

CLIMATE CHANGE

39/2026

International Good Practice in ACE

by:

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publisher:

German Environment Agency

CLIMATE CHANGE 39/2026

REFOPLAN of the Federal Ministry for the Environment, Climate
Action, Nature Conservation and Nuclear Safety

Project No. (FKZ) 3722 41 504 0

Appendix

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On behalf of the German Environment Agency

Imprint

Publisher

Umweltbundesamt
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06844 Dessau-Roßlau
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Fax: +49 340-2103-2285
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Report performed by:

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Report completed in:

June 2026

Edited by:

Section V 1.1 International Climate Action
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DOI:

<https://doi.org/10.60810/openumwelt-8566>

ISSN 1862-4359

Dessau-Roßlau, September 2026

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Abstract: International Good Practice in ACE

This report summarizes a research project to establish good practice examples of ACE (Action for Climate Empowerment) strategy and development in Germany's European and international partners. The aim was to lay some groundwork for Germany's effort to draw up a comprehensive national ACE-strategy by identifying common patterns in partners' efforts. A sample of eight nations was chosen by selecting countries with a similar economic position as Germany and an ambitious climate policy which led to six European cases. They were enhanced by two samples of countries from the Americas with far-reaching ideas and experience on ACE. Some common problems and ten theses for the process of setting a German ACE-Strategy could be deduced.

This account is published as an appendix to a report that focuses on Germany's ACE policy.

Kurzbeschreibung: Internationale Gute Praxis in ACE

Dieser Bericht fasst ein Forschungsprojekt zur Ermittlung von Good-Practice-Beispielen für die Strategie und Entwicklung von ACE (Action for Climate Empowerment) bei Deutschlands europäischen und internationalen Partnern zusammen. Ziel war es, durch die Identifizierung gemeinsamer Muster bei den Partnern eine Grundlage für Deutschlands Bemühungen zu schaffen, eine umfassende nationale ACE-Strategie zu entwickeln. Eine Stichprobe von acht Nationen wurde ausgewählt, die in einer ähnlichen wirtschaftlichen Situation wie Deutschland sind und eine ehrgeizige Klimapolitik verfolgen. So wurden sechs europäische Fallbeispiele ausgewählt. Außerdem kamen zwei Fälle aus den Amerikas mit sehr weitreichenden Ideen und Erfahrungen zu ACE hinzu. Auf dieser Basis konnten einige gemeinsame Probleme und zehn Thesen für die Entwicklung einer deutschen ACE-Strategie abgeleitet werden.

Dieser Report wird als Anhang eines Berichts über ein Konzept für eine deutsche ACE-Politik veröffentlicht.

Table of content

List of tables	8
List of abbreviations	9
1 Introduction, research question and approach	10
1.1 Goals and development of ACE.....	10
1.2 Glasgow Work Programme	11
1.3 Status of ACE implementation	11
1.4 Other relevant international instruments and agreements	12
1.5 Research on International Good-Practice Examples.....	12
2 Results of the research for <i>International Good-Practice</i> examples	13
2.1 USA.....	13
2.2 Chile	15
2.3 Austria	17
2.4 Italy.....	18
2.5 United Kingdom	19
2.6 The Netherlands.....	20
2.7 Denmark.....	20
2.8 France.....	21
3 Individual measures worth mentioning	23
3.1 Chile: Gender and Climate Change Roundtable.....	23
3.2 Italy: River Contracts	23
3.3 UK: MacKay Carbon Calculator	23
4 Conclusion: Common patterns and lessons learned from the research.....	24
4.1 Shared Problems	24
4.1.1 Distributed responsibilities	24
4.1.2 At best half-hearted mechanisms for participation.....	24
4.1.3 Singular focus on youth and education	25
4.2 Ten theses for an ACE strategy	25
4.2.1 Make ACE the headline in climate policy.....	25
4.2.2 Provide ACE with a vision and mission statement, describe co-benefits	25
4.2.3 Place responsibility for ACE with high-ranking officials.....	25
4.2.4 Guarantee participation functions reliably and is sustained	25
4.2.5 Recognize climate justice as a guiding principle in ACE.....	26
4.2.6 Conduct regular, detailed and standardized surveys on attitudes.....	26

4.2.7	Integrate social and communication sciences	26
4.2.8	Focus on standards and initiative in education	26
4.2.9	Let ACE offer something for the whole society	27
4.2.10	Take seriously the advice your own development cooperation gives other countries	27
5	List of references	28

List of tables

Table 1: ACE-Elements and Objectives..... 10

List of abbreviations

Abbreviation	Explanation
ACE	Action for Climate Empowerment
BIPOC	Black, Indigenous, People of Color
CCAEC	Comité Coordinador de Acción para el Empoderamiento Climático, ACE coordinating comitee in Chile
CCC	Convention Citoyenne pour le climat, Climate Citizens' Council in France
CCS	Carbon Capture and Sequestration
CNG	Consiglio Nazionale Giovani, National Youth Comitee in Italy
CO ₂	Carbon dioxide
COP	Conference of the Parties
DENA	Deutsche Energie Agentur, German Energy Agency
DUF	Danish Youth Council
En-ROADS	Energy Rapid Overview and Decision Support (Simulation system)
ETICC	Interministerial Technical Team for Climate Change in Chile
GWP	Glasgow Work Programme
NC	National Communication to the UNFCCC
NDC	Nationally Determined Contribution (Paris Agreement)
NFP	National Focus Point (responsible for ACE)
NGO	Non-governmental organisation
PACE	Planetary Health Action Survey, research project of the University of Erfurt
SDGs	Sustainable Development Goals
UBA	Umweltbundesamt, German Federal Environmental Agency
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change, or its secretariat in Bonn

1 Introduction, research question and approach

As part of the German Federal Environment Agency (UBA) project on successful and effective climate communication, the project team is developing pointers on how Germany could implement its international commitment in the realm of “Action for Climate Empowerment” (ACE). As a first step, findings from partner countries on international good practice were compiled and analysed.

1.1 Goals and development of ACE

Action for Climate Empowerment is to be understood as a worldwide, nationally organized approach of including civil society in efforts to achieve comprehensive climate protection. „*The overarching goal of ACE is to educate, equip and empower all members of society to engage in climate action*“, summarizes a document of the UNFCCC Climate Change Secretariat (UNFCCC, 2024). The action program is based on the provisions of Article 6 of the 1992 Rio Framework Convention on Climate Change (UNFCCC, 1992) and Article 12 of the 2015 Paris Agreement (United Nations, 2015), which declares the elements of ACE to be important for achieving the treaty goals, i.e. limiting global warming:

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.

The five tasks mentioned there, together with the international cooperation called for by the Rio Convention, form the six elements of ACE:

Table 1: ACE-Elements and Objectives

Elements/Area	Objectives	
Education	Long-term habit change	Foster a better understanding of, and ability to address climate change and its effects
Training	Development of practical skills	
Public Awareness	Reach people of all ages and walks of life	Promote community engagement, creativity and knowledge in finding climate change solutions
Public Access to Information	Provide openly accessible and appropriately communicated information	
Public Participation	Involve all stakeholders in decision-making and implementation processes	Engage all stakeholders in debate and partnership to respond collectively to climate change
International Cooperation	Strengthen cooperation, joint efforts and knowledge exchange	

Source: Paas 2016, p. 3

The term “Action for Climate Empowerment” (ACE) was coined in June 2015 to avoid confusion of work under article 6 of the UNFCCC with the central Article 6 in the draft Paris Agreement circulating at the time (UNFCCC, 2015). The new name was formally adopted by COP22 in Marrakesh 2016 in decision 17/CP.22 (UNFCCC, 2016) and COP24 in Katowice in 2018 in decision 17/CMA.1 (UNFCCC, 2018). As early as 2012, COP18 in Doha recommended that the member states of the Rio Convention should set up and maintain central contact offices or

persons, known as National Focal Points (UNFCCC, 2012). In many countries, these individuals coordinate what the states report to the UNFCCC on the elements of the program in their *National Communications*. The list of these contacts currently responsible for ACE is available from the UN Climate Change Secretariat UNFCCC.

1.2 Glasgow Work Programme

The current international resolution on ACE is anchored in the Glasgow Work Programme (GWP, UNFCCC, 2021) which was adopted at COP26 in the Scottish city in 2021. Among other things, it calls on the signatory states to integrate ACE more strongly into national climate policy and to develop a national ACE strategy for all six elements. Guidelines direct that ACE should be designed primarily for one's own country, should be cost-efficiently, flexibly and implemented in phases as well as systematically and holistically. Countries should also consider the role of gender and generations as well as the sustainable development goals (see below).

In addition, the GWP identifies four priorities for the work over the ten years from 2021: ACE should fit in with other climate policies ("*Policy Coherence*"), be further developed in a coordinated manner ("*Coordinated Action*"), the countries should pay attention to "*Tools and Support*" and evaluate their own activities ("*Monitoring, Evaluation and Reporting*"). The program mentions several times that countries can rely on social science findings, for example to encourage behavioural change. For 2026, a review of progress will be carried out to determine the extent to which these and other provisions of the resolution have been fulfilled.

1.3 Status of ACE implementation

There are no reports in international climate policy that specifically address ACE. Information can be found in the *National Communications* of the Parties to the UNFCCC (separately for Annex I / Non-Annex I countries) in the chapters on "Education, Training and Public Awareness" and possibly in the *Biennial Transparency Reports* under the Paris Agreement.

For future planning, Unesco has published information (Unesco, 2020) on how ACE can be incorporated into the Nationally Determined Contributions (NDCs) to be submitted under the Paris Agreement. A first step in this direction is a national ACE strategy.

According to a list of good-practice examples (as of September 2024, UNFCCC, 2024), only a few countries in the Global South, such as Cape Verde, Zambia and Peru, have so far succeeded to some extent in integrating ACE into the NDCs in a systematic ("holistic") manner. The only European country in this category is Andorra. However, many more nations, including OECD countries, have already included individual keywords from the ACE elements in their NDCs. A UNFCCC synthesis report for COP28 in Dubai 2023 (UNFCCC, 2023, from paragraph 115) contains high percentages: 93 percent of states mention public participation, 65 percent mention 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.

A joint document of the European Union, for example (Spain and European Commission, 2023), shows what this can look like; here the terms are bundled together in one paragraph:

The EU aims to achieve gender-balanced participation and encourage the full, equal, effective and meaningful participation and leadership of women and girls at all levels of climate action and decision-making. The EU will also continue to support meaningful engagement of youth and children in climate change decision-making processes, as well as climate education and training, and increase public awareness on climate change.

The NDC content, the document adds, was compiled with the help of stakeholder input and public participation via a survey on the Commission's website in 2020. However, the topic is then not treated with much more detail.

1.4 Other relevant international instruments and agreements

The regulations on ACE in the international legal provisions on climate protection have points of contact and overlap with several other relevant international agreements. For instance, both the Convention on Biological Diversity (CBD, 1992) and the Convention to Combat Desertification (UNCCD, 1994) contain passages that talk about public education and awareness-raising.

The SDGs have clear links to the ACE goals, particularly with regard to climate protection (No. 13), but also with regard to education (No. 4), water (No. 6), energy (No. 7) and work (No. 8) as well as other goals. For example, for the operationalization of goal 12 (Responsible consumption and production) in indicator 12.8.1, the extent to which the goal has been mainstreamed in national education policy is explicitly measured. The SDGs were adopted at a summit in New York in 2015 and are to be achieved by 2030, which is why they are often referred to as the “2030 Agenda”. The UN Secretary-General reports annually on the progress of the 17 goals; in 2024, he wrote that implementation was “severely off-track to achieve the 2030 agenda” (United Nations 2024).

The Aarhus Convention was adopted in 1998 in the Danish city of Århus and came into force in 2001 after a sufficient number of states had ratified it (Ufu, 2024). It regulates citizens' access to environmental information in the signatory states, gives them the right to have a say and provides for access to the courts so state decisions with environmental impacts can be reviewed there. It was primarily intended for the UNECE region (essentially Europe, Russia and Central Asia, in North America Canada and the USA). Guinea-Bissau was the first country from the Global South to join (UNECE, 2023). At EU level, the requirements of the Convention have been implemented by several directives and regulations, e.g. the Environmental Information Directive and the Public Participation Directive.

1.5 Research on International Good-Practice Examples

As it is not possible to gain a complete international overview of ACE strategies, this project focused on a number of Germany's international partners. The criteria for selection were, on the one hand, comparability, for example in economic terms, on the other hand similarities in the political system and, finally, an ambitious climate policy. The choice therefore fell on a number of EU member states: France, Italy, the Netherlands, Denmark and Austria. They were joined by the UK and the USA and last not least Chile, as an outlier and example of one of the countries highlighted by the UNFCCC for its comprehensive ACE strategy. This report contains the research status at the end of March 2025.

2 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. One the one hand the USA where a civil society initiative had developed and presented a comprehensive ACE Strategic Planning Framework. One the other hand Chile where an interministerial effort led to a comprehensive ACE strategy published in 2024.

2.1 USA

In the United States of America a group of 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 and Morrison 2021). Although the preliminary work was not taken up by the Biden administration although it did publish a National Communication to the UNFCCC that dealt with some ACE Elements (USA 2022). Needless to say, neither did the second Trump-government use any 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 book *Empowering Climate Action in the United States* (Bowman and Morrison 2021) not only contains the strategic planning framework for ACE developed voluntarily by around 150 experts, but also explanatory chapters on the history of its creation. For this group, diversity and climate justice were essential prerequisites for a successful climate policy. The ACE agenda demanded of the USA should, among others, fulfill this condition: *“Equity and empowerment are, in fact, inseparable from successful efforts to reduce carbon pollution and build resilience.”* (Chapter 4; page numbers are no reliable indicator in this e-book). The involvement of particularly disadvantaged groups should go beyond consultations, decisions should therefore only be made by consensus, which would effectively give BIPOC communities (Black, Indigenous, People of Color) and Native American tribes veto power, for example. *“ACE-related policies that fail to address inequity and injustice will, themselves, fail”*, warns the book (chapter 4).

According to the work, ACE is *“the fastest and most efficient way to accelerate a transition to a low-carbon world that is equitable and just”*. It is described as a means of turning people into co-creators of new political approaches and new behavioural norms. ACE can then redirect the focus from technocratic CO₂ accounting *“to the lives of the people whose behaviours and choices will determine what the world becomes in the next few decades”* (all quotes from chapter 1). The concept strives for a comprehensive change in society: *“[It] weaves climate empowerment and public participation into every aspect of the nation's social, cultural, civic, and economic life.”* (Chapter 4) From this perspective, ACE could become the central tool for making climate protection a success, as the authors of the concept saw it.

The actual planning framework in Chapter 4 of the book addresses all six elements of ACE and formulates demands, including:

- ▶ Weave ACE into all aspects of national climate policy and always take it into account in budgets and procurement, especially in education;
- ▶ In all types of schools, approach the teaching of climate issues from a climate justice perspective and connect local and global impacts of climate change;

- ▶ Focus on local communities that, in their large numbers and proximity to their citizens and members, could mobilize large numbers of people to act;
- ▶ Reliably fund organizations in ACE work;
- ▶ Overcome the missing link between science and everyday life;
- ▶ Incentivize managers and teachers to assess all working conditions through a climate lens;
- ▶ Tackle misinformation with a coordinated and robust strategy;
- ▶ Develop communication strategies based on targeted social science research and drive behaviour change (quoted approvingly from the UNESCO/UNFCCC brochure (Paas 2016)).

The National Focal Point (NFP) is to play a central role in this, according to the concept it will become a powerful and influential institution with a corresponding budget and staff (still quoting chapter 4). UNESCO and the UNFCCC (Paas 2016) had already recommended a staffing level of *“five to ten investigators/ consultants with broad knowledge across the six ACE elements who are able to invest significant time and energy to support and develop the National ACE Strategy”*. The authors of the US civil society concept propose establishing the NFP and its team as an organization at the federal level, with a long-term, proactive mandate and as an *“entrepreneurial enterprise”*, i.e. not as an authority but as a company with a public mandate (perhaps comparable to the German Energy Agency, DENA). This institution should then be in constant contact with relevant groups within and outside of the community involved with ACE. The staff should be diverse and the management structure collaborative rather than hierarchical.

This office would have influence throughout the country because it would summarize and monitor progress in the implementation of ACE measures across all units of government and all agencies – and this includes (see above) teaching materials and budget decisions. In addition, the NFP should work with state legislatures and Congress in Washington to embed public participation in climate legislation. In addition, there were to be regular and long-term reviews of teachers' climate knowledge as well as the attitudes and knowledge of the population. The office should also coordinate training and career paths in climate-relevant professions and link with the trade unions. And last but not least: setting priorities in communication and developing simple and effective messages based on social science research.

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 elect presidential candidates like Donald Trump, and would presumably fiercely resist an influential federal NFP that they might feel would have a say over their schools, careers, budgets and laws.

A few years after the publication of the book, one of the coordinators of the initiative and editors of the book, Tom Bowman, acknowledges the problems: *“An ACE Strategy can turn climate action into something that makes sense and builds community,”* he said in an interview. *“But we didn't achieve this with this book, because it is about climate justice, which is a lightning rod to people on the right.”* However, he is certain that it is possible to find topic ambassadors and trustworthy voices who can bridge the gap in order to develop an ACE concept that is acceptable and helpful to both sides.

The attempt to strategically develop an ACE strategy for the USA therefore came to nothing. A quote from communications researcher Daniel Yankelovich (1924 to 2017), which is used several times in the book, seems almost prophetic: “*You don't really have a voice if those making the decisions aren't prepared to listen to you.*” (Yankelovich, 1999)

The key lessons from the civil society attempt to launch a national ACE strategy will be drawn later. Here we will describe the research results from other countries first.

2.2 Chile

„*¡En Chile ya lo estamos haciendo!*“ – In Chile we're already doing it. This proud statement is the final sentence of a short YouTube video on the Ministry of the Environment's website about the Chilean ACE strategy. Whereas in the USA a civil society initiative without official mandate had put together theoretic thoughts about the framework conditions of ACE, the government of the country on the west coast of South America put them into practice: in 2024, it adopted a comprehensive and coordinated “*Estrategia de Desarrollo de Capacidades y Empoderamiento Climático*” (literally: Strategy for the Development of Capacities and Empowerment in Climate Issues), which systematically addresses most of the elements of ACE (Ministerio del Medio Ambiente 2024).

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 contará con una sociedad e instituciones capacitadas para responder a los desafíos del cambio climático, con una ciudadanía informada, sensibilizada y proactiva que contribuirá a la elaboración de políticas públicas y aportará desde su ámbito personal y organizacional a los cambios necesarios para lograr la carbono neutralidad y resiliencia del país a más tardar al 2050.

English: 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.

The authors of the strategy paper emphasize that the climate targets have prerequisites far into the social order and democracy and must bring about changes there (loc cit, p. 8):

Poner en marcha un proyecto de esta naturaleza, requiere promover cohesión social, fortalecer la democracia, el diálogo y la búsqueda del consenso en torno al interés general.

English: 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 process of developing this strategy started in 2020 with the participation of the EU's Euroclima program (European Union 2024). It focuses on Latin America and the Caribbean and their sustainable development. In its approach, climate and social goals are mentioned in the same breath: “*Euroclima places a strong emphasis on achieving ambitious climate, environmental and social targets.*”

In 2020, work on the strategy began with a webinar. Representatives of the climate department of the Chilean Ministry of the Environment collected contributions, ideas and wishes from civil society, the public and private sectors, youth and other interest groups. Later, regional dialogues

were held in all 16 administrative districts. At the same time, the Ministry of the Environment launched a program called „*Re-acciona por el Clima*“ (Re-act because of the climate), which, according to its own description, wanted to bring citizens into action. This included climate talks and citizen workshops, surveys among teachers, a municipal environmental education program and a festival of documentary films. And the song *Ama la Tierra* (Love Earth) sung jointly by well-known artists and activists.

The Ministry of the Environment then summarized the ideas and social input in a draft strategy, which was published in 2022 and discussed at workshops (in person, hybrid and online). „*De este proceso se obtuvieron cerca de 400 comentarios y sugerencias que permitieron mejorar la claridad de los lineamientos y líneas de acción*“ (“This process resulted in around 400 comments and suggestions, which made it possible to improve the clarity of the guidelines and lines of action”), the strategy paper states (Ministerio del Medio Ambiente, 2024, p. 12).

Two interministerial working groups played an important role in shaping the dialog process: firstly, the Interministerial Technical Team for Climate Change (ETICC), which was founded in 2014 and anchored in the Chilean Climate Change Framework Law in 2022 (Biblioteca del Congreso Nacional de Chile, 2022). More important for ACE in particular, however, 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 as the “*Comité Coordinador de Acción para el Empoderamiento Climático (CCAEC)*” (ACE Coordination Committee).

The members of this interministerial ACE working group draft and implement measures, coordinate the program and develop indicators for implementation, report on progress in the national climate protection plan and are also in charge of measures in their own areas of responsibility. A total of ten people are working on what ACE means for their ministry's scope of competence (in addition to other tasks there). This includes identifying potential partner organizations and, if necessary, arranging for their funding. The coordination committee is currently working on mapping the ACE landscape. Furthermore, 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 vulnerable groups (Ministerio del Medio Ambiente, 2024, p. 32).

The Chilean strategy has defined five priorities, which are broken down and explained in detailed tables in the document:

- ▶ research and science on climate change;
- ▶ building and strengthening capacities to deal with climate change;
- ▶ education and awareness-raising among citizens in dealing with climate change
- ▶ exchange of experience and cooperation to mitigate and adapt to climate change
- ▶ access to information and citizen participation to strengthen climate action.

However, vocational education (training as the second ACE element) appears to be missing from the strategy insofar as it takes place outside of formal educational institutions such as universities. An NFP representative explains this by saying that the Ministry of Education is still in the process of fully adapting its internal structures to the planned mainstreaming of climate issues in the education and training sector.

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.

For the future development of the strategy, the strategy document calls for a continuation of the history of its creation, i.e. once again a “cross-sectoral participatory process that incorporates the visions and needs of the public sector, the private sector, academia and civil society”.

Chile presents its ACE strategy in the *National Communication* to the UNFCCC published in February 2025 (Gobierno de Chile 2025). At the level of the *Nationally Determined Contributions* (NDC), the central instrument of the 2015 Paris Agreement, the country already explains the process for the planned ACE strategy in the 2020 version (Gobierno de Chile 2020). An updated NDC is not yet available, but is in preparation and should include the ACE strategy. The United Nations Framework Convention on Climate Change (UNFCCC) therefore highlights Chile in a list of “*Good Practices for Integrating Action for Climate Empowerment into Nationally Determined Contributions*” (UNFCCC 2024).

2.3 Austria

There is currently no structural ACE planning in Austria, although the country actually had created good preconditions for this with the Burgenland Declaration adopted in the fall of 2019 (UNFCCC 2019). The text was signed by representatives from Austrian federal and Burgenland state politics, members of NGOs such as company managers, representatives of associations and envoys from the governments of Hungary, Slovenia and Italy. It states, among other things:

(...) AFFIRMING that the emissions gap between the goals of the Paris Agreement and continued rising emissions cannot be closed without also closing the education, training and knowledge gap on climate change (...)

We, the undersigned (...) DECLARE our 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.

In those years when the FridaysForFuture youth movement and its partner organisation among adults were dominating the news and climate policy suddenly seemed to be making great progress, Austria also saw a successful climate referendum in 2020 (Bundesministerium für Inneres 2020) and, as a result, a Climate Citizens' Council appointed by the government in 2022.

However, this highly political approach to public participation in and influence on climate policy, which is unusual by international standards and one of the six ACE goals, fell short of the high expectations. A year later, the climate referendum initiative complained (Klimavolksbegehren.at 2023) that only a few of the Climate Council's 93 proposals (Klimarat der Bürgerinnen und Bürger 2022) had been implemented. A stronger anchoring of climate protection in the laws or the Austrian constitution also failed to materialize: Despite the success of the initiative, the Climate Protection Act still did not receive any new emissions reduction targets; the commitments named there were only valid until 2020. However, Austria has committed to achieving climate neutrality by 2040 (oesterreich.gv.at 2025).

On the positive side, as far as the involvement of civil society is concerned, Austria has the Klimaaktiv initiative, which was founded in 2004 (Klimaaktiv 2024), most recently supported by the Federal Ministry for Climate Protection and managed by the Austrian Energy Agency (it

remains to be seen what institutional connection the initiative will have after the government is formed in March 2025: Climate protection is now no longer the first term in the description of the responsible ministry, but is anchored in the agriculture ministry, where it is listed in third place).

Klimaaktiv connects all information and funding programs on the topic in Austria, and the initiative 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 findings on attitudes, intentions to act and behavioural change, including the handbook “Über Klima sprechen” published by Klimafakten (Schrader 2022). According to experts, the structural planning on ACE topics that exists in Austria is taking place at klimaaktiv – it is seen as a “milestone”.

At the level of the individual ACE elements, education stands out in particular. In Austria, the federal level can prescribe curricula centrally, but the actual implementation is up to the federal states, some of which are governed by different political constellations. As in many other countries, climate change and climate protection are part of education for sustainable development, which was regulated in Austria in 2014 in a fundamental decree (Bundesministerium für Bildung und Frauen 2014). In 2020, the parliament, the Nationalrat, passed a resolution calling for climate protection to be more firmly anchored in the curriculum, in all subjects, but not as a separate subject (Parlament Österreich 2020).

Other ministries and political bodies are responsible for other ACE elements that are not covered by Klimaaktiv. The position of National Focal Point is assigned to a civil servant with other duties, so it is difficult to obtain an overview of all ACE activities, including the numerous Austrian NGOs.

2.4 Italy

According to its own assessment and that of other observers, 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. The initiative also benefits from contributions by other donors, which complement Italy’s financial support, and young people from developing countries can apply for funding of 30,000 USD per project, for a total of 50 projects awarded each year (UNDP 2025).

Italy is also funding the Youth4Capacity program run by the UNFCCC, aimed at strengthening the skills of young people to engage in climate policy processes. As part of this, a regional training for 150 participants from across Africa was planned for July 2025 in Rabat, Morocco, in collaboration with the Hassan II Center for Environmental Education of the Mohammed VI Foundation. Besides, a Youth4Climate flagship event will be organized in Brazil by the end of 2025.

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), Articles 470 et seq.) to represent young people and promote their participation in decision-making processes. The Council is consulted on relevant political decisions and serves as a platform for national dialogue. According to the Italian NFP, the country also intends to have national youth delegates for the COPs (Conferences of the Parties) selected by the CNG in the future in collaboration with Youth Led organizations.

The focus on young people is also reflected in school curricula, where there has been a school subject *Educazione Civica*, or civic education, since 2019. According to Italy's *National Communication* of December 2022 (Italian Ministry of Environment and Energy Security 2022, p. 320), the subject initially had the following three topical points: the Italian constitution, the 2030 sustainability agenda and the environment, as well as digital education. With a reform in September 2024 (Ministero dell'Istruzione e del Merito 2024), the second focus, which included climate change and climate policy, was redefined as economic development and sustainability.

According to the NFP, the ACE work does not focus as strongly on any other potentially vulnerable group apart from young people (such as the elderly, who are at risk from increasing heat). However, the *National Communication* (loc cit) contains many pages of tables of activities that could fall under ACE, and there are also many stakeholder consultations mentioned, including regional and local governments and authorities, representatives of science or agriculture and others.

The NFP compiles these tables through intensive informal contact at working level with other public institutions and departments. In the sample at hand, no other country is as thorough. As in many other countries, responsibilities for various ACE elements in Italy are spread across several ministries and authorities, each of which insists on its own competencies. Under the heading of *Action for Climate Empowerment*, however, it is hardly possible to implement joint plans because the topic does not play an appropriate role at leadership level.

The NFP coordinator believes that the *National Strategy for Sustainable Development* could be a starting point for an Italian ACE strategy (Ministero dell'Ambiente e della Sicurezza Energetica 2017). Due to a lack of capacity, as she has other tasks in the ministry, she has not yet been able to check to what extent there are points of contact and whether ACE could be integrated into the *National Strategy for Sustainable Development* or build on it.

2.5 United Kingdom

With a net zero strategy the government in London wants to help people make climate-friendly decisions more easily and cheaply (Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy 2021). This contains some elements of ACE without being actually an ACE strategy. Only a paragraph about the policy in Wales, however, mentions that it should be fair and equitable. Since 2012, the government has regularly surveyed people's awareness of climate issues several times a year using an attitude tracker (Department for Energy Security and Net Zero, Department for Business, Energy & Industrial Strategy and Department for Business and Trade 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.

The description here is based almost exclusively on the UK's *National Communication* of December 2022 (Department for Business, Energy & Industrial Strategy 2022) and the *Nationally Determined Contribution* of January 2025 (UK Government 2025). Both documents contain largely separate information for England, Wales, Scotland, Northern Ireland and, in some cases, Gibraltar and islands such as Jersey and the Isle of Man.

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*, the goal is for the education system to become the best in the world for sustainability and climate change by 2030 (loc cit, 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.

In 2020, a Climate Assembly met in the UK, which was set up by several House of Commons committees to further public participation on climate issues which would be in line with ACE goals. Its report with 50 recommendations on how to achieve the net-zero target by 2050 was published in September of that year (Climate Assembly UK 2020). The Johnson government, the House of Commons noted in summer 2021 (House of Commons Business, Energy and Industrial Strategy Committee 2021), only made very selective comments on the recommendations up to that point: essentially only on some recommendations that were in line with its own policy while contradictions were ignored. The Net Zero Strategy published in the fall of 2021 (loc cit) does not even mention the Climate Council's report.

2.6 The Netherlands

The Dutch *National Communication* of 2022 acknowledges 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. In some schools, the so-called Whole School Approach (e.g. (Gibb 2016) also comes into play. As in many other countries, education for sustainable development is linked to the ACE elements and included in the reporting on measures.

Under the headings of information and raising public awareness, the report mentions 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 terms of public participation, the *National Communication* (loc cit) mentions the training of young people as youth climate ambassadors, who are primarily intended to have an impact on their own generation. In addition, youth delegates are chosen in national elections and then take part in negotiations at COPs on the topic of ACE, for example. In 2022, a kind of National Climate Council (*Nationaal Klimaat Platform*) was also founded, which talks to citizens, companies and politicians and advises the respective Minister for Climate and Energy several times a year.

Finally, in January 2025, a Citizens' Council on Climate Policy (*Nationaal Burgerberaad Klimaat*) was constituted with 175 randomly selected members, which will formulate recommendations by September 2025, which the government must then discuss and report its decisions back to the committee.

2.7 Denmark

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 Utilities 2023).

In the education system, the central government in Copenhagen can set common learning objectives, but the schools in the country are largely free to design their own curricula and lessons. The Ministry of Education provides institutions with material and teaching aids on the SDGs, covering grades from pre-school to secondary school or vocational qualifications.

According to the report, the so-called Whole School Approach is also used at some schools (Gibb, 2016).

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.

As for participation, a Climate Citizens' Council met in 2020 and 2021 in Denmark and presented 119 recommendations on 19 topics relating to climate and green transformation in a first phase (The Citizens' Assembly On Climate Issues 2020). In a second phase, 73 recommendations on 18 topics were added, some of which focused more on specific political projects such as a CO₂ tax, speed limits for cars in cities or the approval of carbon capture and sequestration (CCS) (The Citizens' Assembly On Climate Issues 2021). The Citizens' Assembly then voted on these projects. The yes votes ranged from 52 percent (in connection with an economy without growth) to 100 percent (standardized charging stations for electric cars).

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 also 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.

2.8 France

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 Territoire 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. With those observations the country opens Chapter 9 of the French National Communication to UNFCCC of 2023 (Ministère de la Transition Énergétique 2023). And in a list of all issues for concern (Lutun 2024) the climate is named much less as top cause of worry only once reaching the highest percentage (tied with health in the pandemic year of 2021). Further evaluations show that 30 percent of the population already recognize the consequences of climate change in everyday life, primarily due to heat, water shortages and food shortages during droughts.

The National Communication attributes this increased awareness of the risks to good government information campaigns. At the same time, France now restricts commercial advertising claims and prohibits greenwashing techniques, thus trying to prevent misinformation. According to the report, the population's level of knowledge translates into expectations of the authorities and politicians and, in some cases, high approval rates, for example for obligations to renovate houses or higher taxes on cars with high emissions. 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.

The country's education system is highly centralized. Paris therefore provides the guidelines for education on sustainable development and the 2030 Agenda, which also include climate issues. One innovation since 2020 has been the so-called eco-delegates ("éco-délégués"), who are appointed among the pupils in the classes (Ministère de la Transition Énergétique 2023, p. 240). 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 (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).

In 2019/20, a Citizens' Climate Council ("Convention Citoyenne pour le climat" – CCC) appointed by the President met in France and, after seven three-day meetings, presented 149 recommendations to reduce emissions by at least 40 percent by 2030 (French version of the results: (Convention Citoyenne pour le Climat 2021); English summary: (Convention Citoyenne pour le Climat 2020)). 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).

3 Individual measures worth mentioning

3.1 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 taken into account when working on ACE. 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 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, p. 362). 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 members of such communities.

3.3 UK: MacKay Carbon Calculator

The UK has condensed the function of its national energy system into a website where users can take upon themselves the task of leading the country to its net-zero target by 2050 in an online simulation (Department for Business, Energy & Industrial Strategy 2022, p. 412). 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. For other countries, the initiative Climate Interactive is pursuing a similar project with figures on the global energy system using the En-ROADS simulator.

4 Conclusion: Common patterns and lessons learned from the research

Research in eight nations has revealed some common patterns that can be condensed into theses for the process of developing a national ACE strategy for Germany. The country would presumably be a pioneer among the industrialized countries and its European partners. According to both the UNFCCC documents and the research described above, there is no evidence that other countries of a comparable size and economic power are about to present a national strategy or that they have even begun to develop one. According to the Unesco's guidance from 2016 (Paas, 2016) and 2020 (Unesco, 2020) this requires, among other things, defining one's own priorities in coordination with one's own climate policy and publicly coordinating with many stakeholder groups on how to proceed.

4.1 Shared Problems

4.1.1 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 political order of a country can also play an important role here, so that many established and, in case of doubt, jealously defended responsibilities distributed across different levels 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.

The responsibility for ACE, crystallized in the task of being the National Focal Point, is usually delegated to a person in a ministry who also has other responsibilities. This person can only get an overview of everything that is part of ACE if they receive information from the other government departments 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.

4.1.2 At best half-hearted mechanisms for 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 makes ACE a highly political issue, if it were taken seriously. The way in which the respective Citizens' Council was set-up seemed to play no 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 ignored even by the "Ampel" government of SPD, FDP and Green party, which was initially sympathetic to the endeavor.

Governments are more likely to be influenced by organized interest groups or stakeholders than by such deliberative bodies from the citizenry. This is not a problem per se as long as not only groups with strong economic interests and corresponding budgets for lobbying are heard. In principle, taking the voices of citizens seriously 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.

4.1.3 Singular focus on youth and education

A related problem is the strong focus on education, professional qualifications and the effective involvement of young people (if it is more than a facade). On the one hand, these are important levers, but on the other hand, changes here are more likely to be effective in the long term. In many other areas, this reinforces the impression that the transformation is not so urgent and that there is nothing for other people to do or that their contribution is not important. 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).

4.2 Ten theses for an ACE strategy

4.2.1 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 where energy issues are concerned; this is called “mainstreaming” in other subject areas. 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.

4.2.2 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. 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 (see in Germany, for example, the Allianz Klimawandel und Gesundheit or the Stiftung Gesunde Erde, gesunde Menschen). Such organizations can be strategic allies in an ACE strategy. This research does not show that other countries systematically use the commitment of the health sector, however, apart from isolated examples (e.g. in France to switch to a more plant-based diet).

4.2.3 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 first come to an agreement and then set up a coordination committee based on the Chilean model. 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 is.

4.2.4 Guarantee 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.

Such a strategy, however, is likely to lead to governments facing increased pressure from social organizations (NGOs) which might make it unattractive. In this context, it is probably important to convey 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 more of an analytical grid for this progress than a finetuned steering instrument.

4.2.5 Recognize climate justice as a guiding principle in ACE

The climate crisis generally affects disadvantaged groups more, even though they have generally contributed less to its emergence. This is true not only at the global level, but also within individual societies. Perhaps none of the countries considered here are as diverse and unequal as the US, but it can be assumed that in most of them the public takes a very close look at possible social injustices in climate policy. In many cases, however, commitments to equitable or social implementation of climate policy must be backed up by financial resources to compensate for hardship. The guidelines of the Glasgow Work Programme on ACE also stipulate that issues of gender and intergenerational equity should be taken into account.

4.2.6 Conduct regular, detailed and standardized surveys on attitudes

Since ACE has public awareness raising as one of its instruments, 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. In the USA, a research group at Yale University (*Yale Program on Climate Change Communication*) has been doing this for many years; in Germany, a working group at the University of Erfurt and other partners, including public authorities, has made a good start with the PACE surveys (*Planetary Health Action Survey*). In addition, the Federal Environment Agency's environmental awareness studies (*Umweltbewusstsein-Studien*) have been around for many years, although their methodology, focus and questions change from time to time. Such data presumably works best when it delivers comparable results over the long term, is credibly removed from political influence and is independently financed.

4.2.7 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.

4.2.8 Focus on standards and initiative in education

Many other countries differ from Germany in that the national government has a greater influence on curricula. In Germany, the necessary standards must therefore be adopted by the Conference of Ministers of Education; the federal government can only provide limited assistance. 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 a kind of climate class spokesperson 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.

4.2.9 Let ACE offer something for the whole society

Instead of focusing one-sidedly on young people, people who are already in the job and possibly have positions of responsibility should also be addressed with further training, as envisaged by the civil society ACE concept from the USA, for example. Furthermore, it is also important to address those actors who do initially neither feel particularly addressed by 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.

4.2.10 Take seriously the advice your own 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. 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.

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