environment, health, and quality of life (Umweltbundesamt, 2025b).

A more recent, but increasingly important instrument is the Planetary Health Action Survey (PACE) (Betsch et al., 2025). Launched in 2021, PACE conducts repeated online surveys several times a year to capture knowledge, risk perception, trust, attitudes, and behaviour regarding the climate crisis. As a joint project of the University of Erfurt, the Bernhard Nocht Institute for Tropical Medicine, the University of Bamberg, the Robert Koch Institute, the Federal Institute for Public Health, the Leibniz Institute for Psychology, and the Science Media Center, PACE aims not only to measure public opinion but also to identify strategies for improving climate communication and ensuring that climate policies are both accepted and acted upon.

Beyond the two central monitoring tools, several other instruments provide complementary insights. The Socio-Economic Panel (SOEP), a long-running longitudinal survey since 1984, regularly includes climate-related questions (Nachhaltig Handeln Baden-Württemberg, n.d.). The EIB Climate Survey, conducted annually since 2018 by the European Investment Bank, provides a comparative European perspective on attitudes toward climate action (EIB, n.d.). Furthermore, the Online Media Monitor, developed at the University of Hamburg in 2015, systematically tracks online media debates — from tweets to newspaper coverage — offering insights into how climate change is discussed and framed in digital spaces (OMM, n.d.). Another data source was developed within the Ariadne project, titled “Geographical and temporal differences in public support for climate policy in Germany” (Klimadashboard, 2025). Together with findings from the PACE study, these data are presented in a particularly accessible and visual way on the platform *klimadashboard.de/gesellschaft* (Klimadashboard, 2025).

As the public debate on climate change evolves at high speed, robust and well-funded monitoring systems become ever more critical. The existing surveys already provide valuable insights, but they also reveal just how fragile the current landscape can be. For ACE to truly thrive, we need monitoring that is not only regular and methodologically sound, but also sufficiently resourced to keep pace with shifting discourses, perceptions, and behaviours.

4.2.4 Public Access to Information

For citizens to truly access climate information in a way that empowers them, several layers need to work together. First, the information itself has to be publicly available and free of charge. Second, it needs to be clear, accessible, and engagingly presented in a way that makes clear it has not only scientific but also social relevance for everyday life. And third, it should be embedded in a relevant context that connects knowledge with possible action and makes action as frictionless as possible.

Figure 14: Layers of accessible information

Source: own illustration, ConPolicy, using the tool Napkin.

4.2.4.1 Publicly available information

Germany already has an impressive foundation on publicly available climate information. A cornerstone is the Environmental Information Act (Umweltinformationsgesetz, UIG), which has been in force since 2005 (Umweltbundesamt, 2024). The UIG essentially translates the requirements of the 1998 Aarhus Convention into national law. It guarantees citizens free access to environmental data held by public authorities, from the state of air, water, and soil to broader environmental interactions. Each federal state has its own legislation.

Although information is legally required in planning and approval procedures for infrastructure projects, actual implementation falls short (Hanke, 2025). According to the latest monitoring report by the *Unabhängigen Instituts für Umweltfragen* (UfU), only 596 out of 1,950 projects subject to environmental impact assessment between 2020 and 2023 — less than one third — were made publicly accessible (see *Tagesspiegel*, Hanke, 2025). This persistent gap constitutes a violation of EU law and effectively restricts civil society's right to participation as guaranteed under the Aarhus Convention and the EU Environmental Impact Assessment Directive (Hanke, 2025).

At the European level, new regulations also play a role. The Corporate Sustainability Reporting Directive (CSRD) requires around 49,000 companies across the EU to publish sustainability reports, strengthening corporate accountability and transparency (CSR, n.d.).

Moreover, key climate reports help anchor information in public debate. The IPCC reports are made accessible through the German IPCC Coordination Office, which publishes German translations and serves as a national contact point (IPCC, n.d.). Similarly, reporting to the UNFCCC through National Communications ensures international transparency on Germany's climate efforts. Under the Enhanced Transparency Framework of the Paris Agreement, Parties are also required to submit Biennial Transparency Reports, starting from December 2024, providing updated information on progress toward national climate targets.

Another recent milestone is a digital online platform. In January 2025, the environmental information portal umwelt.info was launched by the *German Environment Agency*. It bundles environmental and conservation data from across Germany into one accessible platform, aiming to make climate and environmental information transparent, easy to navigate, and useful for citizens, businesses, and policymakers alike (Umweltbundesamt, 2025a).

A major driver behind the accessibility of scientific information is the Open Science movement, which has gained momentum in recent years. The idea: Scientific results, data, and even teaching materials should be freely available to everyone, not hidden behind expensive journal subscriptions or institutional walls. Although this is an increasing trend, the reality is mixed and many studies remain accessible only to those who can pay for the content.

Of course, public access to climate information does not stop with official reports or scientific papers. There are many kinds of climate information, such as consumer sources of information that influence everyday decisions. These include product labels that communicate energy efficiency, carbon footprints, or organic certification; sustainability seals that signal responsible production; and emerging tools that shed light on circular economy practices. Some of these are mandated by law, while others are voluntary initiatives. While there is, on the one hand, an overload of information that makes it difficult to maintain an overview, there are at the same time notable gaps and a lack of certain types of information (see box below).

Three Types of Climate Knowledge and Information

Environmental psychology distinguishes between three kinds of knowledge (and thus, types of information) that matter for turning awareness into action (Klimafakten, 2021):

- **Problem knowledge** explains what the issue is and why it matters — for example, that climate change brings serious and growing risks if left unchecked.
- **Orientation knowledge** helps people place the issue into context: How urgent is it? What is established fact, and what remains uncertain? And if uncertain, what still merits attention and action?
- **Action knowledge** equips people to respond, giving them the tools and strategies to act meaningfully.

So far, public communication often overemphasizes problem knowledge (doom-laden reports of disasters) and quick individual tips, while orientation knowledge – the bridge that helps citizens see where they stand and how they can act collectively – is often missing (Klimafakten, 2021).

In short: while the supply of climate-related information in Germany is vast, sometimes even overwhelming, the challenge is not necessarily availability but accessibility and guidance. As experts in the interviews stressed, citizens often feel drowned in data rather than empowered by it.

4.2.4.2 Clear and engaging presentation

Making climate information publicly accessible is only the first step. For it to have a real impact, it also needs to be clear, engaging, and accessible to everyone. Dry documents and technical reports will not be enough — people need content that speaks their language, fits their daily realities, and lowers the barriers to understanding.

Take the example of ACE. In theory, all key documents are publicly available — from the Paris Agreement to the Glasgow Work Programme. Yet in practice, there are very few resources that explain ACE in ways that are easy to grasp. The *ACE Hub* has made an important start in breaking down these texts into more accessible formats, but the available materials are still far from generally comprehensible (UNFCCC, 2025a).

There are, however, some promising good practices that show how climate communication can be made more engaging. A notable example is the recently launched platform by the Ministry of the Environment in North Rhine-Westphalia: *gutesklimafuer.nrw*. Unlike traditional government

communication, the site embraces the style and tone of social media. Instead of politicians delivering statements, you'll find short explainer videos featuring small business owners who talk about how they integrate climate action into their daily work. The platform also sets an example for inclusion and accessibility by offering content in sign language and easy language.

Beyond individual projects, there are initiatives that aim to strengthen climate communication more broadly. One of the most notable projects is *Germany Talks Climate*, which provides an evidence-based toolkit for organizations that want to engage the German public (Melloh et al., 2022). Its focus is on values-based communication, helping actors frame climate change in ways that resonate with people's everyday lives. A similar approach is followed by *Klimafakten* with its Academy and the network *Klima kommunizieren* of professional climate communication trainers which offer tools and insight in public engagement formats from keynotes to extended workshops for organisations.

4.2.4.3 Relevant context and actionability

For climate information to empower people, it must appear in the right context, at the right time, and with a clear link to action. Accessibility alone is not enough. After all, many people do not actively seek out climate information in their daily lives. According to the PACE study, one in four Germans rarely or never informs themselves about climate change (Institute for Planetary Health Behaviour, 2025). Even among those who say they frequently follow the issue (a bit over 40%), much of the information is unlikely to be readily available in their everyday context and when it is, it is not always clear how it connects to their own actions.

Experts pointed out that while there is an abundance of climate information, too little of it is framed in ways that are directly actionable. Too often, climate policies and the measures that follow are rolled out without sufficient explanation or meaningful communication to accompany them. A prominent example is the *German Building Energy Act* (mostly called "Heizungsgesetz"), which became a highly contested policy not only because of its technical complexity, but also because of communication failures. Even former Economics and Climate Minister Robert Habeck, who was responsible for the Act, later admitted that mistakes were made in explaining the law to the public (Unfried, 2023). This is all the more stunning as an impressive, government-funded infrastructure for "Energieberatung" (energy consulting) has been in existence in Germany for more than 40 years.

At the local level, too, climate protection measures often lack the accompanying communication that would help citizens understand why these actions matter and what role they can play. Municipal climate managers, for instance, are often left without the training, structures or data needed to effectively communicate the municipality's plan of climate action.

This makes it all the more crucial that climate information meets people where they are, instead of expecting citizens to proactively seek it out. Information should be embedded in the contexts where decisions are made and daily lives unfold. This challenge is amplified by shifting information cultures: among younger generations, traditional news formats such as newspapers or TV broadcasts are losing ground. Around one-third of 14- to 24-year-olds show little interest in global affairs and rarely use established media (Wunderlich & Hölig, 2023). Instead, social media platforms like TikTok and Instagram are becoming the primary source of political and social information for 42% of young Europeans (European Parliament, 2025).

But with this shift comes a serious risk: social media is also a breeding ground for mis- and disinformation (the former being inadvertent, the latter intentional, at least for the original source, Bundesregierung, n.d.). TikTok officially bans false climate content, yet systematic enforcement is lacking. An investigation by *Global Witness* from 2024 showed that climate-sceptical and misleading content continues to circulate despite reporting mechanisms (Global

Witness, 2024). The JIM Study, an annual survey on media use among 12- to 19-year-olds conducted since 1998, confirms that 61% of German teenagers encountered disinformation on social media in just the last month (mpfs, n.d.). The rise of AI-generated greenwashing and transatlantic denial campaigns further illustrate how climate disinformation is mutating rapidly (EU DisinfoLab, 2025). Russia can be expected to be another key source of climate and energy disinformation (e.g. Dobbert & Thiele, 2025). This makes it essential to strengthen strategies like "prebunking", proactively closing information gaps before mis- or disinformation can spread, and ensuring that reliable, relevant information keeps pace with shifting media landscapes.

At the international level, this challenge has now received unprecedented political recognition. For the first time in over 30 years of UN climate negotiations, information integrity has been elevated to the core of the agenda through the COP30 Declaration (UNESCO, n.d.). In this context, UNESCO, the Government of Brazil, and the United Nations have launched the Global Initiative on Information Integrity on Climate Change. The initiative aims to "investigat[e], expos[e], and dismantle[e] disinformation related to climate change, as well as t[o] socializ[e] […] the results of the research" (UNESCO, n.d.).

At the same time, it is worth stressing that even the clearest and best-communicated climate information does not automatically lead to empowered citizens. Knowledge is necessary, but not sufficient. The so-called *intention–behaviour gap* highlights this challenge: people may fully intend to act more sustainably, yet daily routines, structural barriers, or competing priorities often get in the way. This gap is well documented in psychology and reminds us that effective climate empowerment requires more than public access to information, it needs supportive structures.

Good Practices and Important Actors: Public Access to Information

Alongside the reports and initiatives already mentioned, there is a wide range of projects and actors making climate information more accessible in Germany.

- **Publication about climate communication**: An example is the first report of this project on Efficient Approaches in Climate Communication, which provides evidence-based insights into what works in practice (Schrader et al., 2024).
- **K3 Climate Communication Conference:** Organized every two years by Klimafakten together with partners from Germany, Austria, and Switzerland, K3 brings together researchers, practitioners, and communicators. Launched in 2017, it was designed to connect actors and to strengthen the professional community around climate communication (K3, n.d.).
- **Helmholtz KLIMA Dialogue Platform:** This initiative of the Helmholtz Association aims to bring climate science into political and public debate, creating a stronger link between research and decision-making (Helmholtz KLIMA, n.d.).
- **Educational Platforms:** On the official ESD portal of the German government (BMBF, n.d.-c) and via the Materialkompass of the Federation of German Consumer Organisations (VZBV) (Verbraucherzentrale, n.d.), educators and citizens can find a wide range of resources on climate and sustainability education.
- **Other initiatives:** Numerous smaller projects and networks — from NGOs to social media campaigns — enrich the landscape of climate communication.

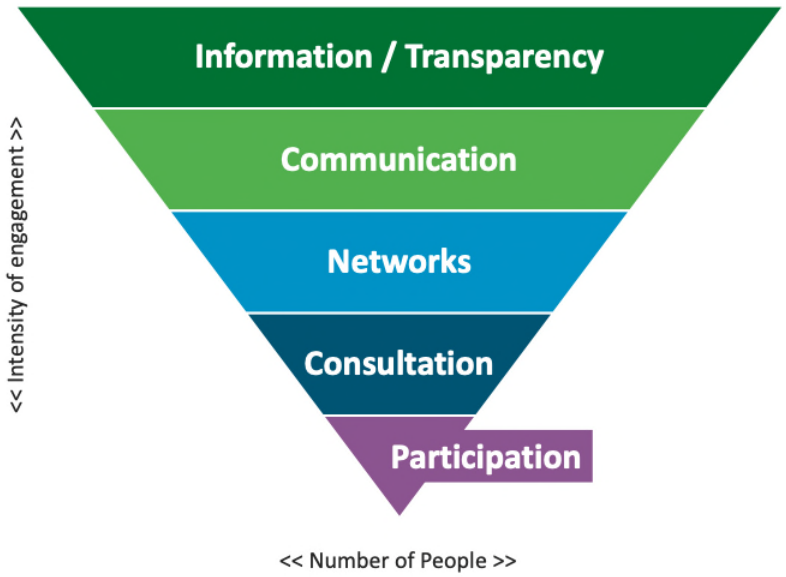
However, what is still missing is a central coordinating hub that bundles and navigates the efforts of making climate information publicly accessible.

4.2.5 Public Participation

At its core, participation means having a voice in the decisions that affect us. It is about bringing diverse perspectives, needs, and interests into a shared process of negotiation to arrive at solutions that are both inclusive and durable (UfU, n.d.). International agreements such as the Aarhus Convention provide the legal backbone for this, setting minimum standards for transparency, access to information, and the involvement of citizens in environmental decision-making including the right to challenge those decisions in court (UfU, n.d.).

Participation itself takes different forms. On the one hand, there is formal participation, anchored in law, such as elections or referenda or as part of administrative law and planning codes. On the other, there is informal participation through civil society initiatives, roundtables, citizens' assemblies, consensus conferences, living labs, or scenario workshops — all designed to open new spaces for dialogue and influence (UfU, n.d.). In some definitions, participation is stretched even further: it may begin with access to information alone, where simply being informed is already considered part of the participation pyramid (Hemmati & Schmidt, 2020).

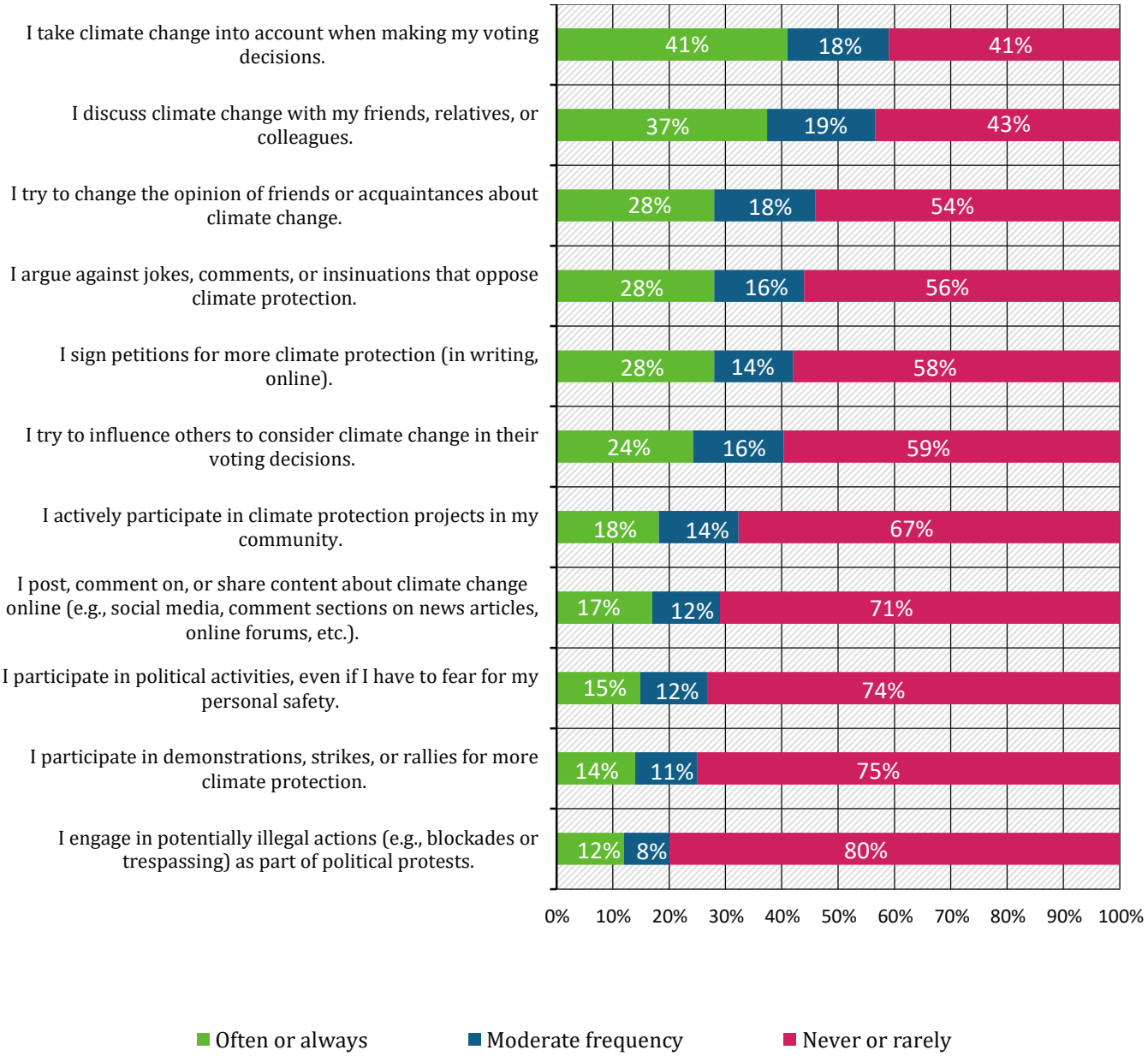
Figure 15: Pyramid of Participation



Participation pyramid, levels of participation, and typical phases of multi-actor partnerships
Source: Participation pyramid adapted (Hemmati & Schmidt, 2020)

Survey data helps to illustrate what participation looks like in practice. In the PACE survey (Institute for Planetary Health Behaviour, 2025), citizens were asked about their political participation. The most common forms were voting, discussing politics with peers, and trying to influence the opinions of friends and family about climate change. More active forms — such as joining demonstrations, posting about climate change online, or engaging in risky protest activities — remain far less common, with fewer than 20% reporting such behaviour as often (see Figure 16).

Figure 16: Political Participation in Germany: Frequency of participatory behaviours



Survey from 06th of May 2025
Source: Institute for Planetary Health Behaviour, 2025

In a study on civic engagement and participation in Germany's socio-ecological context, researchers found that active citizens play a crucial role in raising awareness, strengthening political participation, and addressing local challenges (Peuker et al., 2020). This sort of civic engagement can take on different functions: at times it is compensatory, filling gaps where state services fall short, and at other times it is transformative, driving broader societal change and supporting socio-ecological renewal.

Community gardens for instance foster food sovereignty and social inclusion. Solidarity-based agriculture builds new producer-consumer alliances. Repair cafés promote resource conservation and collective empowerment, and energy cooperatives democratize energy production while creating local value (Peuker et al., 2020). Across fields from mobility projects

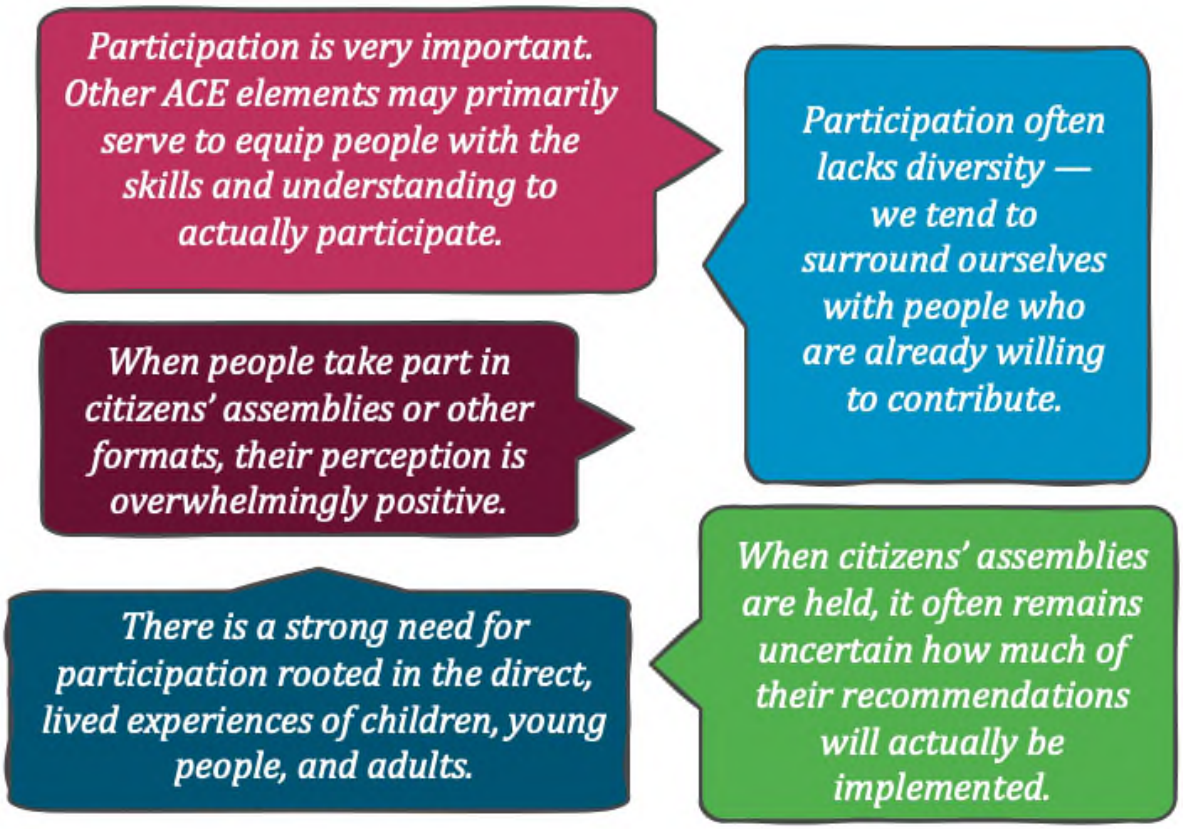
to neighbourhood networks, such initiatives strengthen competencies, foster democratic culture, and often inspire change well beyond their immediate context.

The study also points to challenges (Peuker et al., 2020). Access to participation is unequal: socio-economically disadvantaged groups are underrepresented. Many initiatives operate under precarious conditions, heavily reliant on project funding, voluntary work, and short-term grants. There is also the danger that civic engagement becomes a "gap-filler" for state responsibilities rather than building additional structures. Moreover, civic engagement in the socio-ecological field is still too rarely met with political recognition. As many initiatives struggle with a lack of structural and long-term support, it becomes all the more difficult to build continuity and stability. At the same time, the local infrastructure is often insufficient: dedicated spaces, advisory services, and supportive networks that could help initiatives grow and connect are missing in many places.

4.2.5.1 Challenges, Lessons and Good Practices from the interviews

Looking across the interviews, one theme stood out: participation was consistently described as essential. In fact, one expert highlighted that the other ACE elements primarily serve to equip people with the confidence, skills, and understanding needed to actually participate. Moreover, participation processes are not only important for climate action but may also be important for strengthening democracy itself.

Figure 17: Insights from the interviews



This figure illustrates trends, themes, and challenges that surfaced in the interviews — not necessarily as direct quotes, but as recurring patterns.
Source: own illustration, ConPolicy.

Citizens who participate often describe formats like citizens' assemblies or councils as "extremely positive" experiences. At the same time, these processes are not without risks. If

recommendations are ignored or watered down, the effect can be disillusioning. Such frustrations have been observed abroad, for example in the French climate assembly, where most recommendations were never implemented (Kern, 2021). Interestingly, Germany has become something of a hotspot for citizen assemblies. According to Prof. Detlef Sack (University of Wuppertal), no other country hosts more lottery-based assemblies than Germany (BUW, 2024). A new database records around 300 such processes since 1972 — once known as "planning cells." Their use has surged in recent years: while the 2010s saw about six assemblies per year, between 2020 and 2023 the number jumped to nearly 30 annually. Roughly 80 percent take place at the municipal level, particularly in North Rhine-Westphalia, Bavaria, and Baden-Württemberg, covering topics from urban planning and infrastructure to sustainability, social issues, climate, and transport. The most important case might be the German *Bürgerrat Klima*: 160 randomly selected citizens spent months debating how to make climate policy "good for us, good for the environment, and good for the country" (Bürgerrat Klima, n.d.). More recently, the Citizens' Assembly about *nutrition in transition*, directly commissioned by the German *Bundestag*, presented its recommendations to Parliament in February 2024. The assembly, composed of randomly selected citizens, adopted nine proposals aimed at improving national nutrition policy (Bürgerrat, 2024). Yet, despite its official mandate, the recommendations have been mostly disregarded.

Another structural weakness is the **lack of monitoring for participation**. Because participation takes so many different forms, from voting to local activism, from roundtables to online posts, it is hard to systematically capture its scope and impact. However, there is also no national monitoring-process for participation that tries to conquer that challenge.

Diversity is another concern. Both interviews and studies have shown that participatory processes tend to attract mostly educated, ACE-affine groups, while marginalized communities remain underrepresented. This remains a central challenge that surfaced again and again in the interviews: How can groups who have so far had little contact with ACE be reached and meaningfully involved. One expert spoke of the lack of and urgent need for participation in the everyday experiences of children, youth, and adults.

Overall, the lesson is clear: participation should be a central element of ACE. But for it to be meaningful, it must be inclusive, linked to real outcomes, and structurally supported.

Good Practices: Public Participation

There are some good examples that show what meaningful participation can look like in practice.

- In **Brandenburg**, a new law mandating stronger youth involvement (MBJS, n.d.) sparked the creation of youth parliaments and innovative participation formats.
- At the federal level, the **youpan youth panel** within the ESD platform has demonstrated how young voices can be integrated early and taken seriously.
- **Mitmischen NRW** creates spaces for dialogue between young people and political decision-makers in North Rhine-Westphalia. Through workshops, formats like *Pizza & Politik*, and a mentoring program with members of parliament, young participants gain skills, share their perspectives on sustainability, and get firsthand insights into parliamentary work (Germanwatch, n.d.).
- New tools are also emerging, such evaluation tools to assess the effectiveness of youth councils (Leuphana, n.d.).

- Beyond youth participation, other promising formats are evolving. In North Rhine-Westphalia, the *Bürgerenergiegesetz* requires wind farm operators to share profits with local municipalities and residents, ensuring that those who bear the impact of turbines also share in the benefits (NRW-Wirtschaftsministerium, n.d.). Similarly, energy cooperatives empower citizens to directly drive the renewable energy transition (BEW, n.d.).

4.2.6 International Cooperation

While the primary focus of this project was on Germany's national ACE strategy, international cooperation deserves mention. Climate empowerment is, by definition, a global endeavor — and several initiatives stand out as particularly relevant.

One of the most visible is the **ACE Hub NRW**, launched in 2022 as a collaboration between the Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia and UN Climate Change which has its secretariat in Bonn, a city in that state UNFCCC, 2025a). Its mission is to boost public support and engagement in climate action in ways that accelerate the implementation of the Paris Agreement across all sectors of society. The Hub is built on three pillars:

- supporting national ACE focal points,
- engaging and empowering children and youth, and
- fostering multi-stakeholder collaboration.

After its first three-year funding phase, the ACE Hub has published a report summarizing its activities (UNFCCC, 2024a). These include the ACE Focal Points Academy, which offered interactive training and capacity-building tailored to national focal points and negotiators, networking meetings that connected practitioners across countries and dedicated youth events under the ACE Hub Youth strand.

Another important initiative is the Facility for Action for Climate Empowerment to achieve NDCs in Zambia, funded by the International Climate Initiative (IKI) (IKI, 2025). Already implemented activities are: the development of behavioural science training packages (will be piloted in Madagascar), the creation of communication networks with relevant ministries, and the training of 45 NGOs in behaviour change approaches (IKI, 2025). Although still in its implementation phase, the outcomes of the project may be valuable lessons for ACE in Germany.

Youth participation in international climate governance is also a cornerstone of international cooperation. Germany supports youth delegations to major events such as the UNFCCC COPs and the NDC Partnership's conferences. These programs provide not only financial backing for young people, especially from the Global South, to attend negotiations, but also capacity-building, training, and opportunities to form networks that extend well beyond the conferences themselves. Beyond individual projects, Germany plays an active role in wider international networks and UN processes, including its responsibility for advancing the 2030 Agenda (BMUKN, n.d.-a).

Finally, interviews highlighted that international cooperation can act as a powerful lever domestically. Seeing how climate empowerment is implemented in other countries can inspire people in Germany and provide motivation, as well as practical models for adaptation at home.

4.3 Conclusion

Germany is active in climate education, communication, and participation — yet the concept meant to bring these strands together, *Action for Climate Empowerment*, is still barely known.

Even among experts, awareness of its history, scope, and added value remains low, which explains why relatively little is explicitly carried out under the ACE label. Instead, most of what could be considered ACE happens without the name — often embedded in ESD, civic engagement, or climate policy initiatives more broadly.

Germany's structural landscape presents both challenges and opportunities. On the one hand, fragmented governance, and resource asymmetries between municipalities create barriers for coherent and equitable ACE implementation. Many smaller, rural, and financially constrained municipalities struggle to take on additional responsibilities like climate empowerment when even their core tasks are under pressure. On the other hand, federalism also enables experimentation. The political power for federal states and municipalities enables "policy laboratories," where niche innovations can be tested, refined, and — if successful — transferred to other regions. This potential for bottom-up learning and diffusion is a strength of the German system, even if it requires stronger coordination to fully unfold.

In **education and training**, Germany is comparatively advanced thanks to its strong ESD architecture. The National Platform, expert forums, and youth panel (*youpan*) provide robust steering structures. Monitoring by *Institut Futur* is internationally unique, combining document analysis, surveys, and mixed methods to track progress. Still, ESD is often treated as an "add-on," and teacher training remains the weakest link.

Public awareness of climate change remains high but is receding from peak levels compared to other issues such as health, education, and economic stability. Monitoring tools like the *Umweltbewusstseinsstudie* and *PACE* survey provide valuable trend data. Overall, there is a growing opposition to policies aimed at tackling climate change. Encouragingly, most citizens continue to support climate action, though they underestimate how the majority shares that view (pluralistic ignorance).

In terms of **public access to information**, Germany has some legal foundations and new milestones such as the portal *umwelt.info*. Yet information often remains fragmented or detached from actionable context. Promising projects — like *gutesklimafuer.nrw* or *Germany Talks Climate* — show how accessibility, clarity, and engagement can be improved. But gaps remain, especially as dis- and misinformation spreads rapidly on social media and is pushed by anti-democratic politicians and populist private media and youth increasingly rely on these platforms for political news. Moreover, there is no publicly-funded or publicly-mandated national competence centre to tackle climate disinformation. A recurring challenge is that climate policies and measures are often rolled out without sufficient accompanying communication, leaving citizens unclear about their purpose, relevance, social compensation measures and practical implications.

Public participation is widely recognized as essential, both by experts and by citizens who describe participatory experiences as "extremely positive." Germany is now a global hotspot for lottery-based citizens' assemblies, with nearly 30 such assemblies having taken place per year since 2020. Yet participation still suffers from limited diversity, weak follow-through on recommendations, and a lack of systematic monitoring. Promising practices exist — from Brandenburg's youth law to *Mitmischen NRW* or local energy cooperatives — but scaling and inclusivity remain unresolved challenges.

Finally, **international cooperation** is anchored by initiatives like the ACE Hub NRW and IKI-funded projects in Zambia. Germany also supports youth delegations at international negotiations, helping build global networks and capacities. Interviews underscored the potential of international cooperation as an inspiration and lever for stronger domestic ACE action.

Germany has many of the important ingredients for ACE. Yet across the board, ACE is still too often treated as an "add-on," unevenly resourced, and weakly coordinated—especially at municipal level.

Four Priority Areas of the Glasgow Work Programme in Germany

Viewed through the Glasgow Work Programme's four priority areas, Germany's implementation of ACE looks like this:

Policy Coherence:

- What exists: There are encouraging first steps toward coherence. Germany's Education for Sustainable Development has a well-defined architecture (with a National Platform, expert forums, and the youpan youth panel).
- What's missing: ACE is not given political priority and ACE has not yet become a recognizable or cross-government frame. The six ACE elements remain scattered across different policies and ministries. Connections between them and broader climate policy are often improvised and project-based rather than strategically planned. Participation and communication are usually treated as after-thoughts that follow policy decisions, instead of shaping those policies from the beginning. Federal-state differences add another layer of fragmentation, leaving practice uneven and coherence partial at best.

Coordinated Action:

- What exists: Strong islands of coordination (e.g., ESD bodies; some federal states with dense support networks like in Baden-Württemberg; ACE Hub NRW connecting internationally).
- What's missing: A national ACE "spine" that connects federal, state, and municipal actors across all six elements. Local capacities (e.g., climate managers) are patchy, and time-limited and lack full integration into municipal administrative structures; many initiatives live on project funding, making progress fragile and coordination more difficult.

Tools and Support:

- What exists: Many teaching resources (e.g. gathered on the website *Umwelt im Unterricht*), growing open-access data (umwelt.info), practical toolkits (e.g., Germany Talks Climate), and international offers (ACE Hub trainings).
- What's missing: More ready-to-use tools for actionability (e.g. behaviourally informed communications playbooks tied to concrete measures), and support for under-represented groups (e.g. youth in disadvantaged regions).

Monitoring, Evaluation & Reporting (MER):

- What exists: A standout national ESD monitoring system (input–process–outcome) and some public-awareness tracking (Umweltbewusstseinsstudie, PACE).
- What's missing: Systematic MER for ACE as a whole—especially for participation and for local implementation capacity.

5 From Vision to Practice: How Can Germany Strengthen ACE?

Action for Climate Empowerment can only gain traction in Germany if its goals are translated into tangible steps that reflect existing financial, institutional, and human resources. The purpose of this chapter is to introduce the implementation concept for ACE in Germany.

The concept aims to initiate, build up, and consolidate national activities and processes that strengthen ACE as a framework and make it more effective. It does not attempt to reinvent the wheel but to strategically connect what already exists, to fill critical gaps, and to create momentum for lasting structures.

Importantly, the proposed roadmap has a limited time horizon of about five years. The focus of this first phase is to launch and stabilize key processes. After this initial implementation period, a targeted review and update should follow. This review phase is essential: it allows new learnings and experiences to flow back into the process, ensures that important stakeholders can be meaningfully involved, and makes ACE development an increasingly participatory and iterative journey.

5.1 Methodology

The methodology used to develop this implementation concept closely mirrors the approach applied in the status quo analysis of ACE (see section 4.1). The concept is based on a combination of sources and perspectives:

- **Expert interviews** provided insights and measures for strengthening ACE in Germany (see section 4.1 for the list of experts).
- **Desk research** filled gaps from the interviews.
- **International good practices** served as inspiration, offering examples of what has proven effective elsewhere and the expert interviews in Germany helped to understand which of these international lessons could be transferred to the German context.
- Finally, the concept draws on the **expertise of the research team**, which integrated the different strands of evidence into a coherent proposal.

The implementation concept is provided as a separate in German and English. Further details can be found in the list of annexes (see p. 71).

5.2 Guidance for the Implementation Concept

Developing a practical concept for ACE in Germany required both strategic choices and a clear focus on priorities. This section outlines the key considerations that shaped the approach, and explains how the resulting concept is designed as a five-year roadmap with iterative learning built in.

5.2.1 Weighing the trade-offs

Designing an implementation concept for ACE meant balancing several important questions. With limited resources, it was crucial to ask where interventions would have the biggest leverage and which priorities would deliver the greatest impact. Expert perspectives highlighted different theories of change: should ACE be driven mainly through top-down regulation, or from

bottom-up initiatives? Since the answer is likely a mixture of both, we aimed to outline measures for each approach and to indicate the sequence in which they could be effective.

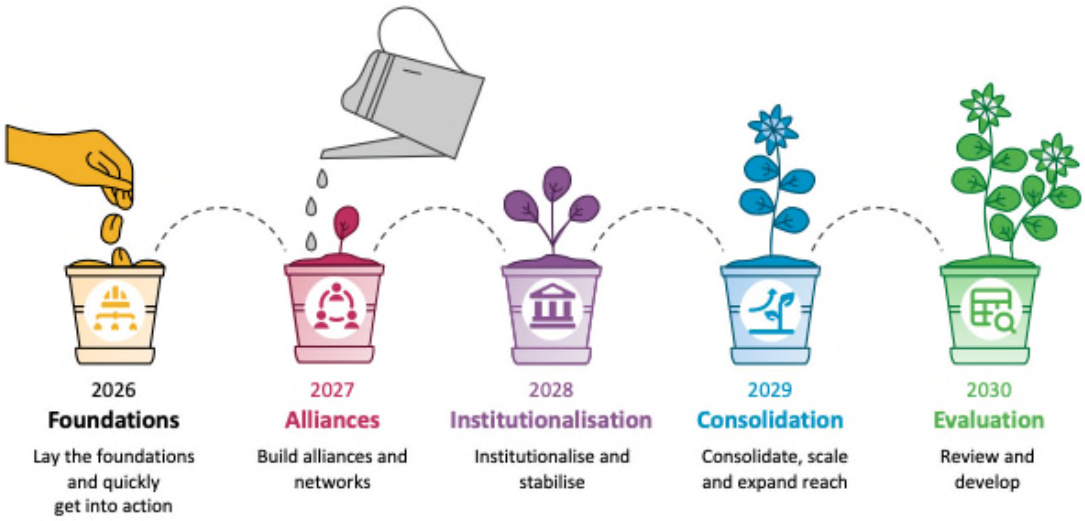
5.2.2 From roadmap to implementation concept

Another guiding principle is that this paper is not a full ACE strategy, but a starting point – an implementation concept. In line with the participatory spirit of ACE, a comprehensive strategy must be developed together with stakeholders from politics, administration, civil society, education, business, science, and especially youth.

This implementation concept therefore positions itself as a five-year roadmap: its purpose is to initiate, build up, and consolidate national activities, processes, and structures for ACE in Germany. After this first implementation phase, an iterative process should begin — the structures will be reviewed, adapted, and expanded to respond to new needs and opportunities.

The concept focuses primarily on the national level. While international cooperation and networking are acknowledged as valuable, the emphasis here is on strengthening domestic structures, processes, and actors.

Figure 18: The 5-year plan for ACE in Germany



Source: own illustration, ConPolicy using Napkin.ai and MS PowerPoint.

The five-year roadmap is structured around annual priorities:

- **2026** lays the groundwork and initiates quick action by mapping resources, identifying gaps, and piloting support.
- **2027** focuses on building alliances, networks, and multipliers to strengthen and connect initiatives.
- **2028** moves toward institutionalisation, embedding positively evaluated, successful pilots into permanent structures and preparing a participatory process for a national ACE strategy.
- **2029** emphasizes consolidation, scaling of impactful activities, and outreach, spreading proven approaches to broader contexts.
- **2030** reviews, evaluates and refines the established structures, ensuring lessons learned from evaluation studies flow directly into the national ACE strategy.

These steps are supported by five goal levels that structure the concept: one overarching level plus four aligned with the priority areas of the Glasgow Work Programme. The boundaries between levels are not strict and many measures cut across them and must be understood as complementary.

The implementation concept can be found in a separate annex (see Annexes, p. 71, for details).

6 Conclusion: What now?

"Now is the time for change and now is the time for real action."

Jerome Foster II

The story of Action for Climate Empowerment began in 1992, when Article 6 of the UN Framework Convention on Climate Change laid the groundwork for a global vision: that education, public awareness, access to information, and participation are indispensable for tackling climate change. Since then, much has happened. Structures have been built, innovative projects have emerged, and citizens around the world have increasingly stepped forward. And yet, the urgency has only grown. Today, the risk is that the climate crisis slips from the agenda just when decisive action is needed most.

The good news is that there are already countless initiatives in Germany that show what is possible—from the monitoring architecture of Education for Sustainable Development, to innovative state-level efforts like North Rhine-Westphalia's ACE Hub and Brandenburg's Youth Law, to the energy and persistence of civil society movements. These are not isolated sparks but proof that ACE is alive in practice. However, the existing ACE infrastructure remains insufficient to meet today's societal challenges and to drive change at the necessary pace.

Failing to act on ACE is not a viable option. Without ACE, climate debates risk becoming unnecessarily polarized or avoided altogether out of fear of public resistance. At the same time, disinformation and anti-climate narratives are increasingly deployed to deliberately erode trust in climate policy. Without the elements of ACE, climate policy might be overwhelming for people. They could feel excluded or left behind. ACE provides the perspective to change this. It can create the conditions for democratic participation to flourish, for citizens to feel equipped rather than overburdened, and for climate action to become a shared endeavour rather than a top-down directive. ACE might be the missing key to ensure not only that climate policy regains public trust and legitimacy, but also that it moves forward on a stronger, more inclusive course. What began in 1992 as an international commitment must now be translated into concrete structures, practices, and resources in Germany.

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8 List of Annexes

- **Annex A:** Country Profiles: Austria, Chile, Denmark, France, Italy, Netherlands, United Kingdom, USA (all included in the appendix below)
- **Annex B:** External Document (English): "International Good Practice in ACE"
- **Annex C:** External Document (German) – "Umsetzungskonzept für *Action for Climate Empowerment* in Deutschland: Die Gesellschaft befähigen das Klima zu schützen"
- **Annex D:** External Document (English translation of the implementation concept) – "Implementation Concept for *Action for Climate Empowerment* in Germany: Enabling Society to Protect the Climate"

A Appendix: Country Profiles

- Austria
- Chile
- Denmark
- France
- Italy
- Netherlands
- United Kingdom
- USA

Country Profile Austria
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name (English / own language)	Republic of Austria / Republik Österreich
Type of Government	Parliamentary democracy, federal state
Democracy Index 2024 [1]	Rank 19 / 8.28 (Scale of 10)
Population (millions) [2] / urban quota (%) [3]	9.2 (2024) / 60%
Membership inter-national organisations	EU, OECD, UN, G7 and G20 (indirect via EU)
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index (1993-2022) [6]	Rank 94; 0.18 fatalities/100,000

Light Green = EU; Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7] / GDP per Capita [8] (current US-Dollar)	521.6 billion / 56,833	2024
Gini-Index of Inequality [9] (0 = perfectly equal, 100 = max. unequal)	30.9	2022
GHG-Emissions [10] / GHG-Emissions per capita [11] (to CO2eq)	72.9 million / 8.25 EU: 3221,8 million / 7.26	2023
Emissions: Percent of World Total [10] / global rank [12]	0.14 % / rank 65(EU: 6.44 % / rank 4)	2023
Carbon Intensity [10] (to CO2eq / 1k USD)	0.12	2023
Percentage Emissions by sector [10] (Top5):	Transport (29.3), Industry (22.8), Power (14.2), Buildings (11.3), Agriculture (9.9)	2023
Emission Change since 1990 [10]	-10.3 %	2023
Fossil energy use [13] / energy imports [13]	62.4 % / 64 %	2023
Renewable Energy use total [13] / use in electricity (incl nuclear, waste) [13]	37.6 % / 86.2 %	2023
Climate Action Tracker [14]	Insufficient (EU-Rating)	2024
Climate Change Performance Index [15]	Rank 23 (medium performing country)	2024
Will country reach its ESR-contribution to the 2030 EU-goal of -55% GHG? [16,17] (-48% vs 1990 in non-ETS emissions)	Official: possible (2024 emissions were close to but above emissions path) [16] NGO: policy gap of 6 % [17]	2024 2025
Target year for Climate Neutrality [18]	2040	2025
Population knowledge of Climate Change Causes / Consequences / possible Solutions [19]	7.68 / 7.38 / 4.41 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov’t measures [20]	67 % / 64 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026a), 14: Climate Action Tracker (2024a), 15: Burck, J. et al (2024), 16: Umweltbundesamt (2025), 17: Velten, E. et al (2026), 18: oesterreich.gv.at (2026), 19: European Investment Bank Group (2024a), 20: European Investment Bank (2022)

2 Austria's Approach to "Action on Climate Empowerment"

One-sentence description

While focussing efforts on sustainability education and largely ignoring the results of public participation by a climate citizens' council Austria's government has delegated a lot of ACE work and coordination to the highly-reputed public agency Klimaaktiv (Klimaaktiv, 2024) which offers information on climate change and policy, solutions and initiatives while engaging in state-of-the-art climate communication.

Central aims and issues according to own views

Austria had and has a range of helpful preconditions for a comprehensive ACE-strategy but still lacks one. In 2019 the country hosted a conference with neighbouring states and civil society actors to pass the Burgenland Declaration (UNFCCC, 2019) which committed parties "*to make Action for Climate Empowerment fundamental in the planning and actions of our government, organization, agency, company or personal or public enterprise*". A year later a **public referendum** passed demanding a more ambitious climate policy from which a climate citizens' council resulted. However, it's 93 recommendations (ARGE Klimarat, 2022) were largely ignored (Klimavolksbegehren, 2023) by the government.

Still operative is the public agency **Klimaaktiv** which not only spreads knowledge on climate change and provides information on initiatives, solutions and funding sources but is engaged in climate education and **climate communication** as well. It has published guides on effective communication (Klimaaktiv, 2022) and visual presentation (Klimaaktiv, 2023) of climate issues drawing heavily on social science input and is seen by many as a "milestone".

The *National Communication* to UNFCCC (Bundesministerium für Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie, 2022) submitted April 2023 lists several initiatives of a focus on **climate education** often integrated in a school subject with citizens' education ranging from all school levels to university and touching the training of specialists (National Communication, loc cit, p. 168-176).

Selected single measures

- Several measures detailed in the National Communication deal with training for and public awareness about **organic farming and the usage of biomass** in the energy sector, e.g. in the form of biogas. Craftsmen like plumbers are certified for installing biomass-heating systems (*National Communication*, loc cit, p. 171). The Wirtschaftskammer (chamber of commerce, industry and crafts) and other institution also offer training and certificates for **installing heat pumps** (WKO, 2025).
- A climate alliance, the "Klimabündnis" (Klimabündnis, 2026), brings together political entities from federal states to local communities with companies, institutions of education and parishes and dioceses of the church. It is **focused on local climate action** but as a network also offers ties and contacts across the country, to 24 European partner states and indigenous organisations in the Amazon region (*National Communication*, loc cit, p. 174/5).

People involved in ACE-programmes, in coordinating and evaluating efforts

One person with other duties in the ministry

Structural coordination and whole-of-government approach

None, coordination and information among agencies and institutions largely depend on personal contacts and engagement. Political responsibility for and institutional set-up of climate policy has shifted several times with government changes.

Reliance on social science expertise

Systematically in the climate communication efforts of Klimaaktiv, otherwise not focused on ACE as a concept but in more traditional elements like education.

Gaps in ACE strategy

There is no formal national ACE strategy (as of May 2025). Public participation could be taken much more seriously which would make ACE highly political.

National Plans and Strategies related to/intersecting with ACE

National Climate Adaptation Strategy (Bundesministerium für Land- und Forstwirtschaft, Klima- und Umweltschutz, Regionen und Wasserwirtschaft, 2024)
Education for sustainable development (Forum Umweltbildung, 2026)

Country Profile Chile
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name (English / own language)	Republic of Chile / República de Chile
Type of Government	Presidential democracy
Democracy Index 2024 [1]	Rank 29 / 7.83 (Scale of 10)
Population (millions) [2] / urban quota (%) [3]	19.8 (2024) / 88%
Membership inter-national organisations	OAS, UN, G-77
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	No
Climate Risk Index [6] (1993-2022)	Rank 144; 0.01 fatalities/100,000

Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7] / GDP per Capita [8] (current US-Dollar)	333.3 billion / 16,710	2024
Gini-Index of Inequality 9 (0 = perfectly equal, 100 = max. unequal)	43.0	2022
GHG-Emissions [10] / GHG-Emissions per capita (to CO2eq) [11]	121.5 million / 6.4	2023
GHG-Emissions: Percent of World Total [10] / global rank [12]	0.23 % / rank 46	2023
Carbon Intensity (to CO2eq / 1k USD) [10]	0.21	2023
Percentage Emissions by sector (Top 5) [10]	Transport (26.7), Industry (24.0), Power (20.0), Waste (9.7), Agriculture (9.5)	2023
Emission Change since 1990 [10]	+108.7 %	2023
Fossil energy use [13] / energy imports [13]	65.5 % / 62.3 %	2023
Renewable Energy use total [13] / use in electricity (incl nuclear, waste) [13]	34.5 % / 63.5 %	2023
Climate Action Tracker [14]	Almost Sufficient	2024
Climate Change Performance Index [15]	Rank 12 (high performing country)	2024
Target year for Peak Emissions / Climate Neutrality [14,16]	2025 [16] / 2050 [14]	2021
Will country reach its 2025 goal of -peaking emissions? [17]	According to available data emissions from fuel and industry peaked in 2019	2024
Population knowledge of Climate Change / very worried about Consequences / favors much more renewable energy [18]	57% / 69% / 73%	2022
Population percentage that thinks they will have to relocate because of climate change / favours stricter gov't measures [19]	51 % / 87 %	2023

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026b), 14: Climate Action Tracker (2025a), 15: Burck, J. et al (2024), 16: Ministerio de Hacienda (2025), 17: Our World in Data (2024), 18: Yale Program on Climate Change Communication (2022), 19: European Investment Bank Group (2023)

2 Chile's Approach to "Action on Climate Empowerment"

One-sentence description

Starting during the Covid-pandemic in 2020 Chile has drawn up a comprehensive national ACE strategy guided by a working group of four government ministries and with an exemplary broad and layered process of public participation (Ministerio del Medio Ambiente, 2024).

Central aims and issues according to own views

Chile has formulated a vision, a **mission statement** for its ACE-Strategy that summarizes the goals of the process and the advantages it is supposed to bring: "*Chile will be able to count on a society and capable institutions to face the challenges of climate change, on an informed, sensitized and proactive citizenry that contributes to the development of public policies and participates, from its personal and organizational scope, in the changes necessary to achieve carbon neutrality and resilience of the country by 2050 at the latest.*" (Quotes translated from original Spanish document)

The architects of the strategy at first came from the Ministry of the Environment but quickly established **interministerial working groups** and a steering commitee with the Ministries for Education, Labour and Social Welfare as well as Science and Technology. They were aware of the prerequisites and opportunities a successful ACE-strategy entailed: "*Starting a project of this kind requires the promotion of social cohesion, the strengthening of democracy, dialog and the search for consensus on the interests of the general public.*" This makes it very clear that climate action is **far from a solely technical and very much a social issue**.

Unfortunately, as of May 2025 the document seems to have been taken down from the Ministry of the Environment's website, although the address is even mentioned in a law of August 2025 (Ley Chile, 2025, footnote 97).

Selected single measures

- The ACE-strategy was drawn up with **several rounds of public participation** on several levels and in various settings. Regional dialogues were held in all 16 administrative districts. A program called „*Re-acciona por el Clima*" (*Re-act because of the climate;* Ministerio del Medio Ambiente, 2021) included climate talks and citizen workshops, surveys among teachers, a municipal environmental education program, a festival of documentary films, and the song *Ama la Tierra* (Love Earth) sung jointly by well-known artists and activists (Re-acciona por el Clima, 2022).
- Chile has set up a **Gender and Climate Change Roundtable**, whose members meet and work directly with the interministerial working groups on climate policy (Ministerio del Medio Ambiente, 2020). This is in line with the Glasgow Work Programme on ACE (UNFCCC, 2021), which explicitly asks for gender aspects to be taken into account when working on ACE. A special focus has been placed on gender issues in climate policy instruments and expenditure and people have been trained to pay greater attention to possible inequality.

People involved in ACE-programmes, in coordinating and evaluating efforts

A total of ten people are working on a interministerial taskforce and report back from there on what ACE means for their ministry's scope of competence (in addition to other tasks there).

Structural coordination and whole-of-government approach

Woven into the set-up and governance of the ACE-strategy and effort as four ministries work together (Environment, Education, Science and Technology, Labour and Social Welfare)

Reliance on social science expertise

Woven into the set-up of the ACE-strategy. Regular surveys to record changes in the attitudes of the population are also being discussed.

Gaps in ACE strategy

Vocational training is not mentioned in the ACE strategy as the Ministry of Education is still fully adapting its internal structures to the planned mainstreaming of climate issues in the education and training sector. Moreover, Chile has not yet defined indicators and targets to measure ACE-progress. This is in process, but the questions of which institutions at which level of public administration and government can and should set meaningful targets still need answers.

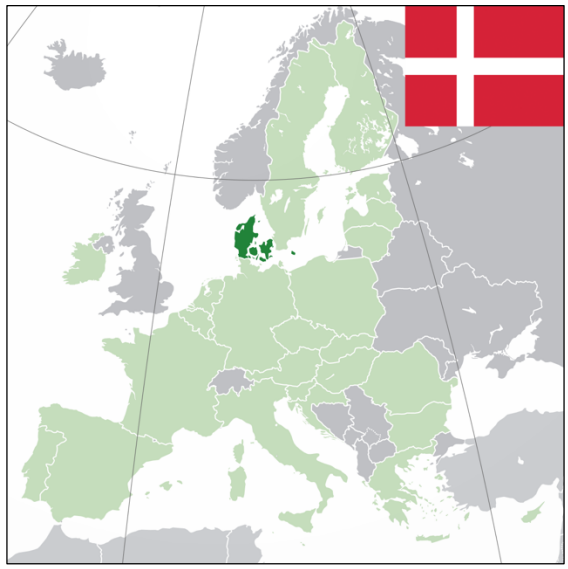
National Plans and Strategies related to/intersecting with ACE

Plan of Action for Climate Change (UNDP, 2017)
National Adaptation Plan of Chile (Gobierno de Chile, 2014):
Plan Nacional de Educación (Educación 2020, 2017, División Educación General, 2024)

Country Profile Denmark
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name (English / own language)	Denmark / Danmark
Type of Government	Parliamentary monarchy
Democracy Index 2024 [1]	Rank 7 / 9.28 (Scale of 10)
Population [2] (millions) / urban quota [3] (%)	5.98 (2024) / 89%
Membership inter-national organisations	EU, OECD, UN, G7 and G20 (indirect via EU)
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index [6] (1993-2022)	Rank 106; 0.14 fatalities/100,000



Light Green = EU; Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7] / GDP per Capita [8] (current US-Dollar)	429.5 billion / 71,582	2024
Gini-Index of Inequality [9] (0 = perfectly equal, 100 = max. unequal)	29.3	2022
GHG-Emissions [10]/ GHG-Emissions per capita (to CO2eq) [11]	41.8 million / 7.13 EU: 3221,8 million / 7,26	2023
Emissions: Percent of World Total [10]/ global rank [12]	0.08 % / rank 92 (EU: 6.08 % / Rank 4)	2023
Carbon Intensity (to CO2eq / 1k USD) [10]	0.10	2023
Percentage Emissions by sector (Top 5) [10]	Transport (27.2), Agriculture (24.4), Industry (13.6), Power (12.2), Buildings (9.7)	2023
Emission Change since 1990 [10]	-39.4 %	2023
Fossil energy use [13]/ energy imports [13]	51.3 % / 43.8 %	2023
Renewable Energy use total [13]/ use in electricity (incl nuclear, waste) [13]	48.7 % / 88.8 %	2023
Climate Action Tracker [14]	Insufficient (EU-Rating)	2024
Climate Change Performance Index [15]	Rank 4 (high performing country)	2024
Will country reach its ESR-contribution to 2030 EU-goal of -55% GHG? [16,17] (-44.5% vs 1990 in non-ETS emissions)	Official: Can be achieved, signif. imple-mentation required, sign. uncertaint. [16] NGO: policy gap of 5 % [17]	2024 2025
Target year for Climate Neutrality [16]	2050 (poss. even reduction by 110%)	2024
Population knowledge of Climate Change Causes / Consequences / possible Solutions [18]	7.71 / 7.78 / 4.79 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov't measures [19]	47 % / 62 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026c), 14: Climate Action Tracker (2024a), 15: Burck, J. et al (2024), 16: Danish Council on Climate Change (2025), 17: Velten, E. et al (2026), 18: European Investment Bank Group (2024b), 19: European Investment Bank (2022)

2 Denmark's Approach to "Action on Climate Empowerment"

One-sentence description

Denmark has no structured planning and no strategy for ACE and creates the impression of not needing one either as it describes its population as highly aware of climate change, very well informed and engaged in the debate on how to manage climate change.

Central aims and issues according to own views

The country according to its *National Communication* (Danish Ministry of Climate, Energy and Utilities, 2023) is working on aligning its society and especially the **entire education system, including vocational training**, more closely with the green transformation (Eurydice, 2026). The central government in Copenhagen can set common learning objectives and provides material and teaching aids on the SDGs, but the schools and other learning institutions in the country are largely free to design their own curricula and lessons.

Moreover, there is broad societal and political cooperation on climate and sustainability measures **over partisan borders**: A 2030 panel on sustainable development and the SDGs (The 2030-Panel, n.d.) includes representatives from civil society organizations. The panel advises the members of a parliamentary, non-partisan 2030 network. (The Danish Parliament, n.d.)

Participation is organized for instance in a Youth Council (DUF, n.d.), which represents around 80 youth organizations and manages a budget derived from state lottery revenues. In 2019, a Climate Youth Council was also established (Klima-, Energi- og Forsyningsminsteriet, n.d.), which advises the Minister for Climate and Energy. The DUF also has a seat in the 2030 panel mentioned above.

Selected single measures

- Denmark is establishing three vocational schools that prepare students for particularly **ambitious tasks in the context of the green transformation** and is amending the legal requirements for training to include contributions to transformation as an explicitly named purpose (*National Communication*, loc cit, p. 408, 416).
- A Climate Citizens' Council met in 2020 and 2021 and presented almost 200 proposals (The Citizens' Assembly On Climate Issues, 2021), some of which focused on specific political projects such as a CO_2 tax, speed limits for cars in cities or the approval of carbon capture and sequestration (CCS).

People involved in ACE-programmes, in coordinating and evaluating efforts

no information

Structural coordination and whole-of-government approach

not necessary according to National Focal Point

Reliance on social science expertise

not focused on ACE as a concept but in more traditional elements like education

Gaps in ACE strategy

no formal strategy

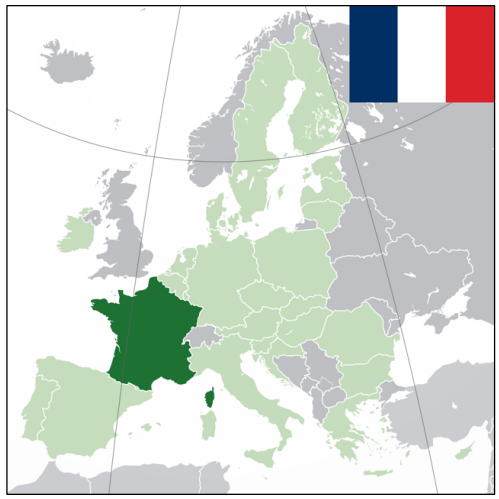
National Plans and Strategies related to/intersecting with ACE

Action plan for a climate proof Denmark (Task Force for Climate Change Adaptation, 2012; a new action plan is in the works)
Agreement on vocational training for green transformation (Cedefop, 2024)
Copenhagen Climate Plan 2035 (City of Copenhagen, 2025)

Country Profile France
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name (English / own language)	French Republic / République française
Type of Government	Semi-presidential democracy
Democracy Index 2024 [1]	Rank 26 / 7.99 (Scale of 10)
Population [2] (millions) / urban quota (%) [3]	68.5 (2024) / 82%
Membership inter-national organisations	EU, OECD, UN, G7 and G20
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index [6] (1993-2022)	Rank 32; 0.47 fatalities/100,000



Light Green = EU; Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7]/ GDP per Capita [8] (current US-Dollar)	3162.1 billion / 46,151	2024
Gini-Index of Inequality [9] (0 = perfectly equal, 100 = max. unequal)	31.2	2022
GHG-Emissions [10]/ GHG-Emissions per capita [11] (to CO2eq) (incl Monaco)	385.5 million / 5.81 EU: 3221,8 million / 7,26	2023
Emissions: Percent of World Total [10] / global rank [12]	0.73 % / rank 20 (EU: 6.08 % / rank 4)	2023
Carbon Intensity [10] (to CO2eq / 1k USD)	0.10	2023
Percentage Emissions by sector (Top 5) [10]	Transport (32.1), Agriculture (17.8), Industry (17.7), Buildings (16.3), Power (6.3)	2023
Emission Change since 1990 [10]	-27.7 %	2023
Fossil energy use [13]/ energy imports [13]	45.5 % / 47.1 %	2023
Renewable Energy use total [13]/ use in electricity (incl nuclear, waste) [13]	54.5 % / 92.4 %	2023
Climate Action Tracker [14]	Insufficient (EU-Rating)	2024
Climate Change Performance Index [15]	Rank 25 (medium performing country)	2024
Will country reach its ESR-contribution to 2030 EU-goal of -55% GHG? [16,17, 18] (-47.5% vs 1990 in non-ETS emissions)	Official: extr. unlikely (projected reduction of -44 to -52%) [16, 17] NGO: policy gap of 11 % [18]	2024 2025
Target year for Climate Neutrality [19]	2050	2024
Population knowledge of Climate Change Causes / Consequences / possible Solutions [20]	7.12 / 7.70 / 4.44 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov't measures [21]	60 % / 73 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026d), 14: Climate Action Tracker (2024a), 15: Burck, J. et al (2024), 16: European Commission (2024d), 17: European Environmental Agency (2025) , 18: Velten, E. et al (2026), 19: Haut-commissariat à la Stratégie et au Plan (2025), 20: European Investment Bank Group (2024c), 21: European Investment Bank (2022)

2 France's Approach to "Action on Climate Empowerment"

One-sentence description

In France, the population has a high level of knowledge about as well as concern over climate change with many people already experiencing adverse consequences which translates into expectations of the authorities and politicians and, in some cases, high approval rates for measures that could be deeply unpopular elsewhere.

Central aims and issues according to own views

The French *National Communication* chapter (Ministère de la Transition Énergétique, 2023) detailing elements of ACE is mainly concerned with education and public opinion. The former is – as many areas in public administration – highly centralized. Paris therefore provides the guidelines for **education on sustainable development** and the 2030 Agenda, which also include climate issues. In 2023, a plan with 20 measures for schools was also published (Ministère de l'Éducation nationale, 2023), which, for example, provides for all education staff to be trained in the challenges of ecological change by 2027.

France has been collecting data on the population's concerns about environmental issues since the 1990s via the National Statistics Institute Insee (Ministères Aménagement du Territorire Transition Écologique, 2025). Climate change has been at the top of the list since 2012, but the large gap to other concerns has recently narrowed after peaking in 2022. And in a list of all issues for concern (Lutun, H., 2024) the climate is named much less frequently as top cause of worry only once reaching the highest percentage (tied with health in the pandemic year of 2021).

In 2019/20, a **Citizens' Climate Council** ("*Convention Citoyenne pour le climat*" – CCC; Convention Citoyenne pour le climat, 2020a) appointed by the President presented 149 recommendations to reduce emissions by at least 40 percent by 2030 (French version of the results: Convention Citoyenne pour le climat, 2020b; English summary: Convention Citoyenne pour le climat, 2020c).According to the *National Communication*, policymakers have implemented some of the recommendations, including improved school education on sustainable development and the obligation to indicate environmental characteristics on consumer products. Overall, however, only around ten percent of the CCC's recommendations have been implemented, according to a sum-up by the French online magazine *Reporterre* (D'Allens et al, 2021).

Selected single measures

- One innovation in the education system since 2020 has been the so-called **eco-delegates** ("éco-délégués"; Ministère de l'Éducation nationale, 2025), who are appointed among the pupils in the classes. They are then responsible for projects and campaigns on the topic, coordinate with the teaching staff and external partners, and take part in a national competition (*National Communication*, loc cit, p. 237).
- France **restricts commercial advertising** claims for goods of "excessive impact on the climate", bans advertising and promoting fossil fuels and prohibits greenwashing techniques, thus trying to prevent misinformation (*National Communication*, loc cit, p. 235).

People involved in ACE-programmes, in coordinating and evaluating efforts

No information

Structural coordination and whole-of-government approach

No information

Reliance on social science expertise

No information

Gaps according to own reflection

No information

National Plans and Strategies related to/intersecting with ACE

National Climate Adaptation Plan (2025, in French: Gouvernement France, 2024)
Education plan with measures for schools 2023 (Ministère de l'Éducation nationale, 2023)

Country Profile Italy
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name (English / own language)	Italian Republic / Repubblica Italiana
Type of Government	parliamentary democracy
Democracy Index 2024 [1]	Rank 37 / 7.58 (Scale of 10)
Population [2] (millions) / urban quota (%) [3]	59.0 (2024) / 72%
Membership inter-national organisations	EU, OECD, UN, G7 and G20
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index [6] (1993-2022)	Rank 5; 1.14 fatalities/100,000

Light Green = EU; Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7] / GDP per Capita [8] (current US-Dollar)	2372.8 billion / 40,226	2024
Gini-Index of Inequality [9] (0 = perfectly equal, 100 = max. unequal)	33.7	2022
GHG-Emissions [10] / GHG-Emissions per capita [11] (to CO2eq) (incl Monaco)	374.1 million / 6.36 EU: 3221,8 million / 7,26	2023
Emissions: Percent of World Total [10] / global rank [12]	0.71 % / rank 23 (EU: 6.08 % / rank 4)	2023
Carbon Intensity [10] (to CO2eq / 1k USD)	0.12	2023
Percentage Emissions by sector (Top 5) [10]	Transport (27.8), Power (22.6), Industry (18.7), Buildings (14.8), Agriculture (8.5)	2023
Emission Change since 1990 [10]	-26.9 %	2023
Fossil energy use [13] / energy imports [13]	79.1 % / 79.6 %	2023
Renewable Energy use total [13] / use in electricity (incl nuclear, waste) [13]	20.9 % / 45.9 %	2023
Climate Action Tracker [14]	Insufficient (EU-Rating)	2024
Climate Change Performance Index [15]	Rank 43 (low performing country)	2024
Will country reach its ESR-contribution to 2030 EU-goal of -55% GHG? [16,17,18] (-43.7% vs 1990 in non-ETS emissions)	Italy submitted nec. NECP but remains >20% off target in 2023 [16,17] NGO: policy gap of 3 % [18]	2024 2025
Target year for Climate Neutrality [19]	2050	2024
Population knowledge of Climate Change Causes / Consequences / possible Solutions [20]	7.26 / 7.86 / 4.14 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov't measures [21]	55 % / 81 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d) 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026e), 14: Climate Action Tracker (2024a), 15: Burck, J. et al (2024), 16: European Commission (2024e), 17: European Environmental Agency (2025), 18: Velten, E. et al (2026), 19: Erbrach, G. (2024), 20: European Investment Bank Group (2024d), 21: European Investment Bank Group (2022)

2 Italy's Approach to "Action on Climate Empowerment"

One-sentence description

Italy focuses its ACE efforts to a very high degree on youth initiatives, education and participation funding international programmes and earning praise for its efforts in partner countries; however, the strong focus leaves out other areas and (vulnerable) target groups.

Central aims and issues according to own views

Italy has given the protection of the environment and biodiversity as well as sustainable development a central position in Article 9 of its **constitution and the education system**. Since 2019 the school subject *Educazione Civica* deals with environmental and climate issues (among other topics like constitutional law and digitalisation) (*National Communication* to the UNFCCC: Italian Ministry of Environment and Energy Security, 2022).

A 2018 law instituted a **national youth council** (*Consiglio Nazionale Giovani* – CNG; Gazzetta Ufficiale della Repubblica Italiana 2018, Articles 470 et seq.) to organize the adolescents and give them a voice in relevant political decisions. Together with UN-bodies Italy runs – and finances– the Youth4Climate initiative (Youth4Climate, n.d.) where projects can apply for funding and the Youth4Capacity programme (Youth4Capacity, n.d.).

Selected single measures

- The foundation CMCC sponsors a bi-annual award for international climate communications initiatives to **raise awareness of climate change** (Climate Change Communication Award Rebecca Ballestra, 2025)**.** 2023 participants came from all over the world, from Greenland to Buenos Aires and from Los Angeles to the Solomon Islands.
- More than 200 **River contracts** exist in Italy, i.e. agreements among stakeholders along water bodies to deal with allocating water resources and overcoming the effects of flooding (Ispra, 2023). The instrument is much older than ACE but is seen as an example of civil society participation and cooperation in view of the climate crises by the *National Communication* to the UNFCC of December 2022 (loc cit, p.362).

People involved in ACE-programmes, in coordinating and evaluating efforts

Due to the very diverse and cross-cutting nature of the six ACE elements, it is not possible to estimate the number of people involved in activities related to this process.

Structural coordination and whole-of-government approach

While there is significant work and coordination across departments on the six ACE elements, these activities are not explicitly identified as "ACE" since this term is specific to the UNFCCC negotiation process. As a result, it is difficult to provide a clear answer to this issue strictly in ACE terms.

Reliance on social science expertise

not focused on ACE as a concept but in more traditional elements like education

Gaps in ACE strategy

While Italy does not have a dedicated national strategy on ACE, some features of ACE are contained in the National Energy and Climate Plan (*Piano Nazionale Integrato per l'Energia e il Clima* – PNIEC; Ministero dell'Ambiente e della Sicurezza Energetica ,2024b) and the Long-Term Strategy for decarbonisation (LTS). Both documents are key strategic instruments for implementing climate policies and have been submitted to the European Commission and the UNFCCC.

Moreover, although Italy does not have a national citizens' assembly on climate, it regularly involves civil society in decision-making processes through:

- Public consultations (e.g. on drafts of the PNIEC and other strategic documents);
- The National Youth Council (*Consiglio Nazionale dei Giovani* – CNG, loc cit), which serves as a consultative body for youth, also on climate-related issues.

Thus, there is a certain level of organised civil society participation in climate policy, albeit fragmented.

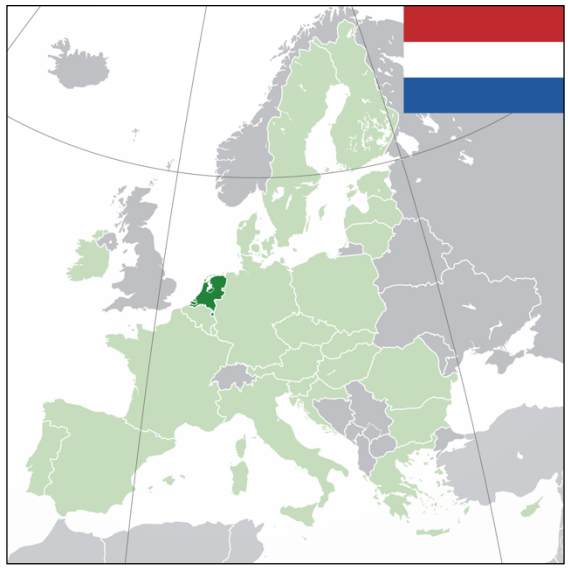
National Plans and Strategies related to/intersecting with ACE

National Strategy for sustainable development (Ministero dell'Ambiente e della Sicurezza Energetica, 2024b)
National climate adaptation plan (Ministero dell'Ambiente e della Sicurezza Energetica, 2023)

Country Profile Netherlands
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name (English / own language)	Kingdom of the Netherlands / Nederland
Type of Government	Parliamentary monarchy
Democracy Index 2024 [1]	Rank 9 / 9.00 (Scale of 10)
Population [2] (millions) / urban quota (%) [3]	17.99 (2024) / 93%
Membership inter-national organisations	EU, OECD, UN, G7 and G20 (indirect via EU)
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index [6] (1993-2022)	Rank 86; 0.21 fatalities/100,000



Light Green = EU; Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7]/ GDP per Capita [8] (current US-Dollar)	1227.5 billion / 68,219	2024
Gini-Index of Inequality [9] (0 = perfectly equal, 100 = max. unequal)	25.7	2021
GHG-Emissions [10]/ GHG-Emissions per capita [11] (to CO2eq) (incl Monaco)	150.7 million / 8.7 EU: 3221,8 million / 7,26	2023
Emissions: Percent of World Total [10] / global rank [12]	0.28 % / rank 43 (EU: 6.08 % / rank 4)	2023
Carbon Intensity [10] (to CO2eq / 1k USD)	0.12	2023
Percentage Emissions by sector (Top 5) [10]	Industry (21.8), Power (21.7), Transport (17.1), Buildings (15.9), Agriculture (11.5)	2023
Emission Change since 1990 [10]	-32.5 %	2023
Fossil energy use [13]/ energy imports [13]	83.2 % / 87.0 %	2023
Renewable Energy use total [13]/ use in electricity (incl nuclear, waste) [13]	16.8 % / 52.0 %	2023
Climate Action Tracker [14]	Insufficient (EU-Rating)	2024
Climate Change Performance Index [15]	Rank 5 (high performing country)	2024
Will country reach its ESR-contribution to 2030 EU-goal of -55% GHG? [16,17] (-48% vs 1990 in non-ETS emissions)	Official: Well on track for ESR (but reaching own, ambitious goal unlikely) NGO: policy gap of 9%	2024 2025
Target year for Climate Neutrality [15]	2050	2024
Population knowledge of Climate Change Causes / Consequences / possible Solutions [18]	7.46 / 7.36 / 4.56 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov’t measures [19]	62 % / 61 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026f), 14: Climate Action Tracker (2024a), 15: Burck, J. et al (2024), 16: PBL (2024), 17: Velten, E. et al (2026), 18: European Investment Bank Group (2024e), 19: European Investment Bank Group (2022)

2 The Netherlands' Approach to "Action on Climate Empowerment"

One-sentence description

In the Netherlands – according to the National Focal Point – a lot is happening already, government departments and others are involved, sometimes even without knowing it is ACE they are working on which makes central coordination and guidance by focussed social research seem obsolete.

Central aims and issues according to own views

The Netherlands describe themselves as "*in the middle of a transition to a sustainable, environmentally aware society with a circular, nature-inclusive and climate-responsible economy. […] Because transitions require the involvement of society as a whole, it follows that the* ***education sector and young people*** *need to be involved as well. In this particular transition, they have a key role to play*." (*National Communication* to UNFCCC from December 2022; Ministry of Economic Affairs and Climate Policy of the Netherlands, 2022, p .345)

Public awareness is built by government sponsored websites that provide information on more sustainable consumer choice and energy savings as well as **correcting misinformation** ("Milieu Centraal") and by national events like a national climate week. (*National Communication*, loc cit, p. 350f)

Selected single measures

- The Netherlands have instituted a National Climate Platform for **social dialogue** and reflection (National Klimaat Platform, n.d.). Its "*chairman can, on the basis of the reflections from society, give (un)solicited advice to the Minister for Climate and Energy*" (*National Communication*, p. 355).
- **Youth delegates** to the UNFCCC and the COPs are democratically elected in national campaigns to join the national delegations. They then play an active role in negotiations on ACE-topics (*National Communication*, loc cit, p. 361).
- In January of 2025, the Netherlands has started a **Citizens' Assembly** on climate (KNOCA 2025). It ran until September of the same year with the final report published in December (Nationaal Burgerberaad Klimaat, 2025). The national government will be required to announce within six months of the conclusion of the assembly which of its recommendations it plans to adopt, which not and why.

People involved in ACE-programmes, in coordinating and evaluating efforts

no information

Structural coordination and whole-of-government approach

not necessary according to National Focal Point, due to broad activity with or mostly without an ACE-label

Reliance on social science expertise

not focused on ACE as a concept but in more traditional elements like education

Gaps in ACE strategy

No formal ACE strategy; results of public participation via Citizens' Assembly remain to be seen

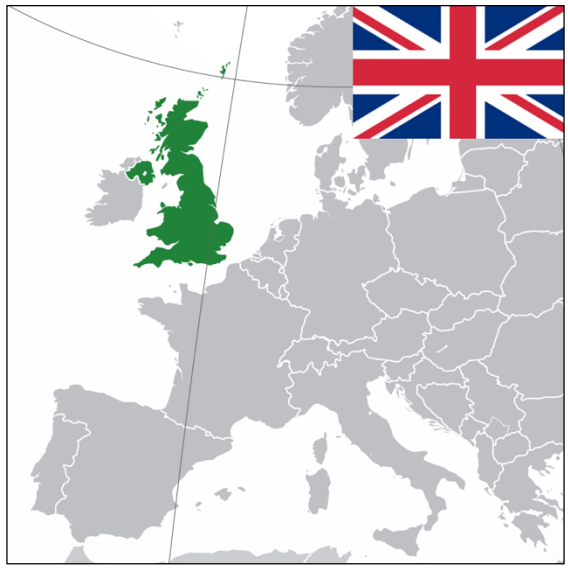
National Plans and Strategies related to/intersecting with ACE

National Climate Adaptation Strategy (Climate Adaption Platform Netherlands, 2016)
Green and digital jobs action plan (OECD Digital Policy Platform, 2024)
National Whole School Approach for Sustainable Development (Leren voor Morgen, n.d.)

Country Profile United Kingdom
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name	United Kingdom of Great Britain and Northern Ireland
Type of Government	Parliamentary monarchy
Democracy Index 2024 [1]	Rank 17 / 8.34 (Scale of 10)
Population [2] **(millions) / urban quota (%)** [3]	69.2 (2024) / 85%
Membership inter-national organisations	Commonwealth, OECD, UN, G7, G20
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index [6] **(1993-2022)**	Rank 61; 0.31 fatalities/100,000



Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7]**/ GDP per Capita** [8] **(current US-Dollar)**	3643.8 billion / 52,637	2024
Gini-Index of Inequality [9] **(0 = perfectly equal, 100 = max. unequal)**	32.4	2021
GHG-Emissions [10]**/ GHG-Emissions per capita** [11] **(to CO2eq) (incl Monaco)**	379.3 million / 5.55	2023
Emissions: Percent of World Total [10] **/ global rank** [12]	0.72 % / rank 22	2023
Carbon Intensity [10] **(to CO2eq / 1k USD)**	0.10	2023
Percentage Emissions by sector (Top 5) [10]	Transport (28.9), Buildings (19.9), Power (14.4), Industry (14.1), Agriculture (12.6)	2023
Emission Change since 1990 [10]	-50.1 %	2023
Fossil energy use [13]**/ energy imports** [13]	76.5 % / 44.0%	2023
Renewable Energy use total [13]**/ use in electricity (incl nuclear, waste)** [13]	23.5% / 63.9 %	2023
Climate Action Tracker [14]	Insufficient	2024
Climate Change Performance Index [15]	Rank 6 (high performing country)	2024
Will country reach its 2030 goal? (-68% vs 1990) [16]	Urgent action needed, only 1/3 of needed reductions covered by credible plans	2024
Target year for Climate Neutrality [16]	2050	2024
Population knowledge of Climate Change Causes / Consequences / possible Solutions [17]	7.43 / 7.30 / 4.59 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov’t measures [18]	55 % / 73 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026g), 14: Climate Action Tracker (2024b), 15: Burck, J. et al (2024), 16: Climate Change Committee (2024), 17: European Investment Bank Group (2024f, 2024g), 18: European Investment Bank Group (2022)

2 The United Kingdom's Approach to "Action on Climate Empowerment"

One-sentence description

In official documents the UK lists a wide range of programs, plans and initiatives that span elements of ACE including talk of "*transformational behaviour change*" and an ambitious Net Zero Strategy aiming for broad public engagement while the terms "*ACE*" or just "*empowerment*" are seldomly used.

Central aims and issues according to own views

The United Kingdom in its *National Communication* to the UNFCCC of December 2022 (Department for Business, Energy & Industrial Strategy, 2022) to the UNFCCC of December 2022 clearly states the importance of raising „*public awareness of climate science so that the public understand the risks and uncertainties of climate change. We need to engage the public in a conversation about the actions needed to combat climate change*." (p. 405) **Community empowerment, engagement, and action** are elements of the UK's transition to net zero and are supposed to „*enable communities to access the benefits that it brings, from greener jobs to improved health*". (loc cit, p. 255)

A new education strategy was adopted in 2022 for England, which accounts for more than 80 percent of the UK's population and economic power. It aims to **prepare pupils for future changes** as part of the goal of net zero by 2050 and to give them a voice in political decisions. According to the report, the goal is for the education system to become the best in the world for sustainability and climate change by 2030. (loc cit, p. 406)

There are also ambitious provisions for job training: apprenticeships in the crafts are to be **aligned with net zero objectives** through the Institute for Apprenticeships and Technical Education's Green Apprenticeships Advisory Panel, 2-year courses taken after GCSEs can support young people's paths into green careers, and Skills Bootcamps address adults to upgrade skills or retrain in key green sectors. (loc cit, p. 407)

Selected single measures

- In 2021, the UK Government published the Net Zero Strategy for 2050 (Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy, 2021), which included principles on how to engage the public and support them to make green choices (*National Communication,* loc cit, p. 405). The government plans to support consumers by **making green choices easier, clearer and cheaper** (loc cit, p. 411). It aims to "*build a sense of collective action*", drive up communication and action and provide opportunities to participate, e.g. with deliberative dialogues.

- In 2020, a Climate Assembly met in the UK (Climate Assembly UK, 2020), which was set up by several House of Commons committees. Its report with 50 recommendations on how to achieve the net-zero target by 2050, published in September of that year, was **largely ignored** by the Johnson government, the House of Commons noted in summer 2021 (House of Commons, 2021). The Net Zero Strategy published in fall 2021 (see above) does not even mention the Climate Council's report.

- The UK has condensed the function of its national energy system into a website where users can try to lead the country to its net-zero target in an online simulation. The idea of the so-called **MacKay Carbon Calculator** is to further a rational basis for discussions (Department for Business, Energy & Industrial Strategy, n.d.). The ambition level of policy interventions

can be adjusted in six categories, where information boxes show what the proposed level 1 to level 4 measures would mean for the promotion of electric cars, nuclear power plants, biomass cultivation, or others. The effects on emissions are shown in graphs of curves bending down accordingly.

People involved in ACE-programmes, in coordinating and evaluating efforts

no information

Structural coordination and whole-of-government approach

no information

Reliance on social science expertise

not focused on ACE as a concept but in more traditional elements like education

Gaps in ACE strategy

no formal ACE strategy

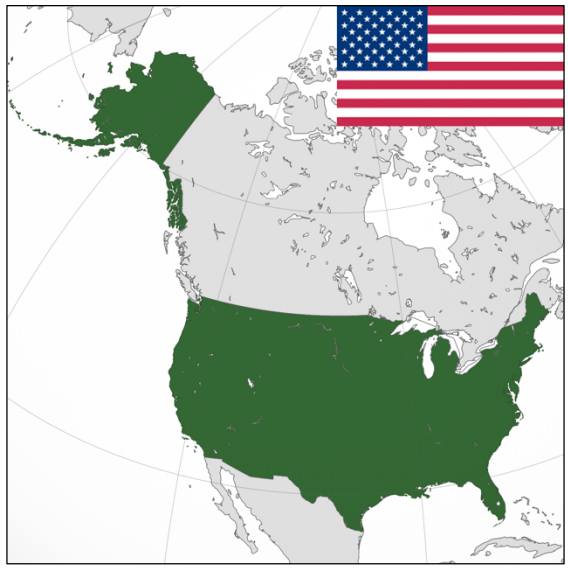
National Plans and Strategies related to/intersecting with ACE

Net Zero Strategy (Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy, 2021)
New education strategy for England (Department for Education, 2023)
Toolkit for Green Aprenticeships (Institute for Apprenticeships and Technical Education, 2023)

Country Profile USA
On „Action for Climate Empowerment (ACE)“

1 General Information

Official Name	United States of America
Type of Government	Presidential Democracy
Democracy Index 2024[1]	Rank 28 / 7.85 (Scale of 10)
Population [2] **(millions) / urban quota (%)** [3]	340.1 (2024) / 83%
Membership inter-national organisations	OECD, UN, G7 and G20
Income Bracket [4]	High income
UNFCCC: Annex 1 [5]	Yes
Climate Risk Index [6] **(1993-2022)**	Rank 13; 0.03 fatalities/100,000



Source: Wikipedia, CC-By-SA 3.0

Climate-relevant Indicators	Values	Year
GDP [7]**/ GDP per Capita** [8] **(current US-Dollar)**	29,184.9 billion / 85,810	2024
Gini-Index of Inequality [9] **(0 = perfectly equal, 100 = max. unequal)**	41.8	2023
GHG-Emissions [10]**/ GHG-Emissions per capita** [11] **(to CO2eq) (incl Monaco)**	5960.8 million / 17.61	2023
Emissions: Percent of World Total [10] **/ global rank** [12]	11.25 % / rank 2	2023
Carbon Intensity [10] **(to CO2eq / 1k USD)**	0.24	2023
Percentage Emissions by sector (Top 5) [10]	Transport (29.1), Power (24.7), Industry (14.5), Fuel Exploitation (12.5), Buildings (10.2)	2023
Emission Change since 1990 [10]	-4.0 %	2023
Fossil energy use [13]**/ energy imports** [13]	80.7 % / 8 %	2023
Renewable Energy use total [13]**/ use in electricity (incl nuclear, waste)** [13]	19.3 % / 40.7 %	2023
Climate Action Tracker [14]	Critically Insufficient	2025
Climate Change Performance Index [15]	Rank 57 (very low performing country)	2024
Will country reach its 2030? [16]	All climate policy is suspended by nat'l gov't, in some aspects reversed	2025
Target year for Climate Neutrality [16]	All climate policy is suspended	2025
Population knowledge of Climate Change Causes / Consequences / possible Solutions [17]	5.95 / 6.13 / 4.07 (scale of 10)	2024
Population percentage that thinks country will fail 2050 targets / favours stricter gov't measures [18]	49 % / 60 %	2022

Sources: 1: The Economist Intelligence Unit (2025), 2: World Bank Group (2026a), 3: World Bank Group (2026b), 4: The World Bank (2026), 5: UNFCCC (n.d.), 6: Adil, L. et al. (2025), 7: World Bank Group (2026c), 8: World Bank Group (2026d), 9: World Bank Group (2026e), 10: European Commission (2024a), 11: European Commission (2024b), 12: European Commission (2024c), 13: International Energy Agency (2026h), 14: Climate Action Tracker (2025b), 15: Burck, J. et al (2024), 16: The White House (2025), 17: European Investment Bank Group (2024f), 18: European Investment Bank Group (2022)

2 USA's Approach to "Action on Climate Empowerment"

One-sentence description

In lieu of government efforts, in 2020 a voluntary civil society initiative drew up a framework for a national ACE strategy that featured a very strong position for a National Focal Point office and vigorously emphasized diversity and climate justice even though the membership of the initiative itself was far from representative of the US-society as a whole.

Central aims and issues according to own views

Officially all climate policy has been stopped, often reversed by the Trump-II-administration. Before it took over power in January 2025 the Biden administration in December 2022 submitted a *National Communication* document to the UNFCCC (US Government, 2022) detailing on about 30 pages initiatives in education, training and public awareness summarizing: *"Effective climate communication and access to information initiatives are empowering many local governments, businesses, community groups, and individuals to take science-based, just, and urgent climate action. Public participation and engagement campaigns are growing in importance as climate strategies to ensure that community goals are met through climate action."*

As in other developed market economies many elements that could be counted under ACE like education, training or public participation are or were **realized under diverse official structures** of local, state or federal governments as well as in commercial and non-government organizations.

An ACE strategy, however, was only designed by the civil society initiative mentioned above. It saw ACE – as it was presumably meant – as the "*the fastest and most efficient way to accelerate a transition to a low-carbon world that is equitable and just*" (Bowman & Morrison 2021, Ch. 1). Climate policy should be refocused from a technocratic carbon accounting "*to the lives of the people whose behaviors and choices will determine what the world becomes in the next few decades*" (loc cit, Ch. 1). ACE is explicitly seen as an **instrument to change society**: "*[It] weaves climate empowerment and public participation into every aspect of the nation's social, cultural, civic, and economic life.*" (loc cit, Ch. 4)

Selected single features of the civil society initiative concept

- Focus on local communities, all educational institutions, all levels of government and the workplaces to put **all decisions into the context of climate policy and transformation**.
- Give **vulnerable and historically disadvantaged groups**, e.g. Native Americans, people of color or poor communities a clear and forceful voice by demanding consensus for decisions.
- Institute a **strong National Focus Point** for ACE policy, not as a government body but as an "*entrepreneurial enterprise*" with sweeping influence on curricula, budgets, law-making and careers. It would need a staff sufficiently large to fulfil its duties, network with the ACE-community and coordinate public climate communication.
- Set up a coordinated and robust strategy to **combat disinformation**.

People involved in ACE-programmes, in coordinating and evaluating efforts

Officially all climate policy has been stopped, often reversed by the Trump-II-administration.

The quoted civil society initiative framework strategy was the product of about 150 voluntary contributors.

Structural coordination and whole-of-government approach

In the civil society framework this would a be a central task for National Focal Point.

Reliance on social science expertise

Would be a key component of planning in the civil society framework.

Gaps in ACE strategy

Officially all climate policy has been stopped, often aggressively reversed by the Trump-II-administration.

Members of the civil society initiative were aware that for all their emphasis on diversity and hearing all relevant voice their initiative was lacking business, rural and faith community participation among others.

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