

Tackling Climate Change

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A guide to practical
climate protection at the
regional and local level





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Foreword

Climate change is one of the greatest societal challenges of our time. Although it is a global problem, solutions need to be found at the regional and local level, as this is where the impacts are felt, where all individuals experience change, and where they can take action. The need to bring together all relevant actors from fields as diverse as policymaking, business, science, and civil society has long been recognised as a prerequisite for acquiring and applying knowledge and action-oriented competencies on the ground. Achieving transformation towards greater climate protection by mid-century heavily depends on this. After all, the reality of climate change won't wait for humans and their needs!

klimafit is an adult education programme developed by the WWF Germany and the Helmholtz Climate Initiative “Regional Climate Change and Humans” (REKLIM). Initially funded (2017-2021) by the Robert Bosch Foundation and the Klaus Tschira Foundation, it was implemented at adult education centres (Volkshochschulen) throughout Germany, focusing on imparting action-oriented skills in the spirit of education for sustainable development. From 2022 to 2024, the follow-up project “klimafit – wissen.wollen.wandeln” was funded by the Federal Ministry for Economic Affairs and Climate Action as part of Germany's National Climate Protection Initiative. **The klimafit course not only imparts knowledge and understanding but also encourages people to get involved.** Further, it contributes to local and

municipal climate protection by **bringing interested citizens together with municipal decision-makers, administrators, and local actors and initiatives.**

“klimafit – From climate knowledge to climate action” was a three-year REKLIM-funded research project based at the University of Hamburg. Designed as a social science research project and aiming to understand the relation between knowing and doing, it ran parallel to the klimafit training course up to 2021, not only to assess the course's impact on those attending, but also to analyse its practical and long-term climate-protective effects in their broader social contexts.

The results show that **klimafit has an important effect on individuals and – more importantly – on their social environment and connected communities.** As became clear in the first project phase, climate protection isn't just a matter of acquiring knowledge and then implementing it; it's more of a cultural, community-based task. Climate protection and climate-friendly lifestyle changes don't happen by themselves. Especially their social and cultural dimensions continue to pose a major challenge for policymakers, administrators, and society in general. Attempts are often made to motivate 'society' or 'citizens' to adopt climate-friendlier lifestyles by 'transferring' ever more detailed scientific knowledge. Economic incentives and funding instruments are brought into play at various levels to help address the problem. In most cases, however, the desired effects in terms of establishing a climate-protective and transformative lifestyle have yet to materialise. The reason: Most of the current approaches fail to address the social and cultural dimensions / foundations of climate protection.

This is precisely where the klimafit research project came into play. Building on methods and theories established in social science research, it had a dedicated focus on the social and communal aspects of climate protection.

Results show that klimafit led to a high degree of regional, local (=community) and individual involvement in climate protection in the form of regular meetings, action groups, neighbourhood initiatives, and individual activities. Changes in behaviour and lifestyle were observed at the level of individuals and families, e.g. with respect to mobility, energy and diet. These effects could extend to participants' friends, working environment or leisure contexts (e.g., sports clubs or informal groups), as the experiences gained in the course provide starting points for disseminating and promoting climate-friendly behaviour, often beyond their private sphere. Participation in the course thus demonstrably contributed to establishing climate-friendly action and lifestyle changes at the local level in neighbourhoods and urban districts, illustrating the potential for broad and community-wide impacts.

The **symposium “Tackling climate change!”** was held on 5 April 2022 at the Tagungswerk Berlin to present the outcomes of klimafit to a specialist audience. **The aim of the symposium was to make community-oriented climate protection more tangible, test methods for making climate protection a community-based endeavour, and explore how different forms of climate knowledge could be practically turned into and lead to more active climate protection.**

This publication documents the work done in klimafit empirically, methodologically and practically. It aims to provide interested multipliers with methods they can apply in their own living or working contexts.

“ Education for sustainable development is the key to a sustainable socio-ecological future. It equips people with the necessary skills to get involved in making positive changes in society. Thanks to the klimafit course, cities and municipalities have gained valuable multipliers who are actively involved in climate protection. In this way, the municipality can become climate fit together with its citizens. ”

Bettina Münch-Epple (formerly WWF)

Let us inspire and encourage you to promote climate protection in your family, your circle of friends or in your neighbourhood by creating your own events. Let us encourage you to make self-efficacy and community building a tangible experience.

Dr Renate Treffeisen and
Dr Klaus Grosfeld (AWI / REKLIM)
Bettina Münch-Epple (formerly WWF)
Nadja Kulikowa (WWF)

www.klimafit-kurse.de



Tackling climate change

Martin Döring and Beate Ratter
Ways to make climate protection a community task

Climate change is no longer an abstract concept, or even a purely physical phenomenon. The gradual and imperceptible rise in atmospheric temperatures is producing a variety of effects: melting glaciers, rising sea levels, more intense storms, heavier rainfall, harsher droughts, more powerful storm surges, flooding, and devastating forest fires. These not only occur in the far-flung polar regions or tropical countries, but increasingly right here on our doorstep, in the places where we live. Although the underlying physical causes and processes are clear, it is much less clear how climate change will play out in the different regions of the world, given their diverse natural and social environments. This poses unpre-

cedented challenges for societies and individuals alike.

The handbook for the symposium “*Tackling Climate Change*” seeks to practically address these challenges. It is based on the recognition that dealing with climate change is a socio-cultural task – and a major one at that. Concrete action – and not simply knowing and understanding – is urgently needed in a wide range of areas, from reducing greenhouse gases to adapting to the diverse impacts of climate change.

The inaction characterising the recent decades shows that convincing, scientifically sound

and evidence-based arguments are not enough to achieve meaningful climate protection or set lifestyle changes in motion. The current social and political controversies are a case in point: *Last Generation activists* are gluing themselves to roads, are vilified by drivers, insulted by politicians, are in some cases even sued or sentenced. *The Fridays for Future* climate alliance has been criticised by various social groups, organisations and political parties for its supposed naivety, lack of practicality, and disregard for economic necessities when it comes to climate protection. *Grannies for Future* are ridiculed, while the appeals from *Scientists for Future* are drowned out by a constant flood of fresh news and relentless efforts to discredit them through social media channels and right-wing politics. Climate protection clearly divides society: While it leads to private feelings of guilt or shame in some individuals, others are left entirely unaffected and refuse to give up their CO₂-heavy lifestyles. How can that be, when we already know so much about anthropogenic climate change and have so many options for mitigating it?

CLIMATE CHANGE – A SOCIO-CULTURAL PHENOMENON

For many decades, climate change was presented to the general public as a purely physical phenomenon. Climate and climate change were predominantly framed as a statistical variable that was difficult to perceive first-hand and were therefore relegated to the sciences. This psychological distance changed abruptly for German-speaking countries when the cover illustration of *Der Spiegel* (issue 33, 1986) showed Cologne Cathedral completely submerged. For the first time, the impact of climate change on humans was impressively de-

icted in a prominent medium and conveyed to a wider readership. But it was only when former British World Bank economist Nicholas Stern calculated the costs of climate change impacts in his 2006 report that politicians also began to take note (Stern, 2006). At that point, a division developed that still pervades climate research today: Climate change was no longer a purely physical phenomenon, but also a socio-cultural one – which in turn required research that not only engaged with its physical aspects, but also its social and cultural dimensions.

Since the turn of the millennium, climate research in the humanities and social sciences has investigated and analysed e.g. the social practices and cultural meanings surrounding climate change. Approaches include research on how climate-related topics are linguistically presented in the media, what motivates young people to protect the climate, how different cultural backgrounds and places contribute to different framings of climate change, and how perceptions of regional climate change can be used to improve climate adaptation and protection.

One of the aims of these studies is to gain insights into socio-cultural patterns of perception and interpretation, so that targeted communication and participation formats can be developed that lead to changes in everyday behaviours, routines and actions. Most of these studies and approaches, however, do not reflect the social contexts and cultural settings in which understanding develops.



Accordingly, there continues to be a gap between climate change knowledge as primarily intellectual knowledge and turning this knowledge into climate-protective action. Most people still don't lead their everyday lives in a climate-friendly way. Despite manifold concerted efforts in countless contexts, therefore, it seems that the climate protection movement is failing. As it stands – even when they know better – people are not prepared to make the changes needed to become climate-friendlier (Welzer, 2019: 49-50).

We now know that willingness to change doesn't just depend on their factual or scientific knowledge; to a certain extent, it also depends on people's living environments (Welzer, 2019: 49). If we take this insight seriously, the starting point for climate protection needs to be shifted – away from a primarily knowledge-based approach and toward one that takes much greater account of people's life-worlds. If we truly want to promote action and socially accepted routines for climate protection, it is necessary – or even fundamental – to understand people's living environments. Only then can we comprehend their current and potential future willingness to change.

The research project *“From climate knowledge to climate action: On the development of regional communities of action against climate change”* and the symposium *“Tackling climate change”* address precisely this aspect.

IDENTIFYING PEOPLE WHO ARE READY TO TACKLE CLIMATE PROTECTION – CONCEPTUAL AND METHODOLOGICAL ASPECTS

At the beginning of our research project, we were faced with the same paradox that social sciences-based climate change research often struggles with: Although our scientific grasp of climate change has substantially improved and, on this basis, many more opportunities have opened up for climate protection, virtually no action is being taken. We therefore set out to analyse this problem from a geographical perspective, i.e., we focused on the relation between places, people, and their perceptions of climate change. Time and again we came up against the same issue: People are not rational and do not act rationally, even though they experience changing weather patterns and ascribe them to climate change.

A scan of current literature revealed that most studies on climate change adaptation to date are almost exclusively centred around knowledge, completely disregarding aspects related to everyday life. Furthermore, many are based on a narrow concept of communication that only focuses on cognition and applies a behaviourist communication model of sender and receiver, lacking e.g. the social aspects central to Schulz von Thun's (2014) approach. We also found that the concept of learning applied in climate protection contexts often had a strictly rational connotation, lagging behind with regard to current research in didactics. As such, we identified an urgent need to apply

situational learning approaches, such as those already being tested in education for sustainable development (ESD).

In developing our approach, we drew on the concept of lifestyle changes, which stems from research into public health, specifically into aftercare and prevention. The aim here is to promote patient health and well-being, e.g. after a heart attack, by making specific changes to their everyday routines and practices, like incorporating regular exercise and dietary changes. As individualised and knowledge-oriented prevention is often unsuccessful in a health context, the concept of 'cardio groups' was developed, which purposely targets the period after a hospital stay or rehabilitation. Here, patients meet regularly in groups to do preventive sports over a longer period of time with the aim to also establish these routines in their daily lives.

The interesting aspect, with potential relevance to climate protection, was that the cardio groups change the participants' daily routines through communitisation: The motivation to do sports was found to be significantly greater when people did it together. In our approach, this important aspect was supplemented by the 'communities of practice' approach (Wenger, 1998) to learning theory, which stems from the area of organisational research.

Wenger's approach to *communities of practice* is characterised by the fact that learning processes are not seen as purely cognitive and situated in the individual; instead, special at-



tention should be paid to the group and social exchanges within it. Abstract knowledge about a given problem is practically applied, and the solutions found are exchanged among a wider group of those who are part of and working in the problem setting. To tackle the social mechanisms underlying these processes, Wenger and colleagues developed an approach based on *communities of practice*, which rely on and are characterised by the following constituting features (Wenger, 1998: 125-127):

- Shared historical roots;
- Interdependent project(s);
- Members who ensure social stability;
- Exchange of knowledge and artefacts between members;
- Geographical proximity;
- The form of the community or group is based on shared activities and practices;
- Shared forms of knowledge, language and social belonging;
- Existing social relationships and social proximity;
- Shared perceptions and behaviours;
- Collective stories and interaction rituals;
- Shared goals in comparable contexts.



The sheer number of characteristics listed here as essential to a collaborative learning process illustrates the social dimensions of learning and indicates just how complex social learning processes are.

Prepared on the basis of this approach, three full klimafit courses (6 teaching units of 3 hours each) were observed in 2018 at the adult education centres in Emden, Eckernförde and Hamburg. Observation lent itself to examining interactions and learning processes in the classroom based on Wenger's characteristics. At the same time, these characteristics provided us with a baseline against which to assess the climate-friendly lifestyle changes that took place as revealed in ex-post interviews conducted ca. six weeks after the end of the course. We found, for example, that a shared historical experience, together with a shared sense of place and geographical proximity, are strong indications that people will attempt to persuade local politicians to implement climate-friendly measures in their city. The situation also appeared to be similar on a smaller scale, where, for example, participants from the course introduced a vegetarian day in the canteens of various companies, regularly met after the course to develop and implement further climate protection projects, or initiated neighbourhood projects that greened balconies. Offered at adult education centres, and with their own respective learning processes, the klimafit courses thus demonstrably achieved two things: On the one hand, the adult education centre fulfilled its educational mandate and imparted knowledge on climate protection; on the other, participants clearly remained active beyond the course, largely as



a result of the community processes experienced and explained by Wenger's concept of *communities of practice*.

TACKLING CLIMATE PROTECTION – THE WORKSHOPS

In addition to analysing the impact of the klimafit courses at adult education centres, our project sought to leverage the courses to promote practical climate protection. Our aim was to develop methods to promote active, hands-on and community-based climate protection work that can be used in different contexts and by almost anyone to initiate climate protection on a local level. Here, too, the characteristics of the *communities of practice*, with their genuine emphasis on the social side of climate change, offered a useful model. Workshops were developed on the basis of the insights gained from analysing the participants' observations in the courses and investigating the qualitative interviews conducted after the courses.

Workshop 1, **“Articulating climate protection”**, was explicitly dedicated to the role of language and communication in generating a joint perception of and shared feeling for climate change. This is particularly important for collaboratively initiating local projects. Several characteristics play a role here, such as a shared language, location and community to articulate what climate change means and what can be done about it. In workshop 2, **“Reading the signs of climate change”**, a collective history was important in terms of giving climate change a historical dimension. Here, individual histories were blended into a commonly shared history which then materialised in artefacts, offering insights

into the temporalities of climate change. In workshop 3, **“Dealing with extreme events”**, a simulation game was played which focused on jointly developed responses to several successive storm surges. The aim here was to illustrate the demands and difficulties of managing such situations in a practical way. Dealing with extreme events, and in particular disaster prevention, requires shared historical experiences and established structures of interaction that define ways to organise and offer aid in such situations.

The same also applies to workshop 4, **“Talking to each other despite uncertainty”**, which focused on maintaining dialogue in the face of different perspectives and despite the many uncertainties surrounding climate change and options for action. Converging experiences and interaction rituals make it easier to cope with the massive flood of information, establishing a socially stable situation in which uncertainty can be articulated and options for action negotiated. In workshop 5, **“Values and norms in climate protection”**, conflicting values and norms were made explicit in a debating club and thus became part of the debate. Revealing and discussing the powerful implications of values and norms brought to light what is at stake in the context of climate protection. Lastly, workshop 6, **“Experiencing nature, understanding climate change”**, was used to test the ‘climate walk’ method. The aim here was for participants to bodily experience evidence of climate change in their immediate urban environment so as to visualise its effects and consider what could be done to protect the climate. Physically passing through places and localising climate change

makes it less abstract and allows participants to reflect on its implications in a concrete and localised way.

To summarise, it is important to take action on both a collective and individual level and to do so together, lending mutual support and reassuring each other that climate action can be productive and effective. The workshops described in the following pages develop the insights gained in the project **“From climate knowledge to climate action”** in an applied way so as to provide starting points for practical climate protection.

After describing the aims and content of the workshop, each chapter provides information on how to set up the workshop, the material and equipment needed, and useful background literature. The main section includes a description of how the various methods were practically applied and a summary of the lessons learned at the symposium. Imitation, including in a modified or expanded form, is expressly encouraged, as this is the only way to move forward from thinking about *climate change to taking climate-protective action*, but above all: **Let's do it together!** ■



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WORKSHOP 1

Articulating climate protection

MODERATION: Martin Döring, supported by Bastian Graf

“How can ongoing conversations and storytelling about climate change be used to promote climate protection?”

Climate change can't be touched, tasted, smelt or otherwise perceived directly. Nevertheless, we notice it indirectly through changes in our environment – and we talk about it. Here, we share personal experiences of climate change and consider how ongoing conversations might help develop new perspectives for climate protection.

Topic and goal

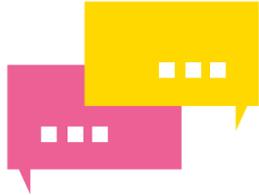
Climate change isn't just our planet's physical reaction to human (mis)behaviour. It has also become ingrained in everyday culture. The world is heating up – and not just literally, but also socially. Terms like *heatwave*, *extreme weather*, *fighting climate change*, or “*the house is on fire*”, to quote Greta Thunberg, illustrate the extent to which the language we use in our everyday lives is permeated by climate change. Some of these terms have threatening connotations: A *heatwave* is immediately associated with forces of nature; we are overrun by it and are defenceless in the face of its power. Words like “*record-breaking temperatures*” also paint a negative picture, indicating that high is not a good but rather a bad thing. On the face of it, climate change's semantic field seems to have few positive connotations – and those few are often used ironically. But what are the implications? Does this negative semantic field motivate us to protect the climate, or does it contribute to fatalism, inaction and a general sense of resignation?

Linguistic studies have shown that language plays an essential role in how humans relate to and behave in the world. Philologist Viktor Klemperer showed this in his famous study on the language of the Third Reich (Klemperer, 1998). Having been banned from using libraries by the Nazis, Klemperer adopted an ethnographic perspective, examining people's everyday lives and speaking habits in his hometown, Dresden. He found that the language designed and deliberately used by Nazi propaganda had permeated everyday discourses and also influenced or even determined people's everyday behaviour. This ensured that even those critical of the regime began using ‘Nazi speak’ and, after a certain period of time, aligned their everyday actions while not being aware of having done so. Although the circumstances are vastly different, the same principle applies to how we talk about climate change. The language that frames the abstract concept of climate plays an important role, as it subconsciously creates meanings, frames, perspectives and courses of action. In short, how we talk about climate change determines how we think or feel, and what we do or don't do about it. This aspect needs to be critically reflected on.

Unfortunately, a change in language does not automatically lead to a change in attitudes and behaviours. Attitudes learnt and communicated through language are deeply embedded in our cultural memory. It is there that they unfold their power and put down roots – to use a metaphor – that can't readily be removed. This also applies to the social, historical and linguistic composition of climate change including its various meanings, which hamper many efforts in the field of climate communication to promote climate-protective action. Although we tend to believe that better and scientifically sound arguments might appeal to people's reason and improve communication to open up new perspectives, unfortunately this doesn't ultimately lead to climate-friendly views and actions. What else, then, can we do?

A basic answer is to enter into dialogue with people. As simple as this statement may seem, it has actually become quite difficult to win over citizens for climate-related discussions. Recent approaches have therefore begun to look at the conditions that need to be met so that conversations and interaction about climate change can take place. What occasions can be created for an exchange of ideas and opinions, and how should such an endeavour be organised?

The first step consists in developing trust. This is achieved by giving people space and time to express their views on climate change, climate protection and climate adaptation. Here we're interested in the content as well as the linguistic composition of different positions. What characterises different positions or opinions, and what language is used to express and capture them? The aim of this workshop is to use dialogue to explore the linguistic foundations that typically describe different experiences and perspectives. By deconstructing the language that we use, we might become aware of underlying meanings, implications and connotations and then find a way to differently frame climate change through a self-motivated linguistic change.



Workshop method

THE DIALOGUE OF EXPERIENCE

The aim of the dialogue of experience method is to initiate an open group discussion about a shared problem or topic. To start off, an appropriate occasion needs to be created for entering into dialogue, and participants must be able to relate to the topic discussed, i.e., it needs to be a relevant part of their lives. In principle, the topic can be determined in advance or developed by the group itself in an initial brainstorming session. In most cases, the latter is the best option, as the participants are actively involved and are more motivated to work on the issue at hand.

TYPICAL AGENDA

The first step is to prepare the room by setting up two circles of chairs (fishbowl format): an inner, smaller one for the speakers with 4-6 chairs and an outer, larger circle for the listeners. A two-person facilitator team accompanies and guides the discussion. While one facilitator fully concentrates on moderating group interactions, the second documents the conversation, including the linguistic elements and levels of reflection, on a large pin board that is clearly visible to all participants.

Content introduction

15 min.



We start with a brief introduction to climate and language. The aim of the workshop is explained, which is to discuss climate change, how climate change is articulated in the group, and what gaps may be noted with respect to the linguistic framing. In a prepared presentation, samples from the media coverage are used to establish connections to the everyday language experienced by the participants.

Round of introductions

In the next step, the participants introduce themselves by answering the following questions:

20 min.

- Who am I?
- Where am I from?
- Why am I here?

Each person has up to two minutes to answer these questions. This helps the participants to get to know each other, familiarise themselves with the content of the workshop, and share their expectations with the group. Even at this point, it makes sense to explicitly point out commonalities between the participants and to strengthen their sense of community by highlighting overlaps. This should be done by the facilitator.

Relaxation and breathing exercise

Group work begins with a relaxation exercise. All participants are asked to close their eyes while the facilitator reads out a pre-formulated text for a 'body scan' breathing exercise. This is a method of relaxation and self-reflection in which participants gradually go through the individual body parts in their mind.

15 min.

Dialogue of experience

Where in your living environment do you notice climate change?

After the relaxation and breathing exercise, the discussion begins with the question: "*Where in your living environment do you notice climate change?*". The aim is to create an experience-based dialogue that focuses on how the participants experience climate change. Those who want to say something sit in the inner circle of chairs, while the outer circle is used exclusively for listening and reflection. It is important for the first facilitator to keep probing at this early stage to establish commonalities between the participants. This brings the group together in terms of content and also sensitises them to the language used to discursively frame climate change. In this way, reflections on language and its implications can thus develop from the first working phase onwards. At the same time, key aspects of the discussion are documented on the pin board by the second facilitator and fed back to the group or used for orientation.

60 min.

What can you do, and what would you like to do, to protect the climate?

The next step asks: “*What can you do, and what would you like to do, to protect the climate?*”. This marks a shift away from merely perceiving climate change and toward the more active dimensions of climate protection. Important verbal contributions or wordings are again documented on the pin board and can be commented on, while the facilitator in the circle of chairs uses targeted questioning to probe why certain linguistic elements are used, thus stimulating a reflective thought process also sensitising the group to the implications of the language they have used to date. It is also important to explore which aspects are NOT mentioned in the discussion surrounding climate change. For example, the commonly used idea of ‘fighting climate change’ can lead to an overly negative focus on climate protection in the sense of a defensive battle and struggle. The group can then discuss the socially positive or innovative potential of addressing climate change and why this aspect is completely overlooked in the current linguistic orientation. Lastly, they can start with positive examples and explore their unarticulated connotations and implications.

10 min.  **Break**

Reflection and documentation

30 min.  In a final step, the documentation on the pin board is reflected upon from the perspective of content and language. This exercise consists in identifying one or more topic areas, including their implications and connotations, in the course of which the group can develop positive and action-oriented meanings and themes for climate protection. To document the jointly developed results, it helps to select two participants from within the group to create a wall poster for the final discussion.

2.5 hours  **total time**



Materials used

Introduction to the content

- Laptop, projector, screen, presentation

Relaxation and breathing exercise

- Text to read aloud for the relaxation and breathing exercise (body scan)

Dialogue of experience

- Two circles of chairs set up in an oval with enough space between them, in a fishbowl format
- One or two large pin boards
- Coloured pencils, enough paper and pins for the pin boards

Reflection and documentation

- A large pin board
- Pin board paper
- Coloured pencils and pins to attach the final poster to the pin board

Results and reflection

The workshop was very well attended (17 people). Overall, the approach was met with great approval by all participants because they had never actively focused on the issue of language and its implications and connotations before. The introductory presentation was important for the success of the event, as it helped to raise initial awareness of how climate change is framed in everyday language. The goal wasn't to turn the participants into linguists; nonetheless, the group was very sensitive to the language chosen to answer the two questions. The relaxation exercise was perceived as very pleasant because “(...) you could simply take yourself out of the hustle and bustle of everyday life” and can “concentrate fully on the topic”.

A lively exchange of ideas developed in the dialogue surrounding the first question, which at some points required guidance and structuring by the facilitator. It is important to repeatedly mediate between the general and abstract dimensions on the one hand, and the local, specific ones on the other, to make the problem of climate change locally specific and connect it to people's lives. References to specific climate-related phenomena and local expressions can help in this process and ‘embed’ climate change.

With regard to the second question, a controversy initially arose over the distinction between climate protection and climate adaptation. Aggressive and warlike metaphors were increasingly used by the participants. This defensive attitude and the associated negative implications of climate change were then addressed in the discussion, first by the facilitator and then by the group. Against this backdrop, the group unexpectedly and creatively raised the question: “*How can we talk about climate change in a positive way?*”. Based on this modified question, positive perspectives and the opportunities arising from them were discussed:

1. How can climate change be used as a unifying rather than divisive element?
2. What new and previously unestablished forms of cooperation in society, politics and business arise for climate change, climate change adaptation and climate protection?
3. How can we turn the negative intergenerational divisions surrounding climate change into a positive sense of ‘we’ or ‘us’ for climate protection?

Conclusion

In summary, there was a very active and lively dialogue. This made it clear to the group that they wanted to tackle climate change and that doing so would be easier using different and more positive language. The shared experience of discussing climate change and engaging in dialogue was perceived as a useful exercise and profitable endeavour. Even if it only represented a first step in moving toward action, at least a start had been made. ■



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WORKSHOP 2

Reading the signs of climate change

MODERATION: Corinna de Guttry and Kerstin Schneider

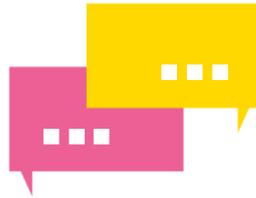
“How can memories of past extreme events and natural disasters be used as an inspiration to engage with and mobilise communities against climate change?”

Collective and individual memories are important as a bridge from the past to the future. The idea generator is a method that helps to find ways of using memories to mobilise people to engage and deal with climate change in the present and future. The first step consists in raising awareness of the signs of climate change that can already be seen in their everyday lives. In a second step, we will question which signs from the past exist in the everyday world and which signs can be used to turn obstacles into opportunities for climate action.



Topic and goal

The signs of climate change are clearly visible in our everyday lives and can be found everywhere, e.g. in memorial plaques and statues, in buildings destroyed by natural disasters, but also in dried-up green spaces or trees. In a discussion about climate change that is limited to the past and the current effects of climate change, these signs are often ignored. However, past signs of climate change can also be used as an opportunity to encourage reflection on the future. By becoming aware of these signs, we can reflect on our relationship with our environment. We can think about the elements that have been lost or are about to be lost. Furthermore, engaging with past experiences and visible signs allows us to visualise and process emerging features of climate change. Designing and developing vivid and tangible projects in which memories and signs of climate change can be used for the community in the future allows us to explore a new avenue of active climate protection together. This type of discussion and engagement differs from other approaches, as it is locally and individually relevant – or as one participant put it: “(...) I’m very happy to be here because the topic is so personal and at the same time so tangible for all of us.”



Workshop method

THE IDEA GENERATOR

The aim of the idea generator in the context of this workshop is to discuss the role of signs of climate change in order to motivate individuals and groups to take climate-protective action – or in other words: to tackle climate change. Three main objectives guide the structure and implementation of the workshop:

1. The visualisation of memories in connection with extreme weather events and climate change.
2. Reflecting on signs of climate change in our everyday lives and encounters.
3. Creating new signs to make the effects of climate change visible and/or tangible for the future.



Materials used

Visualisation of the workshop goals; brainstorming or presentation of results

- 2 pin boards
- Moderation kit (e.g., different coloured moderation cards, pens, pins)

Modules 1 & 2: Sensitisation and reflection

- Projector and screen
- Semi-circular circle of chairs around the screen
- Pin board

Module 3: Application

- Group work tables
- Flipchart posters

NOTES:

PREPARATION:

Before the start, clearly post the daily agenda and objectives on a flipchart in the workshop.

INFLUENCE OF GROUP COMPOSITION AND SIZE

The composition of the group has a decisive influence on the development of the work, on the atmosphere in the group, on the type of issues to be addressed and on the final project ideas developed and presented. Especially if the participants come from the same region, the ideas developed will most likely be based on the climate stressors specific to the region.

TYPICAL AGENDA

The idea generator method is divided into three building blocks, which are explained below.

Sensitisation

The first building block: This includes an input phase in which the participants learn about different forms of signs of climate change and natural disasters. In this phase it is important to provide various examples of existing signs so that the participants gain a comprehensive insight into the wide range of possibilities. The range of signs presented can for example include individual objects on a small scale, such as high-water marks or memorial plaques and on a large scale, urban adaptation projects. Signs of climate change can be found both in institutionalised settings (e.g. museums) and in unorganised forms of expression (e.g. street art).

BUILDING BLOCK 1

30 min.

Reflection

The second building block: Here, the participants become protagonists by being asked to first take a 'mental walk' in their own neighbourhood and collect the signs of climate change that they notice in order to then write down these personal examples together on moderation cards. The collection of results serves as a basis for reflecting on the signs and their effects. In particular, the following questions should be discussed together:

Who created the sign?

Who is the sign intended for (target group)?

What is the message underlying the sign?

What is the meaning or what conclusions can be drawn from this sign?

BUILDING BLOCK 2

80 min.

Application

The third building block: This is where the transition from the conceptual to the practical and applied level takes place. On the basis of the examples collected, the participants are asked to develop their own signs project in small groups in order to make the signs of climate change visible. While working on their project, each group is asked to define the following points:

Project name Brief description of the signs project.

Mission or objective What is the central message of the project?

Target group Who should be addressed by the project?

Institution Who is or could be responsible for implementation?

Implementation plan Which key aspects should be considered during implementation?

After the individual signs project ideas have been developed in small groups, these are presented to the group as a whole and, if necessary, supplemented with further, jointly developed ideas and aspects. An important concern is to ensure that the knowledge gained and the newly collected experiences can be transferred to the participants' own living environments.

The method concludes with the search for an answer to the question: "How can the experiences and the knowledge of the group be implemented in different areas of life?" and in a discussion about the challenges and the insights gained by the participants.

BUILDING BLOCK 3

70 min.

3 hours total time

Therefore, time should be set aside for an exchange on location-specific aspects such as existing institutions, organisations, current projects and previous experiences. Moreover, especially if the participants come from different regions, the discussion is likely to cover a wider range of examples of climate change impacts. Sufficient time should also be planned here for an exchange about the various examples and impacts.

The working group at the Berlin symposium consisted of six participants and a moderator. The small group size enabled a lively exchange between the participants and ensured a pleasant atmosphere for discussion and work. With a larger group (maximum thirteen participants), more time should be allocated for the reflection phase (building block 2) and for presenting the project results.

Results and reflection

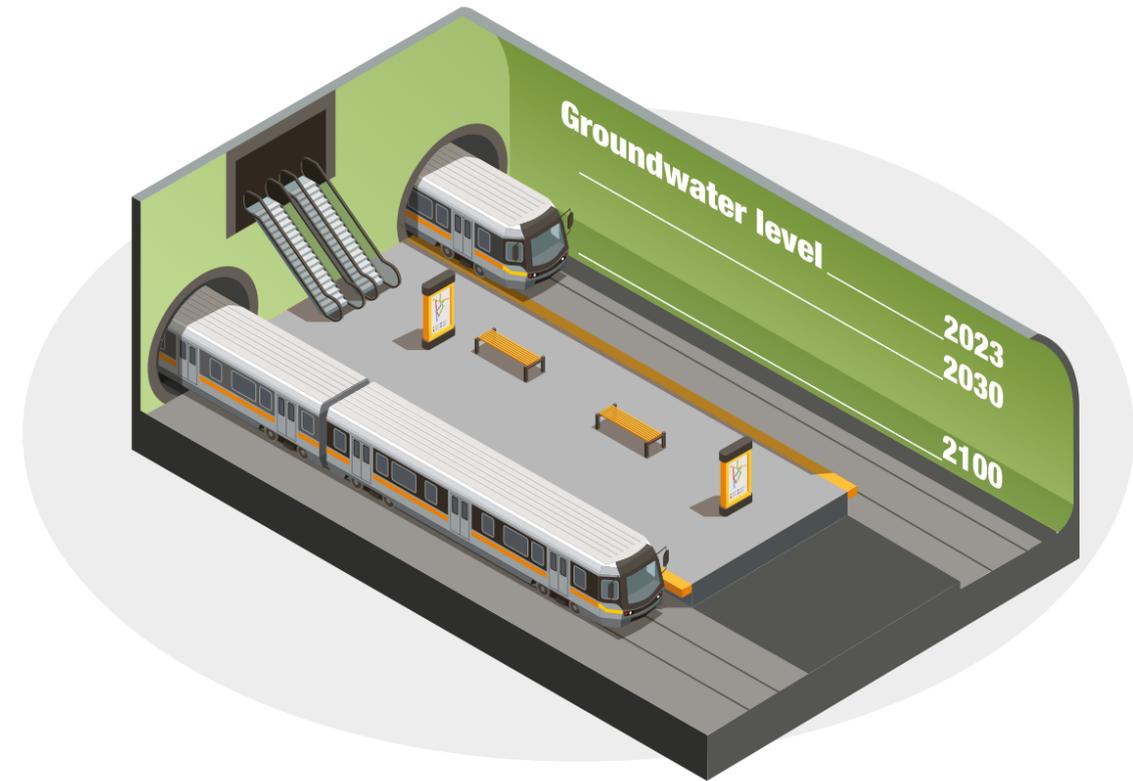
The idea generator method proved to be an innovative and appealing way to think about societal action in connection with climate change and to use scientific findings on memory processes from a societal perspective. Right from the start, it became clear that the findings and perspectives of the scientific community were much more limited than those of the participants. They identified, analysed and discussed a broad range of signs: from initiatives (e.g. “Gieß den Kiez”) and world days (e.g. Earth Overshoot Day) to signs of past damage (e.g. burnt forests) and climate projects (e.g. climate trails), to media contributions (e.g. the photo exhibition “Genesis”).

The two projects developed as part of the idea generator demonstrate the participants’ creativity and extensive knowledge.

Signs Project 1:

SUBSOIL – “MAKING DROUGHT VISIBLE”

As part of the first project developed, the aim is to raise awareness of the issue of falling local groundwater levels at underground and suburban train stations in Berlin. To this end, printed posters and screens along the stairways and escalators in existing public transport stations can be used to make the composition of the subsoil and the declining groundwater level visible. For new buildings, a glass wall could be used as an alternative to make these effects visible in reality. In this way, the topics of groundwater, groundwater levels and climate change are transferred into everyday life and underground and suburban train users are encouraged to think about them as they pass by. Additional information boards on water consumption and potential conservation measures could promote individual action.



Signs Project 2:

WATER – “MY CLIMATE CHANGE – THE WATERLINE IN AN INTERACTIVE SPACE”

The idea behind the second project concerns cities and municipalities that are located near bodies of water and in which the predicted water level in 150 years, for example, is made visible as a line along the shore or the city centre by means of a striking, distinctive line painted on structural elements. This line ends in an interactive space (e.g. pavilion or underpass) where visitors can find out more about the consequences of climate change. As part of the interactive exhibition, the visitor could be projected onto a screen in order to tell the story of the effects and consequences of climate change in their reflection (linking the future and the past in the present). This virtual narrative is also captured as a photo so that participants can share the experience with their environment on social media channels. The informative approach of visualising climate change thus not only reinforces awareness of the problem, but also promotes personal identification with the impending consequences of climate change.

A glimpse of workshop 2 during the symposium. (Photo: Bernd Lammel).



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Conclusion

Lastly, the participants discussed an important insight into the challenges surrounding the topic of 'adapting to climate change' – namely the role of political institutions. Aspects such as the allocation of budget funds, complicated legal frameworks, and conflicting timeframes were considered to be the main obstacles to individual and social action. Instead of encouraging implementation, these administrative hurdles slow down civic engagement. This also corresponds to the basic idea behind the "From climate knowledge to climate action" project, which advocates the communitisation of climate protection and necessarily includes reflection on these levels. ■

WORKSHOP 3

Dealing with extreme events

MODERATION: Jürgen Schaper, supported by Paul Müller

“Can we learn to deal with unexpected extreme events?”

In the 'BLACK SWAN' simulation game, the handling of extreme events is simulated using the example of the East Frisian region of Emden-Krummhörn and an incoming chain of storm surges along the coast. The participants experience the dynamics of cascading events in a difficult disaster situation and face the challenges and problems of dealing with necessary disaster management measures.

Topic and goal

Climate change will lead to more extreme events in numerous regions all over the world in the future. Many people aren't yet sufficiently aware of what extreme events are, how dangerous they can be, and what challenges they pose for those living in the regions affected. The aim of this workshop is to make participants aware of the dynamics of extreme events and to introduce the simulation game methodology as a tool for climate protection education. The practical management of an extreme situation is simulated, in which the goal is to disrupt cascading events. The aim of the simulation game is not to re-enact the professional and practical management of the extreme situation, but to explore the role and relevance of social actors in such disaster situations and to reflect on the institutional and political decision-making processes.

A simulation game is a great way to learn about, experience and understand the difficulties of dealing with unexpected extreme events in a playful but fairly realistic way. Participants are divided into groups with different responsibilities concerning civil protection. The aim is to playfully experience and reflect on the obstacles and conditions of working with and between those responsible for civil protection during an unfolding and worsening extreme situation.

Workshop method

Simulation game method using the 'BLACK SWAN' example

A simulation game is an action-oriented method for experiencing real-life situations together in a playful context (Balikci, 2012). Simulation games were developed as early as the 18th century for military purposes and used to support strategic decision-making. Depending on the area of application, there are different forms, such as simulation, role-playing or drama simulation games. What all forms have in common is that a model or story adapted to reality is created in which a certain number of people participate. They take on different roles and have to make concrete decisions that have a direct influence on the simulated situation in an attempt to find solutions (Kühl et al., 2009). The course of a simulation game, which can last a few hours or even several days, generally comprises the preparation phase, the implementation, and the evaluation or reflection phase. A closed simulation game normally uses ready-made datasets so that the focus is on understanding, acting, reflecting and learning during the course of the game.

The 'BLACK SWAN' game simulates the handling of extreme events of all sorts on Germany's North Sea coast. In the present case, *black swans* are extreme storm surge events that are very unlikely to happen on the one hand, but nevertheless are physically plausible and can be associated with severe damage, impacts or even devastation (Weisse et al., 2019). The methodology of the simulation comprises three parts: a) development, b) implementation and c) reflection.

Developing the simulation game

The simulation game was developed and tested in collaboration with experts from coastal and disaster protection in Emden (Schaper et al., 2019). It includes important preliminary work and questions to be answered as an introduction to the simulation game.

Characterisation of risks in the target region

What are the risks?

The Emden-Krummhörn region on the East Frisian North Sea coast was selected for our simulation game because extreme events are plausible there due to the multiple risks involved. The landscape is shaped by the Ems, the Dollart, high and low tides in the Wadden Sea, and storm surges in the North Sea. The region could also be described as a high-risk landscape, as large parts of the land behind the dykes is below sea level and there is a risk of them filling up with water like giant 'bathtubs' after heavy rainfall.



The target region
Emden-Krummhörn.
(Map: Claus Carstens,
University of Hamburg)

The Emden region largely consists of the city of Emden and is dominated by the local Volkswagen factory and tourism, while the rural region of Krummhörn is a marshland landscape that is mainly used for agriculture through livestock farming. Multiple risks exist here in relation to water (Ratter and Schaper, 2019). On the one hand, a closed line of dykes is needed to protect the coast from the North Sea. On the other, a system of canals, sluices and pumping stations is used to drain the hinterland of the dykes. Coastal protection and drainage ensure the region's safety.



Left: The risk landscape: Marshland, canals and the dyke with the lighthouse in Pilsum.

Right: The city of Emden with its town hall.

(Photos: Jürgen Schaper)

Identification of possible extreme events

What is conceivable in extreme cases?

Particular risks are posed by 'chain storm surges', in which several storm surges occur in succession and gradually soften the dyke due to the direct, prolonged presence of water until it breaks and the water pours into the hinterland. A shipwreck is also conceivable, in which an unmanned ship drifts into the dyke or loses containers that cause structural damage to the dyke until it collapses. Technical failure, e.g. of the opening and closing mechanisms of coastal protection structures (locks, embrasures or barrages), is also conceivable. In extreme cases, all of these individual events can occur simultaneously.

Description of the effects of cascading failures

What happens if ...?

In such an extreme event, the individual effects can build up like a cascade of failures and produce extraordinary consequences. Cascades represent chains or sequences of events or processes, whereby all events build on each other and result from their predecessors. There are different kinds of cascades, e.g. the avalanche effect, which builds up over several stages and gradually becomes stronger and stronger; and the domino effect, which consists of a linear chain of impulses. Cascading failures refer to interconnected event sequences in the case of a catastrophe. A primary event generates disturbances (impulses) that trigger and influence secondary events in other areas, which then unfold. There are also 'if-then' chains with causes

and effects on several levels. In this context, the simulation game is about finding successful measures to disrupt or even stop cascading failures – especially in order to protect susceptible or neuralgic points in the region.

Identifying neuralgic points

What are the critical points?

Neuralgic points are critical locations that require special protection and attention in the event of a disaster. They include drainage, the economy, transportation, critical infrastructures (electricity, gas and water supply) and particularly vulnerable facilities (hospitals, retirement homes, kindergartens and schools). When they are at risk or fail, it can have far-reaching consequences for the security of social actors in the region.

A plausible multi-risk scenario with extreme events, cascading failures and neuralgic points is developed on the basis of real framework conditions and potential events, which represent the core of the simulation game. The conceived scenario is then translated into a narrative scenario that presents a coherent story – based on an extreme scenario – as the conclusion of the simulation game in text form.

Implementing the simulation game

GAME PLAN

Working groups of 3-4 people are formed, each with their own problem in the region to work on. At the klimafit symposium, there were two groups: one group had the goal of protecting the critical and neuralgic points in the port of Emden (such as the sea lock, power plant, and water treatment facilities), while the second had to protect the rural region of Krummhörn (livestock, dykes, power grid, roads, towns and their inhabitants), which is the hinterland of the sea dike.

GAME FLOW

After a short round of introductions by the moderator and participants, the moderator speaks briefly on the topic, the objectives, the rules of the game and the tasks. The simulation game then begins with the reading out of the initial situation. This starts round 1 and the beginning of the extreme event, which cascades round by round, building to a maximum disaster. In each round, each group makes decisions on measures to be taken for the emerging extreme situation under time pressure and collects them on their action board. After 10 minutes working time, the bell rings; then the next round begins and the new, changed conditions, events and linkages are announced. In our case, 7 rounds of 10 minutes each were played out. The extreme scenario comprised 3 days with 4 storm surges, the flooding of the entire region, and the failure of supply and critical infrastructures. In total, you should allow at least 2 hours for such a run-through (introduction, game and discussion).

 2 hours total time

SCENARIO

10 min. 

 **Round 1:** Initial situation: Thursday, 13 November 2030, late in the evening. It's autumn, mid-November in the year 2030, and the winter storm season is just around the corner. It has been a rainy summer, the ground is saturated with water, the retention basins and drainage channels are full to the brim. A major storm is approaching from the north-north-west ... What should you do? You have 10 minutes.

10 min. 

 **Round 2:** Friday, 14 November 2030, 7:14 p.m. – rising waters: The Federal Maritime and Hydrographic Agency (BSH) predicts another very severe storm surge. A report is received that the Chinese freighter MSC Chiang has lost 390 containers. Due to the very high water level and swell, two containers hit the dyke repeatedly on the west coast near the Campen lighthouse. The waves quickly wash the dyke's sand core free. A dyke breach quickly develops. Water flows unimpeded into the hinterland and begins flooding the first cellars in the villages of Upleward, Loquard, Campen and Rysum. What needs to be done?

10 min. 

 **Round 3:** Saturday, 15 November 2030, 4:15 a.m. – outflowing waters: The storm surge forecast calls for another severe storm surge the day after low tide. The local sub-station is knocked out, causing a local power outage in the surrounding villages. The population is still asleep. Farmers can no longer milk their dairy cows, as the milking systems have no power. Several trees fall on the Rysumer Landstraße after a tornado. The trees block the road. A tree falls on a car and kills a family of five in their small car. What should be done?

10 min. 

 **Round 4:** Saturday, 15 November 2030, 9:48 a.m. – third surge: In Krummhörn, heavy rain sets in. More water reaches the region as precipitation. Due to a technical breakdown at the large sea lock, water enters the inland port and flows into the building yard, the waste loading station, the fertiliser station and the petrochemical plant. Toxic substances from the waste and chemical plants seep into the water of the Ems and threaten to spread throughout the port. The drinking water reservoir in the port is contaminated. Dirty water backs up into the sewage treatment plant at Volkswagen factory until it fails. Drinking water treatment is interrupted. What needs to be done?

10 min. each 

 **[Further rounds ...]**

10 min. 

 **Round 7:** Sunday, 16 November 2030, midnight – receding waters: The situation is slowly calming down. The BSH expects increased water levels in the next 24 hours, but no further storm surges, so that it will once again be possible to operate the sewers, albeit with restrictions. The city looks empty. Food, drinking water and medicines are in short supply, as are petrol and other fuels. Many ground-floor apartments are flooded, cold and dark. Two weeks later, the clean-up work is in full swing. Once one storm surge is over, it's time to start preparing for the next one. What should the task force do to prevent this from happening again?

IDEA OF THE GAME

The aim is to build up more and more pressure in each new round of the game: Time and decision-making pressure create dynamics and stress among the participants. Experience cards (additional problems) and bonus cards (jokers for the free use of materials, personnel or money) can further enrich the game.

WORKSHOP SETUP

A bright, tidy and pleasant workshop for everyone with sufficient space for materials is suitable for the simulation game. The tables should be positioned in such a way that the groups can communicate with each other without disturbing each other. There should also be enough space to move around. An additional circle of chairs for whole-group discussions is advisable.



A glimpse of the workshop
(Photo: Jürgen Schaper)



MATERIALS USED

Group:

- One **table and set of chairs** for each group
- **Moveable screen with paper**
- **Pens, pins, adhesive tape, index cards** (different colours)
- **Rules of the game**

Moderation:

- **Laptop, projector, screen, presenter**
- **Flipchart and white paper**
- **Topographical maps, rules of the game**
- **Printed scenario steps** for each round
- **Event cards and bonus cards** (optional)
- **Clock and bell**

Info-Board:

- **Movable wall**
- **Topographical maps** with neuralgic points in the region
- **Relevant information**

Reflection on the simulation game

At the end of the simulation game, there are two rounds of reflection, one within the group and then with all participants together, using the flipchart. The participants look at, reflect on and discuss their own set of measures. Important questions include: What did we do well, what not? What else could we have tried? What would we do differently now? What did we learn from the simulation? What are our takeaways? The aim of the reflection within the groups and all together is to understand non-linear dynamics, decision-making processes, to adapt them if necessary, and to reflect on one's own experiences during the course of the game.

Results and reflection

Each group jointly identified suitable measures in each round. These included: warning the population; closing the sluice; activating the crisis team; declaring alert levels; providing emergency services; observing the lighthouse; packing sandbags; sealing the dyke breach with sandbags; arranging the evacuation; moving livestock to 'dry land' or to higher ground; sealing off the fertiliser store, waste dump and petrochemical plant; pumping out toxic substances (with specialists for hazardous waste); securing an emergency power supply for the screening plant; repairing the sluice; organising replacement deliveries of drinking water; setting up medical care and temporary power supply; removing dead cows (risk of epidemics). Adaptation measures were also considered for after the disaster, including building houses on stilts, expanding the sluice (double sluices), training staff in the port for disasters, training volunteers, organising a sustainable energy supply, preparing drinking water supplies, storing chemicals and toxins in a protected location, growing rice instead of dairy cattle, and exploring hydro/aquaculture.

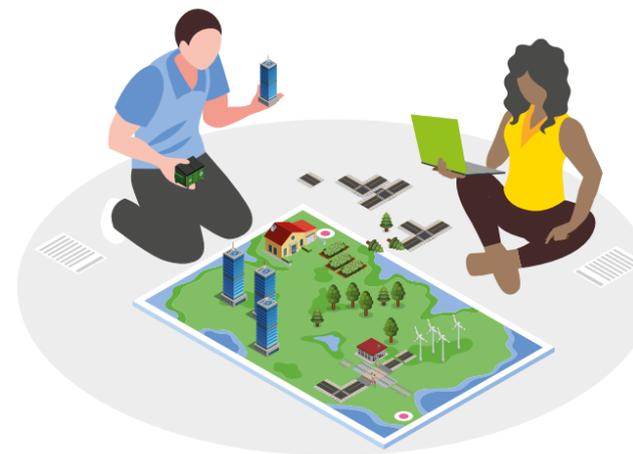
Overall, extremely creative ideas were developed, material was exchanged between the groups, and they helped each other. What was lacking above all was time, specialist expertise in disaster management, and deployable personnel. During the whole-group discussion, the participants realised that evacuating the affected population is a fundamental decision that requires a lot of effort, is difficult to implement, and does not protect everyone affected. The evacuation of livestock is an almost insoluble problem. Limited communication between the groups was also recognised as a problem, especially given the time constraints. It is difficult to be proactive during an emergency event; usually you can only react to new situations. However, all participants agreed on the role and responsibility that society should assume. Ideally, volunteers should be trained for such events at an early stage and by experts. In this respect, it makes sense to define the distribution of roles in advance.

The most important part of the simulation game is the learning experiences and conclusions that the participants drew from the simulated handling of an extreme event. Despite the game situation, they seriously and patiently addressed a topic which they had never thought about before. This discussion was not a one-off and did not end with the simulation game, but rather used the practical example to open up a new perspective on the world affected by climate change. The participants also became very aware of how many actors and structures one relies on, or has to rely on, in everyday life and especially in extreme situations.

Conclusion

What are the 'takeaways' from the simulation? That extreme events can happen anywhere. The simulation game offers a good method for bringing emergency situations closer to experts, the general public and students, as it is accessible to everyone and encourages new ways of thinking and new perspectives. As a methodological trick, experts can be integrated into each group and thus gain a professional perspective from disaster management.

Is dealing with unexpected extreme events something we can learn? Yes, to a certain extent. In the simulation game, possible extreme events can be simulated very well, the dynamics of the events and the time pressure can be made tangible, possible consequences for the environment and society can be shown, the challenges of cascades for disaster control and the population can be identified, the need for action can be derived, cooperation in management practice can be practised, and the limits in dealing with the unexpected in extreme cases can be learned. Conclusion: Dealing with the unexpected can be practised, but protecting yourself completely cannot. Try it out! ■



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WORKSHOP 4

Talking to each other despite uncertainty

MODERATION: Beate Ratter

“We don’t know what’s coming, so how can we deal with it?”

Talking about risk is a way to increase our self-efficacy; it also helps us to cope with uncertainty. Even when we don’t know the exact consequences of climate change, it’s easier to deal with them together. A good dialogue not only means talking but also listening and asking each other questions as equals. In this workshop, key barriers to dialogues and ways to keep the conversation going are identified by moving between different stations.

Topic and goal

The daily torrent of headlines, disaster reports and scientific or pseudo-scientific news is overwhelming: “Sea levels have risen unusually sharply” (Welt, 2019), “Maximum 2.38 meters by 2100” (Spiegel, 2019), “Seas rising faster and higher” (taz, 2020), “Sea-level rise triples in 80 years” (Bild, 2021), “30 centimetres by 2050” (Süddeutsche Zeitung, 2022) etc. The Paris Agreement was celebrated in 2015 and every autumn we follow the latest international climate summit, where the 198 signatory states to the UN Framework Convention on Climate Change come together for the Conference of the Parties (COP). The 28th COP took place in Dubai in December 2023. Germany has had the National Climate Initiative (NKI) in place since 2008, a national Climate Action Plan 2050 since November 2016, and a Climate Protection Act since December 2019. On 2 May 2019, Constance was the first German city to declare a climate emergency, followed by Heidelberg, Ludwigslust and Kiel – over 70 cities in Germany have since done so. *Fridays for Future* movements took to the streets for months calling for more effective climate policies, and supporters of the *Last Generation* are deliberately gluing themselves to streets to disrupt traffic or throwing paint at luxury stores. Yet, there still are sceptics or deniers of anthropogenic climate change, despite irrefutable proof that the Earth has been warming for a long time due to greenhouse gas emissions and is warming faster and faster.

The constant flood of information can be paralysing and the sense of powerlessness can be overwhelming, while the worries about what lies ahead remain. What can we do to cope with the flood of information, and how can we deal with uncertainties?

No-one knows what the world will look like in 2100. We don’t know which glaciers will still exist or where exactly sea levels will have risen to in the Bay of Biscay. But the laws of physics cannot be ignored. The rise in atmospheric temperature will have consequences for nature and society. Despite all the uncertainty about exactly what will happen and when, one thing is certain: Something will happen.

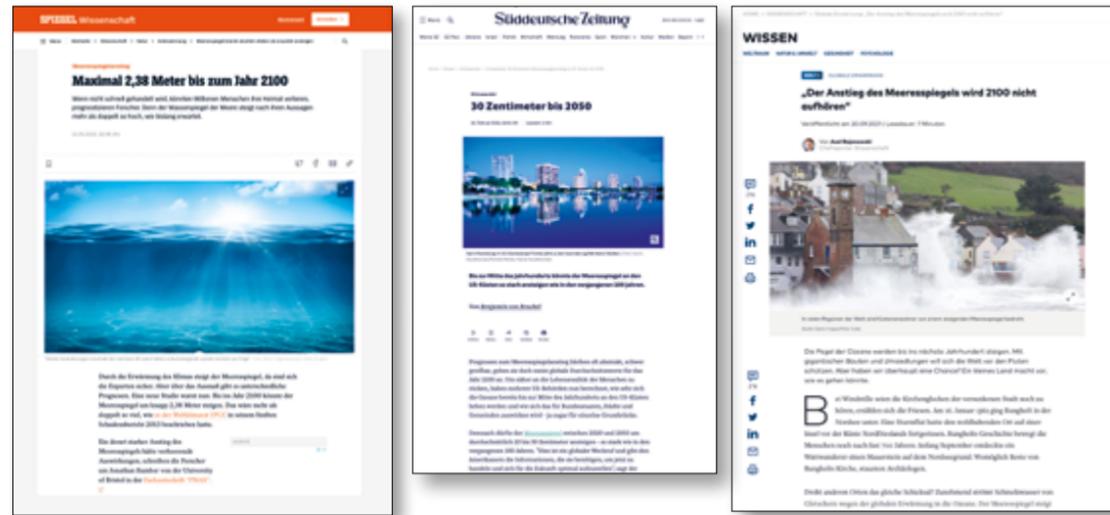
These topics are addressed at the various stations. Each station provides information and a space to discuss:

1. the information overload,
2. that communication is an art, and
3. that forecasts are not projections.

1. Managing the information overload

Hundreds of news items reach us every day on our smartphones, tablets or computers, and no longer just as morning headlines. “As an individual media user, you are usually overwhelmed by the task of checking and categorising information” (Mohn et al., 2022). When searching for reliable facts, a sensible strategy is to rely on trained experts – journalists with experience in the respective subject area. Professional media employ people who are trained and experienced in source checking (Schrader, 2022).

Samples of the flood of information in the media on the subject of sea level rise

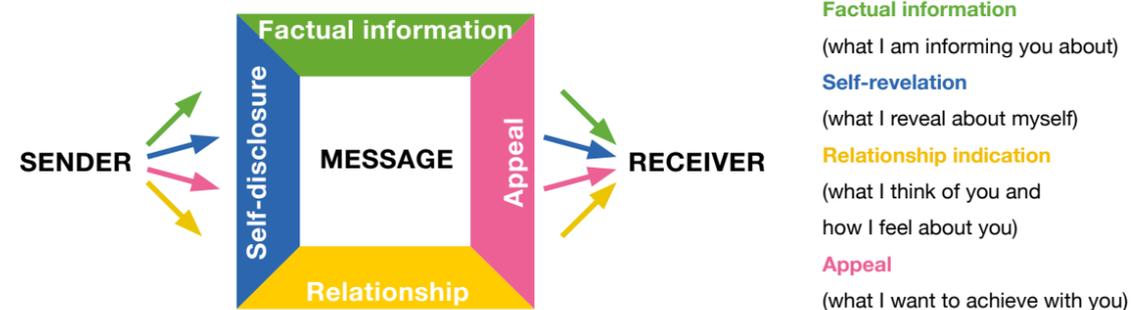


2. Communication is an art

The sender-receiver model of communication has long been proven inadequate. Merely sending out the right message does not mean it will be perceived by the recipient as truth; even less does it mean it will lead to correct understanding and just actions. Single-channel communication in the sense of merely proclaiming something bypasses the recipient and his or her context. Real communication only occurs through exchange. Since the beginning of the 20th century, language theorists, psychologists, philosophers and communication scientists have shown that a message has at least four facets. Whether intentional or not, four messages are sent at the same time: factual information (what I'm informing you about), self-disclosure (what I'm revealing about myself), a relationship indication (what I think of you and how I feel about you), and an appeal (what I want to achieve with you). According to F. Schulz von Thun and his four-ear model (2014), these messages are also heard by the recipient in four different ways. Yet despite all these theoretical findings, we still read that knowledge transfer and scientific communication is a one-way street from sender to receiver. Why is this the case?

THE COMMUNICATION SQUARE (FOUR-EAR MODEL)

Modified from F. Schulz von Thun (2014)



3. Forecasts are not projections

What do we actually *know*, for example, about sea level? What elements of this knowledge are *reconstructed* on the basis of ice core and drill core studies, and what is calculated or *modelled* with enormous effort in so-called climate models? Talking and thinking about these forms of knowledge in different ways helps us to not see scientists as 'clairvoyants of the modern age'.

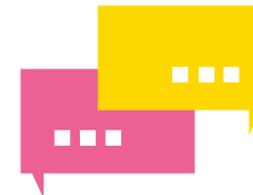
The well-known climate scientist Mojib Latif stresses that we do not have a lack of information, but a lack of action. Lea Dohm, psychological psychotherapist and co-founder of *Psychologists for Future*, explains: "(...) If we feel that our concerns are taken seriously, we can gain strength to tackle new challenges – and thus create the inner capacity for climate engagement in the first place" (Mohn et al., 2022). In this workshop, passing through the different stations is intended to help people deal with uncertainty. It helps them stay in the conversation and jointly find ways to live with uncertainty.

Workshop method

STATIONS OF A JOURNEY

On this journey, we travel to three different stations, each with a dedicated topic. The method used is station-based learning, also known as a learning journeys or learning landscapes. This is an action-oriented method for structuring a topic and enabling the group to find different ways of dealing with challenges. For this purpose, a room is prepared with various 'stations'. Each station has a concrete work assignment (a set of tasks for the participants) and material to stimulate a discussion. A journey consists of three (or up to five) stations and is designed to enable group work, which makes it easier to engage with a controversial or new topic.

A stimulating learning environment and freedom to move around the room are important aspects. A facilitator is needed to guide and explain but not influence the group, and a timekeeper. At each station, enough time must be provided for everyone to familiarise themselves with the material provided, discuss the topic in the group, and answer the questions on the worksheet. At least 30 minutes should be allotted for each station. Everyone chooses a station to start with.



TYPICAL AGENDA

15 min. 

Step 1:

The journey begins with a welcome and round of introductions of the participants, who are also given the opportunity to state their expectations. In preparation for group work, the topic is introduced and the procedure explained.

30 min. 
per station

Step 2:

This is followed by walking through and working at the three stations. Each has the following material: the task sheet as a guide, a DIN-A0 sheet as a writing surface and several thick colour felt-tip pens for documenting the discussion. Participants work and discuss according to their own needs and if possible, without time pressure. Each participant does not necessarily go through all stations in the same group.

45 to 60 min. 

Step 3:

This is where the whole group comes back together. The results of the discussion at each station are presented, discussed and reviewed. Commonalities and differences that emerged at each station are visibly documented and pinned to a wall. The discussion concludes with possible courses of action. Reviewing and presenting results is part of any successful discussion and learning process. Sufficient time must be given to this component, and the results must be documented for all to see.

20 min. 

Step 4:

The journey also encourages everyone to critically assess their own working methods and learning progress. At the end of the journey, participants compare their experiences. It is important that all participate as equals, which needs to be ensured by the facilitator. There should be a final round of critical reflection on the method, including what participants did NOT like.

2.5 to 3 hours 
total time

NOTE

A sufficiently large room is required for the station tables, which should be marked according to topics, e.g. using colours. They should not be numbered. A circle of chairs is needed, as are pin boards and supporting material that is easy to read. The facilitator should be friendly and assist the group rather than dominate the conversation. A team of facilitators has proven an effective way to share the tasks of informing, explaining, helping, keeping an eye on the time, etc.



MATERIALS USED

For the stations

- **Display/pin board** with selected **material and information**:
Station 1: **Article on a relevant topic**; Station 2: **Communication model**;
Station 3: **Sample climate projections**
- A printed **task sheet** as orientation for each participant
- A **DIN-A0** to write on and several thick **colour felt-tip pens** for documenting the discussion (results sheet)
- **Pens** and **paper** as a basis for documentation
- **Clock** und **bell**

For the additional task

- **Blank postcards**

Talking to each other despite uncertainty

We don't know what's coming, so how can we deal with it? Talking about risk is one way to increase our self-efficacy, as it also helps us to cope with uncertainty. Even if we don't know the exact consequences of climate change, it's easier to deal with them together. Good dialogue not only means talking but also listening and asking questions of each other as equals. During the tour of the three stations, key barriers to dialogue are reflected on and ways are sought to keep the conversation going.

Station tour
checklist

Answer the following questions at each station during the exchange:

1

The information overload

How do we deal with the fact that new information on climate change (e.g. sea level) reaches us almost every week? Take a look at the articles (headlines): What impressions do you get from them?

- What are we learning, and how should we understand this information?
- What do these news items have in common, and how do they differ?
- Do these contributions meet your information needs, or do they increase your uncertainty?
- How can we channel the flood of information rather than ignoring it?

2

Communication is an art

Communication science has long been concerned with the forms and methods of communication. Who talks about what and how? I say what I say, and you hear what you hear. We often get our wires crossed – how can we learn to listen to each other? Different communication models are presented.

- What do these models trigger in you, what thoughts come to mind?
- Which model comes closest to your own ideas on communication?
- What do you consider to be barriers to communication and how can they be overcome?

3

Forecasts, projections or clairvoyance?

Projections are not forecasts. The results of climate models are 'if-then' projections of the past into the future. They do not predict the future; they show possible development paths. Is public opinion mistaking scientists for clairvoyants? The material presented shows sample climate projections from recent years.

- Where do you find these difficult to read and where do you see parallels?
- When you read reports about future climate developments, how do you process them?
- The weather forecast for 15 July 2021 in western Germany, what thoughts does this trigger?
- Can scientists really look into the future or predict the future?
- What do we know? What do we assume? How can we anticipate?

Record the outcomes of your discussions at all three stations on the results sheet.

Additional task: Write a postcard home with any additional thoughts you have.

Results and reflection

1

The FIRST STATION

with the article headlines on sea level rise sparked a lively exchange on the overwhelming flood of information. An important insight shared by the participants was that not everything can be read and not everything needs to be read, and that we shouldn't be afraid to leave gaps and read selectively. When selecting what to read, either use your own particular interests, e.g. the interest in your home region, as a criterion, or get support from professional services, e.g. riff-reporter.de or krautreporter.de. Remember self-care and switch off your messages from time to time. Continuity is important, as it provides in-depth insights and one is not just informed by dramatic alarmism. At the end came a confession: reading more would be nice. It is also worth looking for other forms of knowledge transfer to avoid becoming jaded (e.g. regular pub meetings on the climate).

2

At the SECOND STATION

on the art of talking to each other, the models of communication and Paul Watzlawick's key phrase "You can't not communicate" was met with universal approval. Even better, it was seen as something that had been known for a long time. "In education for sustainable development (ESD), we are already 10 years ahead". But communication is a balancing act that needs to address the factual level while not forgetting the emotional aspects. Positive messages need to be conveyed implicitly without being overly prescriptive. Everyone has a role, but not everyone is a master communicator, which is why communitisation and mutual acceptance must not be neglected in communication. In order to stay in conversation with those that doubt climate change, it is necessary to listen, ask questions, and focus on messages about 'we/us' instead of becoming accusatory in term of 'us vs. them'. The participants agreed that far too little is said about successes, in keeping with the motto: "Do good and talk about it".

Barriers to communication were also jointly identified: a lack of feedback from the readership of publications or the fact that information can be misunderstood. A target group-specific approach and dialogue is more successful than a monologue aimed at information transfer. "There are enough one-sided information flows (...)". Instead, exchange formats should be created where content can be experienced, e.g. through action days, early involvement (e.g. of focus groups and product testers) and joint reflection on it. Take the 'COM-' in communication more seriously: communicate with each other instead of proclaiming truths.

How can doubters or attempts at manipulation be dealt with? Sebastian Herrmann, science editor at the Süddeutsche Zeitung, advised in a guest article for klimafakten.de that you could, for example, ask what sources are being quoted, or why a source is believed to be credible or not. In most cases, however, it's not about facts but feelings, values and attitudes. Nevertheless, listening and asking questions is more helpful than arguing or saying: 'What on earth...?' (Herrmann on klimafakten.de).

3

At the THIRD STATION

with the scientific diagrams on sea level rise and the depiction of a fortune teller looking into a crystal ball, the initial reaction was confusion. Only slowly did an exchange of opinions on various topics develop, e.g. that the role of science has changed, and that science is not and can never be value-free. Scientists also have a job to do. They shouldn't pretend to know everything but clearly state knowledge gaps: rather than make them vulnerable, this will make them more credible. The scientific approach should be made more transparent so that knowledge can be readily set apart from projections (looks into the future based on assumptions). Graphs are only one way of communicating forecasts; everyday images or stories are far more accessible to a wider audience.

But how much complexity is needed to describe something correctly? And how simple does an issue need to be for it to be communicated successfully? This is a balancing act for scientists when engaging with the general public. Science needs interpreters in society, possibly drawing on the social sciences and humanities for guidance. Citizens also have to play their part by honing their understanding of complexity. One way of doing so is to introduce science at an early stage through experiments, e.g. at school; another is to integrate relevant topics, methods and options for action into educational contexts at an early stage. Anyone who has forgotten what exponentials or logarithms are, or how to read statistics, may benefit from an adult education course.

Conclusion

Overall, the 'stations of a journey' concept works if it is embraced by the participants and if selected topics are presented for discussion. Less is more. It is very important to allow enough time, both for the stations themselves and the final group discussion. In our case, the final discussion ended somewhat abruptly because we ran out of time. We were left with a key incentive for translating knowledge into motivation for action: "It's not the climate we have to save – it's ourselves." ■



FURTHER READING

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WORKSHOP 5

Values and norms in climate protection

MODERATION: Anke Wessels, supported by Sarah Rabe

“Which values act as enablers of climate protection, and which are barriers?”

Societal values guide our actions, influence our political views, and shape our resource consumption. The climate debate also needs to address values and the social norms derived from them, as they can act as enablers or obstacles to climate protection. Here, we practise their application in a debating club.

Topic and goal

Climate change is largely a man-made phenomenon. Accordingly, that's precisely where climate protection needs to start: with people and their behaviour. In order to analyse and influence behaviour, societal values and norms need to be considered, as they (often subconsciously) inform our practices and actions. But what exactly are values and norms, and how can we use them to support climate protection?

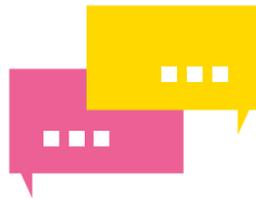


Here we refer to **values** as the fundamental moral guidelines applied by each individual. These values arise and are employed within social groups, which is why they are often referred to as societal or 'social values'. They can also be described as the guiding principles that in a way determine our behaviour – in combination with our experiences, social norms and the resources available to us. Values influence our political convictions, career choices, and resource consumption; they also guide our social and ecological thinking and action, with access to information and knowledge only playing a secondary role (Barr, 2003). Value orientations are not static, but dynamically shift and change, as a result of e.g. social changes, crises or technological advancements. However, this is a slow process that is difficult to identify and monitor, as it is dependent on powerful external influences among other things. Focusing on values that promote solidarity can play an important role in moving the individual to commit to and actively pursue more climate protection.



Social norms, such as prohibitions, laws, customs and traditions, are derived from our values and serve to guide our social actions in the community. Social norms can play a major role in climate protection, as they can be supportive or obstructive, depending on which actions are recognised and approved in society. If climate-protecting behaviour is seen as a social norm based on individual values, this can, for example, increase the acceptance of political regulations and measures for climate protection.

Against this background, a methodology was chosen that not only illustrates the nature of values, social norms, and their role as enablers or blockers of climate protection. It was also selected in order to allow people to consciously use various values and norms in decision-making settings. Before examining values and how they influence individual actions through the norms associated with them, it is important to critically reflect on one's own position. Recourse to one's own values can make it easier to convincingly defend that position in the event of conflicting interests (Gädeke, 2019).



Workshop method

THE DEBATING CLUB METHOD

The debating club method is well suited for this dual purpose. Based on the model of parliamentary debates, the aim of this method consists in exchanging points of view and winning a jury over to your position by presenting logical and clearly articulated arguments. The aim is to emerge from the debate as the winner, since there can be no compromise. The method allows users to hone their mental, contextual, social, cultural and emotional skills such as critical thinking, rational decision-making, structured argumentation, listening and thinking, as well as taking on a perspective contradictory to one's own (Gädeke, 2019).

A mini-debate with simplified rules was chosen for the specific klimafit workshop setting. The debating club began with a 10-minute presentation on the issues of values and norms, which explained the terms and placed them in the context of individual and social climate protection behaviour. A group discussion followed, which served to identify and sort the various values and associated social norms on a large pin board. Based on an initial exchange of views between the participants, this reflection created a common understanding of how and why values and norms can help or hinder climate protection. The actual mini-debate was carried out in the typical debating format and followed the group discussion.



MATERIALS USED

Introductory presentation on values and norms

- Laptop, projector, screen

Group discussion

- Moderation cards in two different shapes for collecting values (ovals) and associated standards (squares)
- Felt-tip pens
- Large pin board/wall
- Adhesive tape, pins, etc. for attaching the moderation cards to flipchart paper

Debating club method

- Flipchart and paper on which the topic of the debate and the order of the speakers are recorded for orientation purposes
- Slips of paper indicating the participants' roles, incl. bag for drawing them from
- Felt-tip pens for the teams to write down values and norms to be used as arguments on moderation cards, which are affixed to flipchart paper with adhesive tape or similar.
- Stopwatch to limit speaking time (3 min)

TYPICAL SCHEDULE

THEMATIC INTRODUCTION

Round of introduction and value positioning

The participants introduce themselves and position themselves in relation to one or more values that are personally important to them.

10 min.

Introductory presentation

Introductory presentation on values and norms, in which the terms are explained and placed in the context of climate-protective behaviour.

5 min.

Group discussion

Group discussion on values as enablers or obstacles to climate protection and joint identification of social norms. These norms are then identified and sorted on a large pin board.

10 min.

DEBATING CLUB METHOD

Presentation of the method and question

Presentation of the topic to be debated and how the debate is organised. The topic of the debate must be formulated as a question that can be answered with a yes or no.

10 min.

Role assignment by random drawing

Ideally, the group consists of nine people to whom roles are allocated randomly: a chairperson, two jurors, and three speakers each for the pro and contra teams. Each of the two teams has an opening speaker, a supplementary speaker and a closing speaker.

5 min.

Preparing for the debate

Each team is given 15 minutes to prepare for the debate. They should define their starting position, anticipate the opposition, choose suitable arguments to defend their own position based on appropriate values and norms, and select, sort and formulate the arguments. The pin board with the values and standards identified can serve as support.

15 min.

Conducting the debate

The debate is opened by the chairperson, who calls out the individual speakers. The opening speaker on the pro side begins with a 3-minute statement, followed by the contra side's opening speaker. The sides then take turns. The speakers should attempt to not only present their own arguments, but also respond to what the other side has said. When the final speaker has finished, the chairperson closes the debate with a call for the speakers to shake hands.

25 min.

Pro team

Contra team



Evaluation and feedback

The jurors' vote is based on the persuasiveness of the arguments presented. They give feedback to the teams on individual members' input and the performance of the team as a whole. They also discuss the arguments, values and norms used.

10 min.

(Adapted from Gädeke, 2019)

90 min. total time

Assessment and reflection

The workshop was attended by eight people. The group was composed of scientists and practitioners, with diverse social backgrounds ranging from Porsche enthusiasts to an active member of *Extinction Rebellion*.

Group discussion

The initial discussion revolved around the question of values and social norms that support or hinder climate protection. The group's enthusiastic participation resulted in an extensive list of values, each of which was then linked to a social norm that either enables or hinders climate protection. It soon became clear that many values can function in both roles. Significantly more values were collected that support climate protection. 'Social justice' was found to be a controversial value. Although it was predominantly seen as hindering climate protection, the group also argued that climate protection should not disadvantage anyone and that it can ultimately lead to greater social justice. To get the group discussion going, it is advisable to have some values already described on cards and introduce them into the discussion. The members of the group can then use them as a starting point for their discussion.



Value as an enabler	Associated social norm
Sense of responsibility	We are responsible for our thoughts and actions, and for their global consequences.
Democracy	We can find and support acceptable compromises. We can create a negotiation process that leads to acceptance.
Courage	Change can be achieved if everyone is willing to try out a few new things.
Social acceptance	We want to behave in order to 'belong'.
Peace	With appropriate behaviour, we can all live well and in peace.
Unity with nature	We can only protect the climate if we live in harmony with nature.
Self-respect	Individual behaviour contributes to climate protection.
Health	Fresh air and exercise in everyday life contribute to a healthy life.
Creativity	Everyone shares responsibility for their own health and for environmental health.
Openness	We can find alternative, climate-protective solutions and try them out.
Sense of belonging	Together we can achieve more than alone. We can create spaces for encounters and dialogue.
National security	Through climate protection, we can preserve the natural foundations of life for all and secure them sustainably. Renewable energies are peace technologies.
Social justice	We won't allow the consequences of climate change to be borne by less privileged social classes/poorer countries alone.
Face-saving	I want to be able to tell my children that I did everything I could to protect the climate.
Wisdom	Recognising the impact of our actions is key.
Family security	We can secure the foundations of life for future generations.
Enjoying life	An enjoyable life is only possible in a healthy natural environment.
Independence	We must become independent of fossil fuels.



SUMMARY OF RESULTS

Value as an obstacle	Associated social norm
Self-discipline	It takes a lot of effort to protect the climate.
Freedom	Your freedom ends where my freedom begins. Individual freedom does not justify curtailing the freedom of others.
Ambition	Our individual ambition disregards the common good. The common good is a barrier to my individual ambition.
Social justice	Climate protection should not disadvantage anyone.
Influence	I want to keep my power and not lose it through reforms.
Respect for tradition	We have always done things this way.
Wealth	I have earned my privileges and my behaviour.
Moderate views	Climate activists are radical proselytisers.
Enjoying life	I only have one life and I don't want to give anything up.
Independence	I make my own decisions & don't let anyone tell me what to do.

Compilation of the formulated values and associated social norms that can act as enablers or obstacles to climate protection.

Selected debate topic

The topic of the debate was “The use of fossil fuels in times of climate change is immoral”. The number of participants was well suited to a mini-debate and allowed three speakers from each team to debate each other. The moderator acted as the chairperson and, together with the minutes-taker, also as the jury. The division into pro and con teams was done by random drawing.

After the preparatory phase, the debate began with a statement by the opening speaker from the pro team, who employed a facts-based argument about the disadvantages of fossil fuels. Her arguments in support of climate-smart behaviour revolved around the values of justice and responsibility towards future generations, as well as unity with nature. The opening speaker of the contra team began with a ‘curve ball’, arguing that fossil fuels were a tradition and should therefore be seen as part of our sense of home. Further, they supported regional value creation and, due to the available expertise, stood for efficiency and stability.

The second speaker from the pro team replied that only a decentralised energy system based on renewable energies could offer energy security. The second speaker from the contra team also referred to the value of social justice but argued that not everyone would be able to afford the energy transition, with potentially negative impacts on social cohesion. The long service life of coal-fired power plants also represented a form of security, and nature and species were preserved by not using scarce resources such as rare earths, in contrast to wind power for example.

The final speaker from the pro team concluded with a reference to courage, arguing that everyone could join in; they just needed to have the courage. They also appealed to our sense of belonging: we are all part of a global community. In turn, the final speaker from the contra team cited the broad acceptance of and familiarity with fossil fuels, which they claimed also took up less space (than e.g. wind turbines).

Conclusion

The mini-debate was varied, engaging and humorous, thanks in part to the acting skills of some of the speakers. The final vote on who had won was called off, as there was no jury and the moderator also acted as a chairperson. In the subsequent reflection on the values and norms put forward by the teams, it was surprising to see that the arguments of the contra side ultimately won out. The sober, fact-based arguments of the pro side were seen as being less convincing compared to the emotional arguments skilfully presented by the contra side.

It became clear that positive narratives based on good past experiences would be particularly effective and convincing, and that the arguments chosen and how they were presented were just as important as the target group, which always has its own set of values. Well-presented arguments can be very persuasive, even if they don’t sit well with one’s own convictions at first. In order to stay in dialogue, it is important to be open to values one might initially consider less relevant.

Despite some initial scepticism, the method was very well received by the participants. Everyone enjoyed the preparation, debate and dialogue, especially because of the surprising effects. It was particularly beneficial to approach the topic of climate protection from the perspective of values rather than facts. ■



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WORKSHOP 6

Experiencing nature, understanding climate change

TEXT: Martin Döring MODERATION: Theresa Karkow and Astrid Paschkowski

“Is climate change disrupting
the environment and
where can we see this?”

We can already observe reactions to climate change in some animal and plant species: Migratory birds are no longer flying south or are returning earlier, animals are waking up earlier from hibernation, trees are suffering from extreme drought, and non-native animal and plant species are spreading northwards. A climate walk in the vicinity of the conference venue is an opportunity to use all our senses to search for clues in the environment. We will listen to what animals and plants are ‘telling’ us about climate change and discuss what conclusions we can draw for climate protection.

Topic and goal

Climate change represents a challenge for society as a whole. One of the biggest tasks consists in communicating it, as for many people, the climate and climate change are abstract concepts. The term ‘climate’ covers a time span of more than 30 years and is determined as a statistical mean value from atmospheric measurement data. Consequently, the temporality of climate change is virtually impossible to experience with human senses, even though people all over the world are constantly trying to find signs of climate change in their daily lives, in the here and now.

Certain aspects, such as the premature flowering of plants, more frequent extreme weather, changing patterns of bird migration, and the loss of seasonality indicate that something is changing. Scientists are always cautious when interpreting such phenomena or so-called indications of climate change, as in many cases there is still no clear scientific evidence for a climate-related explanation. It has not been proven, for example, that the increasingly frequent observations of robins staying for the winter in Western Europe can be directly attributed to climate change. Nevertheless, science now agrees with some of the socially perceived changes and acknowledges that something is shifting in the environment and materialising in various ways as a result of climate change.

This is where the *climate walk* comes in. It takes people who don’t normally spend much time outdoors into the urban environment. Cities offer many opportunities to explore ‘urban nature’, which can be parks, green spaces or urban gardens. The idea is to spend time outdoors as a group and to jointly explore urban nature with all your senses. The *climate walk* method is similar to a school field trip in that it’s all about physical movement, experiencing and sensing things together, and sharing those experiences. At its core, it’s a joint physical experience at a specific place, where mind and body form a unit to absorb impressions through the channels of perception: sight, sound, touch, taste and smell.

In this comprehensive way, climate change can be stripped of its abstract character and sensually experienced, localised and understood in the participants’ living environments. The approach avoids being too schematic, cognitive and formal, as many educational programmes on climate change unfortunately are. By its very nature, the walk particularly facilitates active, intuitive and independent discovery. Rather than seeing people as empty minds that have to be filled with content extracted from the surrounding environment, it sensitises them for holistic immersion and learning about climate change within their life-worlds.

Walking has recently experienced – think about COVID-19 – a revival, which has made exploratory city walks or forays into nature more attractive, although they are usually seen as leisure and a break from the worries of everyday life. Fun and enjoyment are often seen as contradictory to the difficult topic of climate change, but that’s not necessarily the case. A *climate walk* can certainly be used to actively experience and positively learn about climate change. As it gets participants connected to places through their bodies and senses – instead of referring to abstract spaces – it also holds the potential to develop very ‘down-to-earth’ ideas and measures to achieve climate protection.



Beyond these considerations, the *climate walk* offers a variety of didactic, theoretical, practical and place-based opportunities to experience and learn about climate change in the immediate living environment. As such, it can help to embed the problem of climate change in the ‘head, heart and body’, as the participants tread a ‘shared path’ during the culturally established practice of going for a walk.



Workshop method

THE CLIMATE WALK METHOD

A *climate walk* can focus on various natural phenomena. The topics will depend on the chosen route, which will be selected to include certain ‘places of experience’, while the route will also depend on the participants’ mobility. As an experiential, perceptual and interaction-oriented method, the primary aim is to allow participants to individually and collectively experience nature through the lens of climate. (Urban) nature is bodily encountered and apprehended with all five senses in order to connect with it in different ways.

TYPICAL AGENDA

Mindfulness exercise at the beginning

20 min. 

The *climate walk* begins with a mindfulness exercise, in which we concentrate on ourselves and the group while standing in a circle with our eyes closed. After performing a ‘mental scan’ of our own body, intended to calm and focus us, we turn our attention to our four other senses with our eyes still closed. The exclusion of visual perception is deliberate at this point, as our culture is primarily visual and we need to activate the remaining four senses for and during the *climate walk*. Participants are asked to pay attention to their environment, its sounds, tastes and smells, and to discuss these sensory impressions in the group. This round is supplemented by the tactile exploration of tree bark and leaves. At the end of the sensory exploration, the participants can open their eyes again and calmly come back to the starting point, now with all senses activated.



Sensory exploration of the urban environment

In the second part of the *climate walk*, a predetermined route is explored together. Such a walk can be organised to fit any time budget. In our case, we set off from the Tagungswerk Berlin in the direction of a meadow by the Landwehr Canal. Participants were asked to focus on sensory aspects throughout and to be conscious of their sensory impressions; if they wished, they could share them and their moods and impressions with other participants.

 30 min.

Arriving at the destination and sharing impressions

Upon arriving at the Landwehr Canal in Berlin, the first question was: “What has changed in terms of temperature, smell, sounds and your own mood since you arrived in this green space?”. After discussing the sensory experiences and moods that arose during the transfer, this part of the *climate walk* was concluded with a short presentation on the history of the Landwehr Canal.

 10 min.



Sensory exploration of the destination, as well as historical and biological exploration with the help of question games

The third part of the *climate walk* began with a short ‘treasure hunt’ in the park. The aim was to explore the site by wandering around the meadow and the neighbouring areas of the park in a freeform manner. Sensitised by the previous exercises and armed with the historical knowledge of the Landwehr Canal, the aim was for the participants to become aware of the park’s various tangible and intangible dimensions.

 50 min.

In addition to sound, colour and smell, an attempt was made to get closer to the flora and fauna of the park. As with the previous exercises, an emphasis was placed on sensations and feelings so that the group could fully engage with their environment in all its dimensions. The game “Who am I?” began with the instructors pinning an animal symbol to the back of each participant’s jacket, representing an animal that lives in the park. Each participant was then asked to find out which animal they represented by asking the group questions. This required curiosity and eagerness to learn. The exercise also promoted empathy with the animals and introduced the participants to their immediate environment in an emotional, sensitive and spatial way.

Impact of climate change on animal species and considerations on climate protection efforts by humans

20 min. 

In the next exercise, each participant looked for a comfortable place to sit, e.g. under a tree, by the river, or on the grass. They were asked to consider “What does it mean to be my animal here in this place?” and “What is changing for me as my animal as a result of climate change?”. The exercise was aimed to promote connection with the living environment and also move participants beyond the anthropocentric perspective by relating climate change and its possible effects to the flora and fauna of the park. Self-observation was followed by a group discussion where all participants shared their animal-specific climate experiences. Questions such as: “How did I feel personally?”, “What went through my mind as an animal in relation to climate change?” and “What did I feel, see and think as my animal in the context of climate change?” structured the discussion. After the discussion, the participants went back to the starting point.

Return to the starting point and creating a ‘tree of reflection’

50 min. 

At the end, the group once again gathered around a prepared table. Here, cards and pens were available for everyone to write down any ideas, thoughts and feelings that arose during the walk or in the joint discussion. They revolved around the questions: “How can we sensitise other people to the effects of climate change on animals and plants?”, “How can I support animals and plants in times of climate change?” and “To what extent are my perceptions of nature and climate change connected?”. Participants were free to answer just one or several questions, and to combine different perceptions and opportunities to act. Finally, a tree of reflection was created by attaching the cards to the branches and summarising them in a final presentation.

3 hours total time 



NOTE

The *climate walk* does not require any special settings or preparations, as pockets of nature can be found in any city. Potential mobility restrictions need to be clarified in advance so that the route and length of the walk can be adapted accordingly.



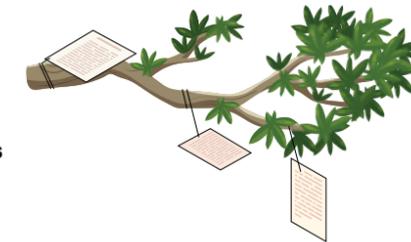
MATERIALS USED

Walk

- **Weatherproof clothing and footwear**
- **Tree bark** / leaves to touch
- **Cushions** to sit on

At the starting point

- **Tables**
- **Cards, pens, hole punches, strings**
- **Branch for the tree of reflection**



FURTHER READING

WWF-Handbuch „Natur verbindet“

www.wwf.de/natur-verbundet

WWF-Naturentdecker-Sets

www.wwf.de/naturentdecker

Essl, F. und Rabitsch, W. (2013):

Biodiversität und Klimawandel - Auswirkungen und Handlungsoptionen für den Naturschutz in Mitteleuropa. Springer: Heidelberg.

Fischer, F. und Oberhansberg, H. (2020):

Was hat die Mücke je für uns getan? Endlich verstehen, was biologische Vielfalt für unser Leben bedeutet. Ökom Verlag: München.

Results and reflection

The participants found the *climate walk* very exciting, eventful and varied. Many were also surprised by their discoveries and feelings during self-observation and emphasised that the sensory and emotional aspects they experienced were beneficial for them. Taking on the perspective of an animal or a plant in times of climate change was perceived as particularly motivating, as illustrated by two quotes: “The walk made me realise how many animal and plant species are at the mercy of climate change” and “I feel quite helpless in the face of climate change and would like to be able to do more or take action against it”.

Sufficient time should be allocated to such a walk, so that all parts and tasks can be completed without rushing. Enough time should be dedicated to self-observation and connecting with emotions and sensations on site. It may also make sense to complete the results cards for the tree of reflection while still on location in the talking circle. This ensures that all thoughts and reflections are recorded, even if some participants have to leave the walk early due to time constraints.

Conclusion

Overall, the *climate walk* offers an innovative methodological approach: instead of thinking about climate change, it offers participants the opportunity to explore and experience it with their senses – which is another way for people to take their first steps toward climate protection. ■





The klimafit team
(from left to right): Kerstin Schneider, Prof Beate Ratter, Dr Martin Döring, Marietta Weigelt, Dr Klaus Grosfeld, Dr Renate Treffeisen, Eva Kirschenmann, Bettina Münch-Epple, Nadja Kulikowa and Cindy Haist.



Dr Martin Döring (UHH / REKLIM) and **Prof Beate Ratter** (UHH / REKLIM) present the six workshops including their rationale, content and goals to the audience.



6

Participants on the climate walk with Theresa Karkow (WWF) and Astrid Paschkowski (WWF), followed by a presentation of the results.



Opening of the symposium
(from left to right): Prof Peter Braesicke (KIT, scientific coordinator REKLIM), Bettina Münch-Epple (formerly WWF), Prof Dr med. Dr h.c. mult. Otmar D. Wiestler (President of the Helmholtz Association).



Info-Board



Category	Value 1	Value 2	Value 3	Value 4	Value 5
Item 1	100	150	200	180	120
Item 2	120	180	220	200	140
Item 3	140	200	240	220	160
Item 4	160	220	260	240	180
Item 5	180	240	280	260	200



Planung Integrierter Schienen - Spätstunde

1. Welche der fünf Hauptknoten sind die besten, um den Schienenverkehr zu integrieren? Begründen Sie Ihre Entscheidung.
2. Welche der fünf Hauptknoten sind die besten, um den Schienenverkehr zu integrieren? Begründen Sie Ihre Entscheidung.
3. Welche der fünf Hauptknoten sind die besten, um den Schienenverkehr zu integrieren? Begründen Sie Ihre Entscheidung.
4. Welche der fünf Hauptknoten sind die besten, um den Schienenverkehr zu integrieren? Begründen Sie Ihre Entscheidung.
5. Welche der fünf Hauptknoten sind die besten, um den Schienenverkehr zu integrieren? Begründen Sie Ihre Entscheidung.

Wir planen ein integriertes Schienennetz. In jedem Knoten werden die folgenden Informationen angegeben: Die Anzahl der Schienenverbindungen, die Anzahl der Schienenverbindungen, die Anzahl der Schienenverbindungen, die Anzahl der Schienenverbindungen, die Anzahl der Schienenverbindungen.



Workshop 3: Design of the information board with all important information for participants.

3



Intense discussions during the rounds of the 'BLACK SWAN' simulation game (workshop 3).



5



Workshop 5: Values and norms in climate protection: The pro team and con team during the intensive preparation for the mini-debate.



Workshop 1: In a joint dialogue, participants articulate and discuss climate change as a shared experience.

1





Dr Klaus Grosfeld
(AWI / REKLIM) and
Dr Renate Treffeisen
(AWI / REKLIM) have
been involved with
klimafit since the
very beginning.

Stationenreise

1. Die Informationsflut bewältigen
2. Kommunikation ist eine Kunst
3. Prognosen, Projektionen oder Hellsehen?

> Materialien zum Vertraut machen
 > Laufzettel mit Fragen & Aufgaben pro Person
 > Wandzeitung zur Dokumentation der Diskussion
 > Postkarten zum Gedanken-Notieren

1. Die Informationsflut bewältigen
Strategien: Selektion, Auswahl
Hilfen: Auswahl
Notizen, Wandzeitung
2. Kommunikation ist eine Kunst
Mehr Austausch über die Disziplin. Schreiben
gegenseitig sind die Chancen der Vermittlung geben
Man kann nicht mit kommunizieren
3. Prognosen ≠ Projektionen ≠ Hellsehen
in den Diskurs gehen
nicht Allwirksamkeit suggerieren
Wissen binden ansprechen

4

Workshop 2: The idea generator
in use during the symposium.
The two projects developed
demonstrated the
participants' creativity and
extensive knowledge.

2

UNTERGRUND
- DURFTE SICH BAR TUNEN

Ideatoren: Stadt, Helmholtz,
Stiftungen, Politik

Zielgruppe: ALLE BERLINER*INNEN
DIE DEN ÖPNV NUTZEN

Botschaft: Sinkender Grundwasser-
spiegel
- Dürre
- Tiere
BILDUNG

Sprecher*in: MEIKE

Mein Klimawandel
- Wasserstandlinie, & intensiver Raum
z.B. in 150 Jahren

Ideatoren: Emilia, Carla,
Noemi, Louisa
temporärer Think Tank

Zielgruppe:
• städtische Bevölkerung
• Tourist*innen z.B. in
Bremerhaven

Botschaft:
• Sichtbarmachung der
eigenen Problembetroffenheit

Umsetzung:
• Wasserstandlinie führt zum
interaktiven Raum
↳ Projektionen und Handlungsempfehlungen (Video & Foto)
Sprecher*in: Louisa

Workshop 4:
Station trip schedule
in the workshop.



Participants go
through three stations
before discussing their
findings as a group.



Climate change as a cultural task

Martin Döring and Beate Ratter

Working together, even if we don't know how

As the previous sections have shown, **climate change** is a cultural challenge; as such, it cannot be addressed by engineering solutions alone, but should also include a social and cultural perspective. Climate change has become woven into the fabric of everyday life and its relationships and processes, in ways that go far beyond scientific evidence alone. It has also begun to structure our everyday lives and experiences. As a socially contested issue, it causes substantial controversy, disagreement, resentment, discomfort and frustration when it comes to everyday action. This is precisely where our research project *“From climate knowledge to climate action: On the development of regional communities of action against climate change”* came into play. It showed that, despite the many difficulties that climate change means for individuals and social groups, there was also much goodwill and potential among

the participants of the klimafit courses to do something about it in terms of climate protection. They were willing to deal with climate change in a productive and action-oriented way. As one participant in Hamburg said: “Let’s stop talking and start doing something on whatever level and with whomever”.

This was taken as a starting point to elaborate a didactic concept that focused on practical action and implementation. The effectiveness of this approach in a particular learning context was demonstrated. However, there is also a limitation, as it is still unclear how action against climate change can be sustainably embedded in society beyond the context of the klimafit course.

This last aspect was the starting point for the symposium and this handbook. We came to the conclusion that climate change, and therefore also climate protection, are socio-cultural phenomena. As such, they cannot be understood or changed by exclusively relying on factual learning or rational arguments; something more is needed to instigate change. After all, the various dimensions of climate change are deeply connected to individual sensibilities, everyday lives, localities and identities.

It became clear to us that climate change, climate protection and climate change adaptation are cultural processes that genuinely require a joint effort. ‘Climate cultures’ need to be a particular focus in this context, as they are where the ‘levers’ for combating climate change and for collectively advancing climate protection are to be found.

The concepts developed for the individual workshops have a clear and substantive focus. Their starting points are climate histories and futures, language, social values, dealing with uncertainty, disaster management, or simply the spatial experience of climate change. As such, they go beyond the intention of factual education, recognising that evidence-based climate communication is not the be-all and end-all, and that further dimensions need to be explored and considered.

We focused on climate change as a shared cultural task and tested the applied potential of the various workshops in that particular context. The highly positive feedback we received showed that this approach was not only perceived as useful by us, but also by the participants.

In this respect, the workshops can be seen as an effort to broaden our climate culture and to use it for climate protection. We are fully aware of the workshop’s limitations; nonetheless, we

hope that the presentations and results outlined here will motivate others to organise similar events and to test, develop and adapt the approaches to other contexts.

After all, climate change is a physical reality we cannot argue with. We can, however, argue with those who embody and actively live out opposing climate cultures. Climate protection and climate change adaptation both start in the community and the individuals that make it up. Sustained activation based on community processes can lead to new routines that allow us to successfully navigate climate change. Reassuring ourselves that action can be effective means we are more likely to believe it’s worth making a collective effort and getting ourselves ‘climate-fit’. “Even the longest journey begins with a first step” (Chinese proverb). ■



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klimafit originated as a pilot project in southwestern Germany. From 2017 on, it grew into a **national lighthouse project for adult education research**, with implementation planned at 170 adult education centres (community colleges) throughout Germany in 2024. This was only possible with the support of committed people and funding organisations who recognised the essential, transformative contribution the project could make to regional and local climate protection. **Our particular thanks go to the Robert Bosch Foundation and the Klaus Tschira Foundation** for providing the necessary financial support for the initial phase of klimafit from 2017 to 2021. Without this initial funding, klimafit would never have evolved from an idea into a nationwide project.

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A pdf version of the handbook is available for download at www.reklim.de



Certified excellence!

On 8 November 2023 the klimafit project was awarded the prestigious National Award – Education for Sustainable Development (ESD) by the Federal Ministry for Education and Research and the German UNESCO commission (www.bne-portal.de).

The National Award – Education for Sustainable Development honours organisations, networks and municipalities that work towards a sustainable, liveable society as part of the UNESCO programme “ESD for 2030”. The programme focuses on innovative forms of learning and teaching that show how sustainability can be embedded in the German educational landscape. The award honours projects that enable people to actively and responsibly shape a sustainable future.

ESD for 2030 stands for “education for sustainable development: implementing the sustainable development goals”. **Sustainable development ensures human dignity and equal opportunities for all in a healthy environment.** In turn, education is a central element of sustainable development: it enables people to make future-oriented decisions, and to understand how their own actions will affect future generations or life in other parts of the world. klimafit is an exemplary case of implementing these objectives.



SYMPOSIUM

“Tackling climate change”

Climate protection and climate-friendly lifestyle changes don't happen by themselves. Especially their social and cultural dimensions continue to pose a major challenge for policymakers, administrators, and society in general. Activating educational programmes play an important role here in providing the knowledge base about what climate change is and what everyone can do about it. At the symposium “Tackling climate change”, climate work was brought to life in six thematic workshops, and ways of demonstrating the practical dimensions of climate knowledge were tested.

www.klimafit-kurs.de