

IX - Adaptation strategies

Parallel session D – Tuesday 11th March 14:00-15:30

ID N°: [270]

Title: **THE SWEDISH RISK AND VULNERABILITY ASSESSMENT - THE LEGACY AND THE WAY FORWARD FOR STRATEGIC ADAPTATION TO CLIMATE CHANGE IN SWEDEN.**

Authors: Åsa Sjöström¹; Ingrid Gudmundsson¹; Lena Lindström¹

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In 2007, an investigation of Sweden's vulnerability to climate change was carried out in order to examine the impacts of future climate change in Sweden, to establish priorities and to assign responsibilities. The investigation resulted in 59 suggested adaptation actions, to be delivered by Swedish authorities.

Six years later on, the need to actively work with adapting society to climate change is receiving increasing recognition at all levels of government, from the international to the local level. A reflection of this recognition in Sweden is the creation of the National knowledge centre for climate change adaptation at the Swedish Meteorological and Hydrological Institute, tasked to assist the work of climate change adaptation in Sweden.

In 2012, a review of the suggested activities of the 2007 investigation took place, showing that 34 out of the 59 proposed adaptation actions had been completely or partially put into place. Many government authorities now work with climate change adaptation within their areas of expertise and the County Administrative Boards have been given regional responsibilities. However, no single authority has been given the overall responsibility to coordinate climate change adaptation at the national level, to deliver a strategy or to drive change.

This session presents the results of the review and discusses the way forward for strategic adaptation work in Sweden in light of the Adaptation strategy for the European Union, particularly with regards to the roles and responsibilities of different stakeholders.

Presenter

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ID N°: [31]

Title: REGIONAL GOVERNANCE MODELS IN ENABLING AND IMPLEMENTING CLIMATE CHANGE ADAPTATION ACTION: AN OVERVIEW OF EU 28 MEMBER STATES

Authors: Jennifer McGuinn¹; Liva Stokenberga¹; Paola Banfi¹; Owen White²; Jonathan Baker²

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Regions can play an active and important role in addressing climate change. This research across all EU 28 Member States provides an overview of the state-of-play on climate change adaptation at the regional level in the EU and highlights the potential that regions can have in advancing adaptation. Regions in the EU Member States engage with climate change adaptation in a number of different ways. In some cases, they resemble the national level and *enable* adaptation through strategic planning and support; in others they directly *implement* adaptation actions. For instance, when climate impacts require a response from more than one municipality, regions are well-placed to coordinate the intervention approach. Similarly, where strategic documents are drafted at the national level, regions can offer expertise and knowledge to make sure that regional and local perspectives and needs are considered. Often regions have a mix of enabling and implementation functions; and in some Member States regions have no substantial role at all regarding climate change adaptation. The position of a region within the multi-level governance system forms the basis of its role in adaptation. For instance, in countries where regions (NUTS II or III level) have responsibilities for some combination of environmental policy and spatial planning, the current extent of progress on adaptation varies considerably. Italy and Poland stand out among the most decentralised countries as Member States that have lagged behind on adaptation at both national and regional level. Smaller but more advanced Member States such as Denmark or Finland have made considerable progress at the national level, and regions are also starting to include adaptation in key planning documents and develop dedicated adaptation strategies or plans. There is considerable potential for further adaptation work at the regional level in those Member States where there is competence at the regional level but limited progress. Among these countries are the Czech Republic, Croatia, Greece, Hungary, Lithuania, Romania and Slovakia. In a number of Member States, the regional level has very limited competence in adaptation. Typically these are Member States where there is no significant level of administrative competence between the national and local (municipal) level. For some of the larger countries within this group, such as Bulgaria, Ireland and Portugal, the lack of a regional level to support and coordinate municipal actions may be an obstacle in adaptation. This research is funded by the European Commission, DG Climate Action, and is carried out by Milieu Ltd and Collingwood Environmental Planning (CEP).

Presenter

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ID N°: [69]

Title: THE UK ADAPTATION SUB-COMMITTEE'S MONITORING AND EVALUATION FRAMEWORK FOR ASSESSING PROGRESS IN UK ADAPTATION

Authors: Lola Vallejo, Adaptation Analyst¹; David Thompson, Adaptation Senior Analyst¹; Daniel Johns, Head of the ASC Secretariat¹

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The Adaptation Sub-Committee (ASC) is an independent public body with a statutory duty under the Climate Change Act to report to the UK Parliament on the progress made by Government in implementing the UK's National Adaptation Programme (NAP), which was published in July 2013. The ASC's first statutory report is due in 2015.

Since its creation in 2010, the ASC has been developing a Monitoring & Evaluation (M&E) framework that it will use to assess the NAP's progress. The framework has three components:

- **monitor** through indicators trends in society's exposure and vulnerability to current climate hazards and the uptake of adaptation actions;
- **assess** the implications of these trends for future vulnerability to climate hazards and identify potential pathways for the uptake of further adaptation action;
- **evaluate** the effectiveness of policy in enabling the uptake of adaptation actions and ensuring that decisions with long-lasting consequences take future climate change into account.

First, monitoring trends in exposure and vulnerability gives a baseline against which to assess the effectiveness of the NAP. These indicators relate to:

- Exposure to climate hazards, which may become more intense or frequent with climate change;
- Vulnerability to climate hazards, underpinned by socio-economic factors;
- Actions that have been taken to reduce vulnerability up to now,
- Realised impacts and costs of climate hazards.

The second component of the ASC's framework assesses the implications of the current trends identified by the indicators continuing into the future under different climate projections. In doing so, the ASC assesses whether there is the potential for the further uptake of the adaptation actions that are cost-effective no matter what the future climate holds (defined as 'low-regret options'). This is done using cost-benefit analysis and other evaluation techniques (see our work on measures to the [built environment](#) and supporting [peer review](#)).

For the third component, the ASC evaluates the extent to which the relevant policies in the NAP are enabling the uptake of adaptation action and ensuring that decisions with long-term consequences are considering future climate. From this, the ASC makes recommendations to Government on how the existing policy framework could be strengthened. For example, in its [2013 Progress report](#), the Committee argued for a better valuation of ecosystem services, including the carbon storage benefits of upland peat.

Since 2012, the ASC has been collaborating with a number of European organisations to strengthen its M&E framework, and applying it through a series of annual reports to assess preparedness for the major climate hazards identified by the UK Climate Change Risk Assessment:

- risks to the built environment from flooding and water scarcity (2012),
- risks to the natural environment, agriculture and forestry (2013),
- risks to infrastructure, public health and businesses (due in our 2014 report).

Presenter

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ID N°: [255]

Title: **POLITICAL CLIMATE ADAPTATION DECISIONS IN GERMANY – SHORTFALLS AND POSSIBLE APPLICATIONS FOR DECISION SUPPORT SYSTEMS**

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Before the European Adaptation Strategy has been brought forward by the European Commission in 2013 to support national action in the member states, several political processes in that regard had already been started in Germany. Adaptation strategies on national and regional level were aimed to shape the future adaptation actions of public and private actors.

First, this paper constructs a framework to evaluate political adaptation strategies from an economic point of view. Four basic climate adaptation policy fields are identified: regulatory framework setting, elimination of market failures, distributive justice and security of supply. While the adaptation of the regulatory framework (e.g. property rights, land use rights, institutional responsibilities) has been initiated by the German adaptation strategy, distributive justice and security of supply are neglected. The elimination of market failures is not explicitly mentioned, but it is partially covered by the planned actions. In general the German adaptation strategy is neither consequently derived from economic considerations nor structured accordingly.

Besides direct regulation and market based instruments (e.g. taxes), public provision of adaptation measures (e.g. dyke-building) is a major instrument of climate adaptation policy. At the same time it is prone to several difficulties. Because resources are limited, the available measures must be prioritised on the basis of relevant criteria. Aside from cost-benefit considerations, other less tangible criteria (e.g. fairness and robustness) have to be taken into account as well. Other difficulties include the proneness of public adaptation decisions to political barriers (e.g. rent-seeking) and the uncertainty connected with the relevant information (e.g. climate scenarios). The overall aim of public adaptation should be an efficient provision of economically justified adaptation. The German adaptation strategy however lacks a structured approach to prioritise the available adaptation options adequately.

Second, based on the identified shortcomings, respective requirements and applications are developed for decision support methods (e.g. cost-benefit analysis, multi criteria analysis, robust decision making). Appropriate methods are required to incorporate cost-benefit information, assessments on fairness and robustness. Decision support methods should be capable of prioritising public adaptation according to these criteria and rationalise political decisions by means of disclosure and monitoring. Moreover, from a procedural perspective, the decision making process should be designed for acceptance and fairness (e.g. stakeholder engagement). Finally, the requirements from the user's perspective include completeness, flexibility, comprehensibility and applicability under uncertainty.

The results are relevant for governments which plan to develop their adaptation strategies further by use of decision support methods.

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