



Overcoming Communication Challenges

How to Successfully Communicate Climate Change Adaptation

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Period

Delivery date

13 March 2013

Status

Final version

Distribution level

Public



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1 Introduction

This report is part of WP5 of the C3-Alps project, Action 5.2 Developing strategies for overcoming specific challenges and problems related to the communication of climate change and adaptation issues. The main objective of this action is to give the project partners guidance how to tackle the specific communication challenges related to climate change adaptation (CCA).

How to read this report: In Chapter 3, you find some general aspects of CC communication. Chapter 4 presents the eight main challenges of communicating climate change adaptation. In chapter 5, the authors describe the seven key success factors to overcome these challenges. A short checklist of the eight main challenges and the seven key success factors to overcome these challenges is given in a table in Chapter 2.

EXAMPLES OR FURTHER READING

Examples or advice for further reading are marked with a frame.

Results from the 2012 online survey among local administrations and regional/national administrations are shaded in grey.



2 Checklist

The following checklist is an approach to match challenges regarding climate change communicating with success factors for communicating climate change. This checklist serves as a quick overview and a brief summary of the following chapters of this guideline on **‘How to successfully communicate climate change’**.

All success factors mentioned in this guideline are relevant for successfully communicating climate change, nonetheless some factors as *‘5.1 Choose the right message’* or *‘5.2 Orientate the communication on the dialogue group’* will be mentioned more often in the following checklist, as they are constant and overall companions when developing and communicating climate change.¹

This compilation is based on results from the project CcTalk! (financed by Climate- and Energyfonds) as presented in the report by Wirth & Prutsch, 2013.

Challenges	Chapters helping to overcome these challenges	Page No.
1. Uncertainties	5.2.3 Make use of established networks and groups*	16
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	5.3.1 Use adequate language and the right arguments	16
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¹ The challenge ‘Research gap in climate change communication’ is not mentioned in the checklist, as it is not the aim of this guideline to overcome this challenge.

* Wirth & Prutsch 2013

		17
3. Scepticism	5.2.2 Make use of ambassadors and well-known and respected spokespeople among the dialogue group*	15
	5.2.3 Make use of established networks and groups*	16
	5.2.4 Make use of local knowledge*, existing values and standards (e.g. sustainability, social responsibility)	16
	5.3.3 Set climate change in a relation to everyday life*	18
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	5.3.2 Death by Data? Provide the appropriate level of information	15
	5.3.3 Set climate change in a relation to everyday life*	16
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5. The Problem lies in the future	5.3.2 Death by Data? Provide the appropriate level of information	16
	5.3.3 Set climate change in a relation to everyday life*	18
6. Climate change adaptation is not the highest political priority	5.2.2 Make use of ambassadors and well-known and respected spokespeople among the dialogue group*	15
	5.3.4 Suggest solutions, give good examples and refer to existing activities*	19
	5.6 Use suitable formats* and communication channels	22
7. Climate change bears no reference to everyday life	5.2.3 Make use of established networks and groups*	16
	5.2.4 Make use of local knowledge*, existing values and standards (e.g. sustainability, social responsibility)	16
	5.3.3 Set climate change in a relation to everyday life*	18
	5.5.1 Make use of pictures, visualisations and virtual realities*	23

* Wirth & Prutsch 2013

3 Climate change communication

In order to identify success factors for communicating climate change, it is important to be aware of the challenges that might occur and which could lead to a failure of communication. Based around the findings within CcTalk! and further relevant research, the following ‘challenges to overcome’ have been identified:

“Effective’ climate change communication can be defined as any form of public engagement that actually facilitates an intended behavioural, organizational, political and other social change consistent with identified mitigation or adaptation goals’ (Moser 2006: 3)

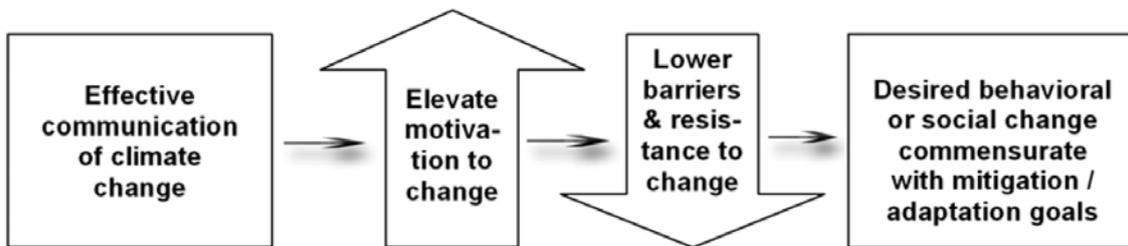


Figure 1: (Moser 2006: 4) – The basic challenge of effective climate change communication

The climate scientist Susanne C. Moser describes preceding communication on climate change as a ‘a match between ‘duelling experts’ (Moser 2010: 32), as mainly technical experts were the communicators of climate change. In the past, the scientific consensus on the severity of climate change as well as public awareness has not been as high as today. It is also not only scientists and technical experts any more, who are the communicators of climate change. Communication on climate change has also discovered, that the mass media is no longer the most suitable communication instrument to implement change, raise awareness or reach a certain dialogue group. (Moser 2010: 32)

Simply informing and educating about climate change, as communication has focused on in the past, is no longer sufficient. Previously, communication research has suggested, that informing and educating individuals leads to action. However, this has been proven false. Recent research has shown, that the so-called attitude – behaviour gap shows a distinct break between individual’s concern about climate change and the actual level of relevant behaviour. (Moser 2010: 38, Corner 2009: 1)

So even if concern has been raised through providing primarily information, communication on climate change has to become more effective and not just informative and educative. In order to induce behavioural and societal change in favour of sustainable behaviour and adaptation, communication is an essential tool.

Within the project CcTalk! (‘Communicating climate change adaptation: effective approaches for Austria’), initiated by the Austrian Environment Agency and published in 2013, existing challenges of climate change communication have been identified. On the basis of these findings, related success factors on how to overcome these challenges will be presented in the present report.

These success factors will be oriented on the following requirements for fruitful communication: Content, Dialogue Groups², Emotions, Formats, Evaluation. (Wirth & Prutsch 2013)

Within this present report, a focus has been put on how to reach two special dialogue groups. For once, local administrations as mayors, members of municipal councils, staff of municipal administration (Dialogue Group 1: DG 1) and regional/national level administration: officers in public administration on national or regional level, officers in public administration on sub-regional level (DG 2). There is evidence, that these DGs have not yet or just partly identified the high importance of the appropriate communication concerning climate change and adaptation issues. Awareness raising concerning the importance of communication as a tool has to be implemented!

→ Ideas on central challenges, tasks and open questions concerning the two dialogue groups have been collected on the 'WP5 Workshop on Target Groups' at Tulbinger Kogel, held 9-11 July 2012. See Annex 1.

² Literature on climate change communication primarily uses the term 'target group' for the prior recipients of the communication. In this guideline, instead of target groups the term dialogue groups (DGs) is used, as it corresponds better for communication in two directions. The term target group represents a one way communication approach, which is not in line with the idea of the C3-Alps project. A DG can also consist of solely one individual recipient.



4 Challenges of communicating climate change adaptation

In order to identify success factors for communicating climate change, it is important to be aware of the challenges that might occur and which could lead to a failure of communication. Based around the findings within CcTalk! and further relevant research, the following 'challenges to overcome' have been identified:

- **Uncertainties***

What is precisely going to happen? Although a wide range of intense studies were conducted, it cannot precisely be determined, what one should adapt to. (WIRTH & PRUTSCH 2013).

- **Information does not necessarily lead to action***

Information might change attitudes and beliefs but not necessarily behaviour. Campaigns and information that aim on changing behaviour should not only focus on the wrong-doing, but include a precise guideline, what to do right. (Corner 2009: 1-2).

- **Scepticism***

A big part of the society is still convinced, that climate change is and will not happen and that the problem is over exaggerated. (Wirth & Prutsch 2013).

- **Global dimension***

Vast effects of climate change are predicted all over the world. Considering the global dimension of these future developments, stakeholders might feel powerless on their own. (Wirth & Prutsch 2013)

- **The Problem lies in the future***

It is not common to adapt to change that is not yet fully visible and does not constitute an immediate threat. (Wirth & Prutsch 2013)

- **Climate change adaptation is not the highest political priority***

Pressure to act concerning adaptation to climate change is not being focused through all political fields. Furthermore, there are several other topics of higher relevance in politics (e.g. economical crisis, health etc.).

- **Climate change bears no reference to everyday life***

Many stakeholders lack experience, what effects climate change has on their normal, everyday life and how adaptation to climate change could actually play a realistic role in their lifestyles.

- **Research gap in climate change communication***

Susanne C. Moser describes, that research on communication on climate change has intensified over the past years, however, research concerning the effectiveness of different communication formats and them implementing action and change is still a sparsely investigated research area. (Moser 2010: 32f)

* Wirth & Prutsch 2013



5 Overcoming communication challenges: Success factors for communicating climate change adaptation

5.1 Choose the right message

'A major problem with most climate messages isn't that people disagree with or misunderstand them, it's that they don't even listen to it' (Futerra 2011: 4)

So the first and overall aim is, to make the message being heard! When choosing suitable communication forms and formats and considering all the following success factors in this guideline, one question will continuously accompany the process: 'What message should we give to people?' (Moser 2010: 39) The message is the direction, the vision of the communication. The success of the message is fully co-dependent on all other success factors as well. Before starting the communication, the purpose of the message should be clear. (Moser 2010: 37-41)

According to Susanne C. Moser, following aspects are to be considered:

- The message has to be internally consistent in all aspects
- Effective messages have to create or make use of existing mental modes
'The distant problem must be brought home; the invisible causes and impacts must be made visible; the inconceivable solutions must be illustrated; perceived and real barriers to action must be shown as something 'people like me' have overcome.' (Moser 2010: 40)
- **Messages are more than the words or information conveyed**
'Messages are accompanied by, and inseparable from, imagery, the tone of voice, and the emotions that are being evoked by pictures, symbols, color schemes, and music.'
- **Messages must keep the audience's attention**
Moser mentions the story of 'Mr W.' as an example of a commercial on wind energy, that achieves keeping up the suspense throughout the video.

(Moser 2010: 39f)

EXAMPLE

→ **The story of Mr. W.** URL: http://www.youtube.com/watch?feature=player_embedded&v=2mTLO2F_ERY

→ **Save Energy Campaign** by the Victorian Government, Canada.

URL: www.youtube.com/watch?v=SCiS5k_uPbQ



- At different stages in the behavior change process, people require different types of motivations and practical information.
- Sustain communication over time and do not convey the same message, regardless of how the audience evolves in its understanding of climate change.

(Moser 2010: 39f)

In the past years, several campaigns on climate change present the issue as a major threat. The demand for a new and fairly positive vision has become very loud. New pictures of the future need to be drawn in the people's heads. (Futerra 2011: 2-10)

Communication has to focus to a higher extent on positive sustainability and adaptation issues (e.g. saving money). Provoking fear might generate behavioural change in some cases, however, only if people feel personally vulnerable and exactly this awareness is not sufficiently spread yet. (Corner 2009: 1)

Chapter 5.5 will elaborate on this concern.

Keep in mind, that self-identification with the problem and the outlook of a self-fulfilling future without having the impression of solely cutting back is an essential part of a successfully communicated message.

*'...it does mean **talking less about 'saving the planet' and more about the things that people care about – their health, their family and their happiness'** (Corner 2009: 1)*

5.2 Orientate the communication on the dialouge group

"An individual comprises numerous roles and identities, each of which has its own set of goals." (CRED 2009: 31)

The foremost important step is to identify, determine and comprehend the recipients of the message, namely the dialogue groups. Communication can only be successful, if it is adequately adapted to the recipient(s). This is of high significance, as not only the awareness on climate change within the dialogue group should be raised, nonetheless commitment of the dialogue group should be achieved, so eventually, the dialogue group will take over responsibility, act and implement change.

Different dialogue groups require a different use of language, metaphors, pictures formats etc., as their level of knowledge or concern for the topic are different ones. At first, it is important to **identify the potential dialogue group** and analyse the different identities and goals its members have. The different identities might be conflicting with each other (e.g. working for the marketing of a car company, household member, greenpeace member). This conflict is solved, as an individual choses the most adequate identity when making certain decision. The messenger has to analyse the different identities and identify the most relevant one(s) for the desired communicational aims. (CRED 2009: 31f)

An example on how to approach an understanding of a dialogue group is the mentioned survey conducted within the C3-Alps project. The results of the online survey were collected in the period 16 August – 10 November 2012. The survey was composed of 13 close-ended questions and the last question for leaving comments. Some of the questions also had an option to leave additional information/comments.

The survey was conducted in 5 different languages and altogether 358 results were collected. The analysis has been done based on the participants' profession/employment. The results of this survey regarding the mentioned dialogue groups 1 and 2 provide input on several details about the dialogue group, which is important to know for developing a communication strategy.



FURTHER READING

- Further reading on how to identify communication target groups: Archesso, Barbara; Brusegan, Elisa; Pasutto, Isabella; Brusegan, Lucia: C3 – WP3 – Act 3.1 – Project Communication Strategy. 28.9.2012.
- SURVEY 2012: C3 Alps. WP5, Action 5.1, External survey of dialogue groups, results.

A part of the identity is the way how people think and why they take decisions in a certain way. According to communication science, people have certain mental models, which represent thought processes that support decision-making. Mental models are cognitive versions of reality, which determine, how information is perceived and what new information is accepted. These mental models also shape how people deal with challenges and thus, what behavioural change is, being at least, considered. When knowing the level of knowledge of the dialogue group, mental models can be identified and updated and misconceptions can be clarified. By renewing mental models, wrong and old information can be exchanged with new one. (CRED 2009: 3ff)

An example of a mental model that should be updated:

CRED researcher and director of the Yale Project on Climate Change Anthony Leiserowitz finds that people often confuse the hole in the ozone layer with climate change.⁷ This is happening, in part and ironically, due to a science communication victory. Scientists and the media effectively and extensively covered the threat posed by the growing ozone hole, eventually resulting in international political action to phase out the main contributor, chlorofluorocarbons or CFCs.

But now many people conflate their mental model of the ozone layer with how the atmosphere works, in particular with how greenhouse gases accumulate in the atmosphere. Dr. Leiserowitz has found it leads to some interesting misconceptions that require updating, such as: If there is a “hole” in the ozone layer, and there is a global “greenhouse” effect, then there must be a “hole” in the “greenhouse.” Some Americans thus reason that this “hole” either allows more solar radiation into the biosphere—warming the planet—or, alternatively, allows heat to escape—cooling the planet.

Although logical, such reasoning has unfortunately led to construction of an inaccurate mental model about the causes of climate change that, in turn, causes many Americans to support inappropriate solutions, such as believing that the best way to solve global warming is to ban aerosol spray cans.⁸ Climate change communicators should try to identify this commonly mistaken mental model and replace it with correct information.

FURTHER READING

- The ICLEI Local Governments for Sustainability 2009 communication guideline for local governments provides examples and best practices on **how to communicate with and integrate municipal employees, the residential sector, the business sector, the youth and seniors**. The guideline focuses on the cultural modes of the US see ICLEI Local Governments for Sustainability 2009: International Council for Local Environment Initiatives. ICLEI Local Governments for Sustainability Climate Change Outreach and Communications Guide. P. 12-22

Figure 2: (CRED 2009: 5) Example for a mistaken mental mode

5.2.1 Gain the attention of the dialogue group* – frame your message

In order to gain attention of the dialogue group, **framing** can be a very helpful communicative tool. ‘Frames are interpretive storylines that set a specific train of thought in motion, communicating why an issue might be a problem, who or what might be responsible for it, and what should be done about it’ (Nisbet 2009).

In this sense, climate change can be framed on for example a political, economical or societal beneficial level. It places the topic in the context of a certain concept. Framing can help to raise attention on the topic and generate identification: ‘[...] framing can be used to pare down information, giving greater weight to certain considerations and elements over others’ (Nisbet 2009). When using an adequate and effective frame, the recipient will be forged to connect the message to deeper values, principles and social norms. Successful framing has to ‘[...] resonate with a set of long-term deep frames’ (Advisory Group 2010: 10).

For instance, the government of the UK framed the **Green Deal** as an economic, rather than an environmental initiative: “£125m Green Deal cashback scheme opens” (Talking Climate 2013b).

Another (debatable) example to be mentioned is the re-framing of climate change in Barack Obama’s re-inauguration speech. He is referring to climate change “as a patriotic, religious responsibility for Americans” (Talking Climate 2013c): “We, the people, still believe that our obligations as Americans (**patriotism**) are not just to ourselves, but to all posterity. We will respond to the threat of climate change, knowing that the failure to do so would betray our children and future generations. [...] That is how we will preserve our planet, commanded to our care by God (**religion**). That’s what will lend meaning to the creed our fathers once declared.” (Talking Climate 2013d)

FURTHER READING

→ Further reading on framing: Matthew C. Nisbet *Communicating Climate Change: Why Frames Matter for the Public Engagement*. URL: http://www.environmentmagazine.org/Archives/Back%20Issues/MarchApril%202009/Nisbet_full.htm

5.2.2 Make use of ambassadors and well-known and respected spokespeople among the dialogue group*

‘The obvious implication for improved climate change communication is to match messengers with audiences, and to let trusted messengers recruit others into behavior change efforts’ (Moser 2006: 6). In order to achieve this, at first, convincing and convinced messengers have to be found. If this spokesperson is in addition a trusted member among a certain dialogue group, the credibility of the message rises. Working together with spokespeople and key actors of existing networks can prove useful in order to gain further trust of the dialogue group and to bring the message closer to the recipients. (Nordwest 2012: 10)

EXAMPLE

→ As a large-scale example of evaluating which spokespeople are able to raise awareness concerning climate change, a study conducted by the Nielsen company and the University of Oxford is to be mentioned, in which climate change and the influence of famous spokespeople was investigated. *The Nielsen Company: Climate Change & Influential Spokespeople – a global Nielsen online survey*. URL: <http://www.eci.ox.ac.uk/publications/downloads/070709nielsen-celeb-report.pdf>

Mayors and other politicians can also function as eminently respectable spokespeople. This can be the new idea, politicians are looking for regarding the political approach towards climate change. Communicating to them, that they can present themselves as innovative and future-oriented leaders might motivate them, to sell themselves via climate change and adaptation. (Lexer 2012)



Thus, they can function as ambassadors and on top of that, they are in a role to implement political decisions.

5.2.3 Make use of established networks and groups*

Everyone belongs to a peer group and a certain social network. It can assist the communication to make use of these networks in order to create social responsibility and support by the social surrounding. Gaining acceptance in a, not necessarily climate change-oriented network or group, can assist on adaptation or mitigation measures to become the norm, rather than the exception. (Corner 2009: 4)

Networks or peer groups can be highly supportive in establishing social norms³. These social norms are most effective if combined with intrinsic motivations, as for example a desire for respect or belonging. (Advisory Group 2010: 8)

Being a significant unit of a visibly larger social network, can generate the feeling of support and thus, the issue of becomes part of the group's identity - and finally transforms into a social norm. Fostering this is closely related to chapter '5.2.4 Make use of local knowledge' and chapter '5.2.2 Make use of ambassadors and well-known and respected spokespeople among the dialogue group'. Portraying very engaged members of the social network or group can intensively contribute to establishing social norms. (Advisory Group 2010: 8f)

The Climate Change Communication Advisory Group draws attention to certain risks when appealing to existing social norms. They raise concern regarding messages such as 'too many people take internal flights' (Advisory Group 2010: 9). This message transports, that on the one hand, taking many internal flights has negative effects on the environment and on the other hand it states, that a high number of people are actually taking internal flights. This message can be perceived as an incentive, that many are taking internal flights, so why should I not do so? Concerning these messages, it is important to focus on what should be happening and not on what is happening at the moment. The above mentioned message could be interpreted as an incentive in the wrong direction. (Advisory Group 2010: 9)

5.2.4 Make use of local knowledge*, existing values and standards (e.g. sustainability, social responsibility)

The content should have a relation to the dialogue group's identity (work, regional...) and their local knowledge should also be taken into consideration. (Wirth & Prutsch 2013)

This aspect should not only influence the chosen communication format, nevertheless also the content of what is communicated. Different regions face different challenges regarding climate change. Thus, a differentiation of local knowledge and values is fairly important.

The dialogue groups have to be understood in their social context. Differences in class, ethnicity, gender, social disparities and other socio-economic factors play an initial part in how effective climate change or proposals for adaptation actually are. Existing social values and standards can be a great starting point for a successful communication, but first, the structure of the social system has to be fully understood.

³ Adam Corner refers to social norms as '[...] the standards that we use to judge the appropriateness of our own behaviour.' (Corner 2009: 2)

The dialogue group should be reminded of accepted and desirable social norms, which are common in the cultural region of the dialogue group. If change wants to be facilitated, it has to be acceptable within the social norms of the dialogue group. (Moser 2006: 6, Corner 2009: 2) It is important to find out, what defines the spatial identity of the dialogue group and adapt the requested degree of change and adaptation to the accepted norms.

5.3 Choose the right Content

5.3.1 Use adequate language and the right arguments

Language is an important tool in order to make and keep people interested in the topic from the beginning onwards. Language can help making the reality more visible. Using the right words can generate a lot of attention. (Corner 2009:1)

Often, information on climate change contains a high quantity of scientific terms, which are either hardly understood or make the information seem inaccessible for the recipient. (Marshall 2010: 8)

An overuse of scientific terms will result in low comprehension and little interest in the communicated message. It is very clear that the language has to be adapted to the audience, their pre-knowledge and level of understanding. Communicators have to pay attention when using scientific terms and have to present explanations in most cases. (CRED 2009: 16-19)

FURTHER READING & EXAMPLES

→ In the ‘Practical Workshop on Target Group Communication’ held in Berchtesgarden from 3 – 5 December 2012, communicating and discussing with sceptics has been intensively practised and discussed (see minutes of ‘Practical Workshop on Target Group Communication, Dec.2012’). For further reading on how to deal with ‘Killer Phrases’ please see the handouts from the workshop. ‘The Most Common Arguments of Climate Sceptics’ have also been discussed in Berchtesgarden and examples and counter arguments for those can be found on the web portal ‘Skeptical Science’. URL: <http://www.skepticalscience.com/argument.php>

→ The Climate Service Center Germany provides an encyclopaedia, explaining scientific terms on climate change and its consequences (only available in German!). URL: http://www.climate-service-center.de/033538/index_0033538.html.de

→ The Heartland Institute provides an encyclopaedia in English. The web platform is a collection of information on climate change and can also be used to find explanations for scientific terms URL: http://www.climatewiki.org/index.php/Main_Page

5.3.2 Death by Data? Provide the appropriate level of information

Provided information has to be manageable. Not everyone has to be informed about every little (scientific) detail. The most relevant information for the special dialogue group in a certain area can be enough (ICLEI Local Governments for Sustainability 2009: 9).

This success factor needs to be tackled in close relation with chapter ‘5.2 *Orientate the communication on the dialogue group*’. As an example of how to identify a dialogue group’s level of information, the C3 survey of 2012, can again be mentioned as an example.

Conclusions drawn from this survey showed, that DG 1 (mayors and local administration) is less familiar with CCA issues than DG 2 (regional and national administration) and thus, the demanded level of information differs. The dialogue group less familiar with the topic needs, in the beginning, summarized

information. As the level of information increases within the dialogue group, in-depth information becomes more significant. Important is, that there is a differentiation between the levels of information and that either the recipient or the messenger has the choice, to make the appropriate level of information accessible for the recipient.

No matter what level of information is detected among the dialogue group, awareness concerning the fact that **climate change is already happening** should always be emphasised and supported by scientific data. This stands in correlation with '0 Figure 2: (CRED 2009: 5) Example for a mistaken mental mode

Gain the attention of the dialogue group' and the provision of local examples.

It is also essential to communicate future scenarios, naturally supported by scientific data. (see also chapter 5.3.4 Address Uncertainties)

The level of familiarity differs on a local and national/regional level. Mayors and local administrations are less familiar with climate change and adaptation issues than administrations on a regional and national level.

It's simplicity on the one hand and it's memorability on the other are what makes the entire message communicable!

5.3.3 Set climate change in a relation to everyday life*

Many of the challenges mentioned in chapter '0

Challenges of communicating climate change' are confronted with abstractness and inaccessibility of climate change. In order to overcome this, the message about climate change has to be made real! This can be achieved by translating what climate change means for the everyday life of the dialogue group, no matter if dealing with decision makers or a farmer in the Alps. Either way, the issue has to become accessible and a clear relation to the everyday life of the recipient has to become obvious. Issues related to climate change that are of high importance to the dialogue group have to be identified and beneficial effects and solutions have to be presented. For instance, a local politician or citizen in the alpine region will not be concerned by stories of endangered polar bears. (ICLEI Local Governments for Sustainability 2009: 9)

One way to foster this identification process is to focus on climate change as an immediate threat and not a problem, which will have an impact in the very far away future. It can be argued, that the failure of communicating this issue correctly is one of the main reasons, why climate change communication has not been too successful in the past. In order to not lose the audience regarding the long-term outlook of climate change issues, the connection to the present has to be made clear. Instead of saying adaptation measures might save money in the future, the message could be brought into the present and state 'losing less now instead of losing more in the future'. (CRED 2009: 11) The centre for research on environmental decisions explains this behaviour scheme as motivation is easier triggered by avoiding 'future losses rather than realizing future gains'. (CRED 2009: 11, 9-12)

In the C3-Survey of 2012, DG 1&2 declared high interest in climate change impacts and vulnerabilities and also future climate change scenarios. Of course in their role as a decision maker, they want to be informed about the outlook of the future.

Still, a focus on already present impacts is the most effective, if action should be provoked. One should not forget, that legislative periods have a deadline!

Present impacts should be accessible for the approached dialogue group. Thus, local examples as dealt with in chapter '0 Figure 2: (CRED 2009: 5) Example for a mistaken mental mode

Gain the attention of the dialogue group' should be used to help making climate change real.

EXAMPLE:

→ In Wirth & Prutsch 2013, the example of a **brochure with real-life visualisations** on how adaptation could be done in the future, published by the British Department for Environment, Food and Rural Affairs is given. URL: <http://archive.defra.gov.uk/environment/climate/documents/interim2/future-worlds.pdf>

An example of how literally far away the challenges of climate change can be perceived, shows a national survey conducted in the US, that most questioned consider climate change as a threat indeed, however, it is mainly perceived as having an impact on people living in other parts of the world or on animals and plants or other surroundings, but not on oneself. (Leiserowitz 2007).

Thus, using **local examples** of effects of climate change or examples of successful adaptation measures is very effective in gaining the attention of the potential dialogue partners. It makes the message a personal concern. (CRED 2009: 8-10)

These local examples have to be undermined by making clear, that climate change will **effect the individual** in their everyday life (e.g. economical instability, health problems, high profile topic in politics). (CRED 2009: 11-12) Presenting the costs of previous climate-triggered damage events and showing, how timely adaptation can prevent such costs and create new opportunities (see chapter '5.3.3 Set climate change in a relation to everyday life'), can be fairly useful. This can be inspiring for decision makers as well as individuals (Lexner 2012).

EXAMPLE

→ The filmmaker John Ryan has portrayed people all over the world, who have to adapt to a changing climate. URL: <http://climatewisconsin.org/>

→ Short films on effects of climate change and adaptation issues have been created in the course of the project nordwest2050. URL: <http://www.youtube.com/user/nordwest2050?unid=8caaa9659a8175bcdb9376944f35b238> (in German)

5.3.4 Suggest solutions, give good examples and refer to existing activities*

This is a very essential part when communicating climate change. Simply talking about, that change which is going to occur and general measures that should be taken (e.g. reducing CO2 emissions) is not sufficient. Appropriate solutions and precise measures have to be included:

- In many cases, solutions are already existing and it is fairly important, to properly sell them. (*Futerra 2011: 6*)
- **Success stories** should be shared. Provide proof, that the suggested measures will actually contribute to making a difference. (ICLEI Local Governments for Sustainability 2009: 10)

Administrations are highly interested in good practice examples from other regions or municipalities, as these show the beneficial and effective aspects of climate change communication. From these success stories, financial or political advantages can be derived. Thus, the beneficence of including the issue of climate change into the own work can be identified more easily.

DG 1 + 2 are highly interested in good practice examples, adaptation tools and decision support instruments. (Lexner 2012, Survey 2012)

EXAMPLES

→ The **Convention on Biological Diversity** based in Canada has collected projects of ecosystem-based adaptation processes. The research database can be searched for monitoring tools or case studies. URL: <http://adaptation.cbd.int/activities.shtml>

→ The **AMICA** project (Interreg IIIC), supported by the climate alliance, provides an adaptation- mitigation- and integration tool. For instance evaluated practice examples of different categories can be downloaded. URL: <http://www.amica-climate.net/materials.html?&L=1>

→ The **climate compass** provides case studies in different fields of activities: URL: http://www.climate-compass.net/_cases.html

→ The **climate toolbox database** provides examples of municipal initiatives on climate change in Germany (only in German). URL: <http://www.climate-toolbox.net/datenbank.html>

→ Best practice examples are also collected by the **Alpine Convention**. URL: <http://intranet.alpconv.eu/Alpine/searchThesaurusAdvancedSearch.do>

→ The **CIPRA cc.alps** team has selected 34 good practice projects with a high beneficial factor for the society, environment and the economy. URL: <http://www.cipra.org/en/climate-projects/cc.alps/good-practice>

5.4 Address Uncertainties

‘Predictability helps people feel safe and secure, whereas uncertainty can lead to anxiety.’ (CRED 2009: 24)

Communicating uncertainties is one of the most significant aspects of communicating climate change - and also one of the most precarious ones. The mode of communication has to be selected very carefully, as otherwise the recipient may doubt the sincerity of the message and the messenger very easily. Uncertainties have to be transparently and consistently communicated and rather be presented as probabilities than uncertainties.

Keeping this first approach in mind, further criteria for uncertainty communication can be consulted. In commission of the Netherlands Environmental Assessment Agency, the University of Utrecht and the Copernicus Institute have published a paper dealing very intensively with communication of uncertainties regarding environmental issues. The following main aspects can be deduced from that research:

- The audience has to be provided with uncertainty information that is required by good scientific practice.
- The uncertainty information has to be consistent.
- The uncertainty information has to be clearly communicated (minimise misinterpretation, bias, different options for interpretations)
- The uncertainty information has to be easily processible.

Criteria for uncertainty communication (Kloprogge 2007: 15)

Considering these criteria can aid on overcoming uncertainties as an obstacle when perceived in a threatening, dooming or unserious way: ‘The everyday meaning of uncertainty is negative – and so when it



comes to climate change, people tend to infer that scientists do not know *anything* about a topic, just because they do not know *everything* about it. Uncertainty about climate change is a major barrier to public engagement.’ (Talking Climate 2013a)

However, not just in the everyday life, also in politics, dealing with uncertainties is not uncommon. Many policy areas have to deal with and plan for future scenarios based on uncertainties. It might be useful to make comparisons with these other policy areas. Just to name some examples, the fields of finances, economics or water management traditionally deal with and plan for uncertain future scenarios. (nordwest 2012: 9, EEA 2012: 114, 124)

The IPCC (Intergovernmental Panel on Climate Change) has developed a **confidence** and **likelihood terminology** in order to make it easier to communicate scientific uncertainties. (IPCC 2007)

A scientific uncertainty means that there is the probability of climate change effects to occur. It is important, to precisely define these probabilistic terms. In combination with the following key of terminology, research has shown that it is best to support the probability terms with the correlating range. (CRED 2009: 25f, Clisp 2011)

Confidence Terminology	Degree of confidence in being correct
Very high confidence	At least 9 out of 10 chance
High confidence	About 8 out of 10 chance
Medium confidence	About 5 out of 10 chance
Low confidence	About 2 out of 10 chance
Very low confidence	Less than 1 out of 10 chance

Likelihood Terminology	Likelihood of the occurrence/ outcome
Virtually certain	> 99% probability
Extremely likely	> 95% probability
Very likely	> 90% probability
Likely	> 66% probability
More likely than not	> 50% probability
About as likely as not	33 to 66% probability
Unlikely	< 33% probability
Very unlikely	< 10% probability
Extremely unlikely	< 5% probability
Exceptionally unlikely	< 1% probability

Table 1: (IPCC 2007) Confidence and likelihood terminology

It is always very important to keep in mind, that uncertainties must not be solely communicated, but always be combined with certainties. The recipient has to understand, what is definitely known with a high degree of confidence and yet, what related uncertainties exist. Still, it must be made clear, that it is important to act in order to prevent even potential threats from happening. (CRED 2009: 26)

Research has shown, a high level of perception concerning the accurate level of information can be achieved, when combining the above mentioned likelihood range with the actual numerical probability. (Talking Climate 2013a)

The CRED emphasised this point by a metaphor voiced by Arnold Schwarzenegger: 'If 98 doctors say my son is ill and needs medication and two say 'No, he doesn't, he is fine', I will go with the 98. It's common sense – the same with climate change.' (CRED 2009: 28)

Communicating uncertainties is closely related to chapter '0 Figure 2: (CRED 2009: 5) Example for a mistaken mental mode

Gain the attention of the dialogue group' and the described mechanisms of framing. Within the adequate use of framing, uncertainties can be interpreted in an either positive or negative way. More insights into this issue is provided by the University of Exeter, which has conducted a study concerning the perception of uncertainties. (Talking Climate 2013a)

FURTHER READING & EXAMPLES

→ Advice on how to express uncertainties in verbal interactions has also been collected in '**The Semantics of Uncertainty in Belgian NAS**' and in '**The Semantics of Uncertainty in Swiss NAS**' (including translations German to English) which were distributed at the Practical Workshop on Target Group Communication in Berchtesgarden in December 2012.

→ The portal 'Talking Climate' refers to a study conducted by the University of Exeter, investigating how framing can influence the perception of uncertainties regarding climate change.

see: Morton, Thomas; et al.: The future that may (or may not) come: How framing changes response to uncertainty in climate change communication. *Global Environmental Change* 21 (1) 103–109: Exeter 2010.

→ In 2007 the University of Utrecht has published a paper titled '**Uncertainty Communication. Issues and good practices.**' See: Kloprogge, Penny; van der Sluijs Jeroen; Wardekker, Arjan: Uncertainty communication. Issues and good practice. Utrecht 2007.

→ An example on how to communicate uncertainties: Austrian Database on adaptation.

<http://www.klimawandelanpassung.at/newsarchiv/schwerpunktthema/unsicherheiten/> (in German)

5.5 Provoke emotions

While it is important to place the message within a scope that the recipients can relate to on a personal level, a boundary has to be set for overstating that matter and provoking too intense emotions. Especially triggering negative emotions, as worrying about climate change as an overwhelming threat, has to be handled with care. As a first approach, it might get the recipient interested in the topic but on a second level, provoking too much 'worrying' can go into the wrong direction. In this connection, the Center for Research on Environmental Decisions (CRED) mentions three concerns:

- There is a limited pool of what people can worry about. Regarding this, the issue of present vs. future worries appears again, as people tend to worry more about present threats and risks.
- It is difficult to produce long-term attention through the emotional system. The audience has to be offered more and especially other reasons to stay engaged in the long-term.



- Emotional numbing might occur, as a result of overexposure to threats.

(CRED 2009: 20-21)

The Climate Change Communication Advisory Group also dealt with the potentials and risks of highly emotional communication, trying to use for instance fear as an incentive to trigger behavioural change. As mentioned above, they agree, that fear often does not change attitudes or behaviour and it can also function as disempowering as it might result in a feeling of lack of control or helplessness. Fear might help to yet realise the potential risks of climate change and dialogue groups might start listening to the messages regarding climate change. Nonetheless, on some dialogue groups, fear only has an effect if they have experienced threat caused by climate change themselves. In any case, the usage of fear has to be handled with care and it is best, to combine this sort of emotional responsive information with other informational levels as constructive information and, especially if fear has been triggered by experience, by this lower the sense of danger. (Advisory Group 2010: 4)

5.5.1 Make use of pictures, visualisations and virtual realities*

‘Pictures are worth more than a thousand words.’ The most powerful images are those with a high relevance to the dialogue group and the everyday life of the recipients – thus, local images should be used. (ICLEI Local Governments for Sustainability 2009: 9)

In a paper published in 2010, Susanne C. Moser states, only little research is available on visualizations, what their effects are and how they are ethically implemented. A contribution in order to fill this research gap is the C3-Alps paper ‘Key messages in still and moving images’, which portray examples of how challenges of climate change communication can successfully be overcome by means of images, graphics and moving images. (Lorenz, Wanschura, Pfefferkorn 2013)

→ The French ministry of health has published brochures in order to aid in how to deal with heat waves. The comics and caricatures are a good example of communicating visualisations without the need of fully understanding the wording with it. (example taken from Wirth & Prutsch 2013)

<http://www.ars.centre.sante.fr/index.php?id=115234> (only in French)

5.6 Use suitable formats* and communication channels

,Surprising approaches (e.g., with humor), unusual spokespeople, or unexpected venues and mediums (e.g., through story-telling or the arts) may be more noticeable and memorable. (Moser 2006: 7)

The choice of format always corresponds with the level of information the dialogue group is familiar with. It depends if the situation and the dialogue group demand broad, summarized or in-depth information and to what extent the dialogue group still needs to be convinced of the relevance of the issue. It is important to remember, receiving in-depth information is only relevant for dialogue partners either already very familiar and highly interested in the topic or, if profound information is demanded, for taking (political) decisions.

For local administrations and mayors, climate change is yet less a priority than for administrations on a regional/national level. Thus, they prefer broader information, compared to DG 2: for them summarized and in-depth information is relevant.

Susanne C. Moser distinguishes between three modes of communication channels: written, verbal and non-verbal (e.g. gestures, sign language, body language etc). Furthermore she determines, that it is important to distinguish the range of the communication, whether it takes place between individuals (face-to-face) or via mass communication. Moser also mentions research which has proven that different communication channels have different levels of persuasiveness. Consequently, it can be said, that face-to-face communication has a higher level of persuasiveness than for example information received through the mass media. (Moser 2010: 41)

Thus, the more adequately the communication is adapted to the dialogue group and the more possibilities are available for discussions and exchange, the higher is the success of the communication.

5.6.1 Get ideas from the following types of information formats and sources

→ Wirth & Prutsch discuss different formats to communicate climate change in: WIRTH & PRUTSCH 2013: Wirth, V., Prutsch, A.: Kommunikation zur Anpassung an den Klimawandel. Überblick und Analyse aus 10 OECD-Ländern, Draft. Umweltbundesamt, Wien. (only in German)

The following formats have been analysed in the above mentioned research paper: internet formats, mass media, telephone formats, PR/advertisements, publications, installations, events, competitions, advisory formats

In the online survey conducted within the C3 project among DG 1&2, the below listed formats have been taken into consideration. The list includes responses received from DG 1&2. It should always be considered, that the usage of formats closely relate to the required level of information:

- Overview on existing information sources
highly interesting for DG 1&2
- Visualized information (maps, graphs, etc.)
highly interesting for DG 1&2
- In-depth reports, technical reports
- Databases (e.g. of projects, studies, information products)
- Geospatial information
very interesting for DG 1&2
- Compendium, fact sheets
- How-to-do manuals
also very interesting for DG 1&2
- Events and Personal contact!

Possible **contact formats** to reach mayors and municipalities are: workshops, conferences, panel discussions, personal invitations to exchange in expert group, personal mails, personal phone calls, informal chats, face to face talks consultations.

The following possible sources of information have been discussed within the online survey. Find below a list of the considered formats within the survey, including results received for DG 1&2.

- Internet
frequently used by DG 1&2



- Newspapers, general press frequently used by DG 1&2
- Professional journals frequently used by DG 1&2
- Project reports, studies frequently used by DG 1&2
- Scientific journals
- Television
- Specialised internet portals/web platforms
- Electronic social media (facebook, twitter etc.)

5.7 Evaluate your communication activities*

Communication can only be effective if there is room for learning. The success of the communication has to be evaluated. Moser suggests: 'To keep communication efforts fresh and responsive to the changing needs of audiences, close monitoring, testing, evaluating and updating of communication efforts will be required over time.' (Moser 2010: 41f)

→ **Act 3.1 of WP3** dealing with communication strategies emphasises the **importance of evaluating** the successes and failures of the communication measures that have been taken. The report mentions several evaluation tools, as feedback questionnaires, focus groups, monitoring the media and media analysis, which can provide information regarding the level of effectiveness and coverage of the communicated message. (C3-Alps WP3 – ACT 3.1 2012: 37-40)

→ Within the C3-project an Advisory Group to assist on evaluation communication will be established.

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