

# A transatlantic dialogue: Part 3 - Climate Change Adaptation Experiences in the U.S. and Europe



## CONTEXT

As the impacts of climate change become more immediate, adaptation to these changes is becoming a greater area of interest and concern among resource managers, planners, and other stakeholders at all scales. However, in spite of advancements in the scientific understanding of climate change, much progress is needed in developing, translating, and disseminating usable knowledge to inform both individual and collective actions, especially at local levels of decision making. As part of this, increased emphasis has been placed on fostering sustained engagement between research communities and users of climate information. Additionally, the documentation of case studies as well as the development of networks that include researchers, practitioners, decision-makers and stakeholders has been identified as helpful mechanisms to support a growing number of communities developing climate change adaptation strategies.

## PROJECT BACKGROUND

A diversity of climate change risks, physical, socioeconomic, and ecological contexts, available resources and response options, decision-making processes, and cultural norms shape the societal response to climate change across political and physical geographies. The resulting diversity of approaches makes it difficult to establish best practices and common ground for interaction between research and stakeholder communities.

Working under the hypothesis that comparing these significant differences can help to identify transferable lessons useful for improving strategies for climate change response (primarily adapting to climate change impacts secondarily reducing emissions), we compared experiences in mountain and coastal areas, in the United States and Europe.



In 2013, the Aspen Global Change Institute and the Climate Service Center in Hamburg, Germany, hosted two innovative workshops that brought together an international group of scientists, stakeholders, resource managers, and elected officials from six specific case regions: Bay of Kiel, Germany; Grindelwald, Switzerland; Roaring Fork Valley, Colorado; Virgen, Austria; Chesapeake Bay, U.S.; and Outer Banks, North Carolina, U.S. (see case study at the end of the paper).



A group of scientists and stakeholders from mountain and coastal areas join together in Aspen, CO (above) and Timmendorfer Strand, Germany (below).

The objectives of the workshops were to: (1) better understand the information needs of practitioners; (2) integrate bottom-up and top-down approaches to climate adaptation; (3) facilitate knowledge exchange and learning across different situations; (4) identify “best practices” or lessons about useful approaches in adaptation planning; (5) build and expand adaptation networks; and (6) identify barriers to adaptation and how actors overcome them. The results of the dialogues are summarized here and in two further briefs.

For more information about the project see: [www.climate-service-center.de](http://www.climate-service-center.de)

## KEY FINDINGS

- Examining the similarities and differences between the United States and Europe with regard to adaptation to climate change provides a valuable opportunity for transatlantic learning for both researchers and practitioners.
- Both sides of the Atlantic face similar challenges and are using similar tools to plan and implement adaptation actions. Much of the consideration of impacts and implementation of responses is at the local level.
- Differences in government, culture, history and geography mean that the public debate on climate change adaptation and mitigation has evolved differently in Europe compared and the United States.
- On both continents, the barriers to climate change adaptation can be overcome through appropriate use of tools in a well-designed process with a focus on the local level, with adequate human, technical and financial resources and with strong leadership.

## INTRODUCTION

This summary looks in particular at the outcomes of the transatlantic dialogue from the perspective of similarities and differences between the United States and Europe with respect to climate change and adaptation. It is important to note from the outset, however, that the case studies that provided a basis for discussions and indeed for the selection of participants are not representative for whole continents. The focus of the workshops was on coastal areas in northern Europe and the East Coast of the US and mountain areas in Colorado, Switzerland and Austria. Despite this limitation, during a facilitated and deeper conversation, similarities and differences did emerge that offer learning opportunities at a broader scale.

## ADAPTATION: PLANNING, ACTIONS, AND CHALLENGES

### *Similarities between United States and Europe*

**Facing similar challenges and using similar tools:** At a broad geographical scale, both the United States and Europe face similar challenges with respect to climate change and adaptation. Both continents have mountainous areas where warming will later the timing and rate of snow and glacier melt or lead to more disturbances (e.g. pests, diseases and fires) to forest ecosystems. Both also have coastal areas that can be affected by storm surges and/or sea-level rise. Both are also relying on science and planning communities to help in finding solutions. Experiences shared in Hamburg and Aspen indeed showed that there are also strong similarities among some of the tools being developed to support decisions on adaptation to climate change. Especially during the early stage of adaptation planning in the United States and Europe, soft approaches, such as knowledge sharing/transfer, awareness raising and education are being used. On both continents, technological adaptation is also frequently discussed, while deeper societal changes and holistic strategies are very rarely considered.



Mayor of Virgen, Austria (left), Dietmar Ruggenthaler and Steve Skadron, Mayor of Aspen, CO (right) discuss common challenges in addressing the impacts of climate change. Credit: James Arnott

**Initiatives at the local level:** In both Europe and the United States there is considerable evidence of local initiatives to respond to climate change. Motives and values driving such initiatives and the bottom-up approaches taken are very similar on both sides of the Atlantic. Tool development for adaptation planning and outreach to local communities is also the same and process support that leads to an improved understanding of the role of values and the need for behavioural change is important. Small communities are taking action, guided by charismatic leaders with a vision and a commitment to make change happen. Federal policies /directives do not necessarily drive what happens at the local level in both the United States and Europe.



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In both the U.S. and Europe many discussions and decisions about climate change adaptation occur at the local level as communities explore how to enhance their resiliency to current and future impacts. Aspen, Colorado, for example, has formed a climate action plan that includes adaptation and mitigation components.



Different perspectives on the role of government between the United States and Europe affect how adaptation to climate change is conceived, funded, and implemented. Shown here is the government building of the German federal state of Schleswig-Holstein, located on the bank of the Baltic Sea. Credit: deli/fotolia

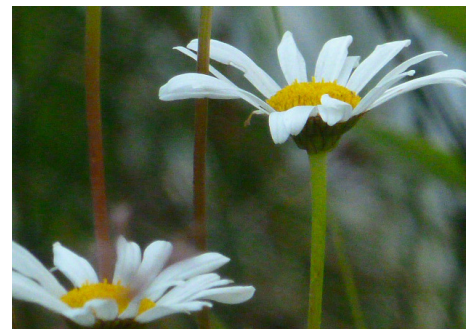
**Less vulnerable than developing countries:** Both the United States and Europe have the technical capacity to adapt to climate change. Having the financial resources to do so helps, but the workshops also showed that money is not always the essential element for embarking on adaptation measures. Human capital in the form of a skilled, healthy population is essential in initiating, guiding, and implementing adaptation to climate change. Social capital in the form of networks and voluntary organizations is also an important contribution to successful adaptation. In all cases examined during the workshops, the need to act arises when places are financially affected (e.g. through declines in the tourism sector) or when life / health is in danger. As pointed out by the participants, however, the vulnerability to climate change – at least in the cases explored – is certainly lower than in some less industrialized countries.

### **Differences between United States and Europe**

**The role of government:** Adaptation planning already takes place at the highest governmental level in Europe, whereas the United States has a more fragmented policy landscape, including a general framework and executive order directing federal agencies in the development of adaptation plans, state adaptation plans in nearly half of the states, and a highly uneven engagement among local governments (municipalities and counties). National and sub-national adaptation plans are being developed and implemented in Europe, where solutions are often driven by government rules and financing, and they appear more locally, privately or individually driven than in the U.S. cases examined.

The prominent role of government is accepted in Europe and viewed with considerable ambivalence in the United States: while financing and guidance is welcomed, regulations and directives are commonly resisted. European governments have taken a stronger position on climate change than the U.S. government and this is reflected in the differences in the political acceptance of and attitudes toward mitigation and climate change science.

**Cultural differences:** Given the ambivalence vis-à-vis government in the United States compared with an expectation of responsibility and leadership from public and government entities in Europe, there is more emphasis on risk management in the United States versus safety and protection in Europe. There appears to be greater literacy about climate and more generally about environmental policy in the broader population in Europe compared with a more polarized public discourse and considerable climate illiteracy in the U.S.. Culture, economy and polity have much more time depth in Europe than in the United States (2000 years vs. 200 years) and this affects the sense of and connection to place. The general population also has different attitudes. For example, forested areas are protected treasures in Europe, while they are intensive use areas in the United States. In Germany retreat from the coast is not seriously considered, while in some U.S. locations it is at least discussed, though strongly resisted.



In the United States messages have to be worded carefully, taking into account strong ideological differences and the polarization of the public debate, in particular in the U.S. House of Representatives. Such ideological deviations in the United States hinder facilitated participatory processes on climate change issues, which have occurred more commonly in Europe.

**Property rights:** Property rights are different in the United States and Europe (e.g. for privately owned land or water) and in the U.S. property rights are a major barrier to some adaptation actions. In the United

States attitudes about private property and taxation are close to the stereotypes of rugged individualist vs. more common-good, community-oriented attitudes of Europe. This affects which adaptation strategies are considered acceptable, including what role governments should play in implementing them.

**Infrastructure and spatial planning:** Spatial planning differs between the United States and Europe, in particular with respect to the legal situation of where and how it is possible to develop land. In at least one of the European case study regions (Tyrol) it is much easier for public authorities to regulate building activity than it is in the United States. With a much longer history of urban development in Europe, urban design differs very much between the United States and Europe, which affects adaptation opportunities. The availability of public transportation also differs quite considerably, with Europe having a much more extensive system.

### Overcoming Barriers – Advancing Adaptation Action



Dialogue between stakeholders in the United States and Germany revealed multiple approaches to overcoming barriers to adaptation such as local planning and leadership, tools support dialogue and decision making, and financial resources.

The case studies presented at the Aspen and Hamburg Workshops and the ensuing dialogue pointed to four concrete ways in which barriers to adaptation can be overcome:

**Working at the local level:** Although there are significant cultural, political and legal differences between the United States and Europe, adaptation planning and implementation is proceeding on both sides of the Atlantic at the local level, both in response to perceived environmental changes (e.g. landslides or increased fires in mountain areas) or projected changes (e.g. sea-level rise in coastal areas).

**Money helps, but is not always necessary:** Ongoing adaptation planning and implementation is supported, if financial resources are adequate, in particular for adaptation that requires (potentially large) investments in infrastructure. However, money

is not always necessary. Less wealthy communities are also adapting by building up human and social capital to increase their coping and adaptive capacities.

**Tools:** On both sides of the Atlantic, a wide range of tools are being used to support decision making and dialogue about adaptation to climate change (see separate briefing sheet). These tools show the impacts of and vulnerabilities to climate change and/or help to guide stakeholders through a process of learning and planning. While there is still a long list of desired improvements to methods and tools to support dialogue and decision making for climate change adaptation, the use of tools is already supporting action on the local level.

**Leadership:** The case studies and the transatlantic dialogue clearly demonstrated the importance of leadership in overcoming barriers to climate change adaptation. Individuals who guide the decision making process with a clear vision of the need for adaptation to ensure the well-being and prosperity of the local population have been essential.

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