

ESPACE – Planning in a Changing Climate



The Strategy & supporting evidence CD-ROM

**... putting adaptation at the
heart of spatial planning**

www.espace-project.org



Introduction

This report contains the final strategy developed by the ESPACE project through work undertaken between September 2003 and June 2007.

'Planning in a Changing Climate' is the final project strategy that aims to influence the philosophy and practice of spatial planning by recommending how adaptation to climate change can be incorporated.

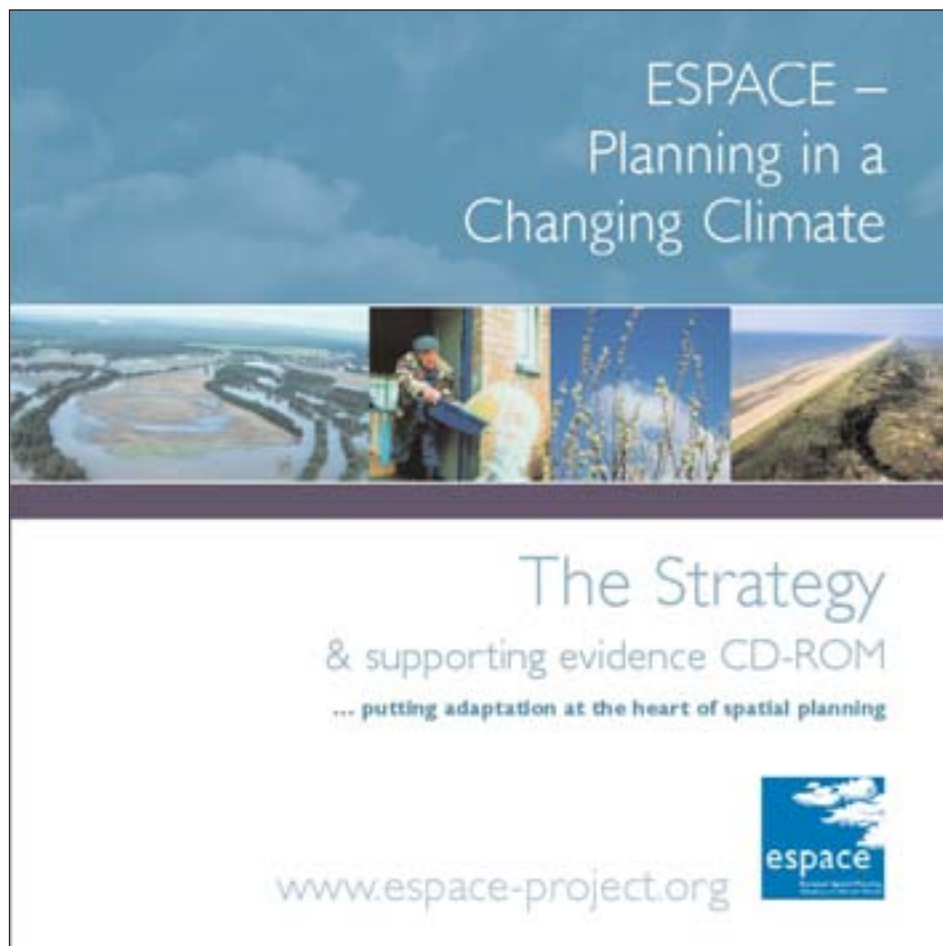
The strategy, 'Planning in a Changing Climate' contains a set of 14 recommendations that are complemented by a series of case studies, tools and examples of policy advice developed by the ESPACE Partnership.

The 14 recommendations are aimed at all levels of governance, including European institutions, national governments and regional and local authorities. The strategy also includes additional messages for specific governance levels where appropriate.

The CD ROM attached to this report contains the full complement of case studies, tools and examples of policy advice that supports the 14 recommendations.

In the back of this report you will find a pull-out chart which provides a quick visual reference to which case study, tool, guidance or policy advice supports each of the 14 recommendations. On the back of the chart further details about the ESPACE Project and Partnership are provided to set the context for how the recommendations and complementary evidence were developed.

Please visit the ESPACE website (www.espace-project.org) for the most up to date information on the ESPACE Project.



Why adaptation to climate change must be addressed in spatial planning

We now know that man-made climate change has been underway since the mid-20th century and is having significant effects around the world¹.

Mitigation measures to reduce greenhouse gas emissions are essential if we are to avoid the worst effects of climate change. Yet, however successful we are at reducing emissions, we will have to deal with many decades of climate change, due to emissions that we have already put into the climate system. We need to start adapting today to these changing conditions, to ensure our social, economic and environmental systems are best-prepared for the unavoidable impacts and are able to take advantage of any opportunities.

Spatial planning mediates between competing demands on the way land is managed and used. While some uncertainty remains over the exact impacts of climate change, it has the potential to be so significant that it will challenge our basic assumptions on the availability of land and its uses over the medium and long term. The Stern Review on the economics of climate change² highlighted the crucial role of spatial planning in facilitating climate adaptation and emphasised that adaptation should be integrated into planning at every level. With climate change underway and future change unavoidable, all professional advice and political decisions must now take climate change into account.

What we mean by spatial planning

This strategy uses the following definition of spatial planning: *“Spatial planning is a process that assimilates and interprets evidence-based knowledge to inform those activities that aim to ensure spatial development takes place in an appropriate, sustainable way, from a functional, social, economic and environmental point of view.”*

We take a broad view of spatial planning, encompassing spatial planning professionals and those whose activities have a spatial planning dimension, such as managers of water, health, transport, design, agriculture and regeneration issues. The strategy therefore presents messages aimed at organisations and individuals involved in spatial planning, including politicians, who are the ultimate decision-makers in the policy-making process.

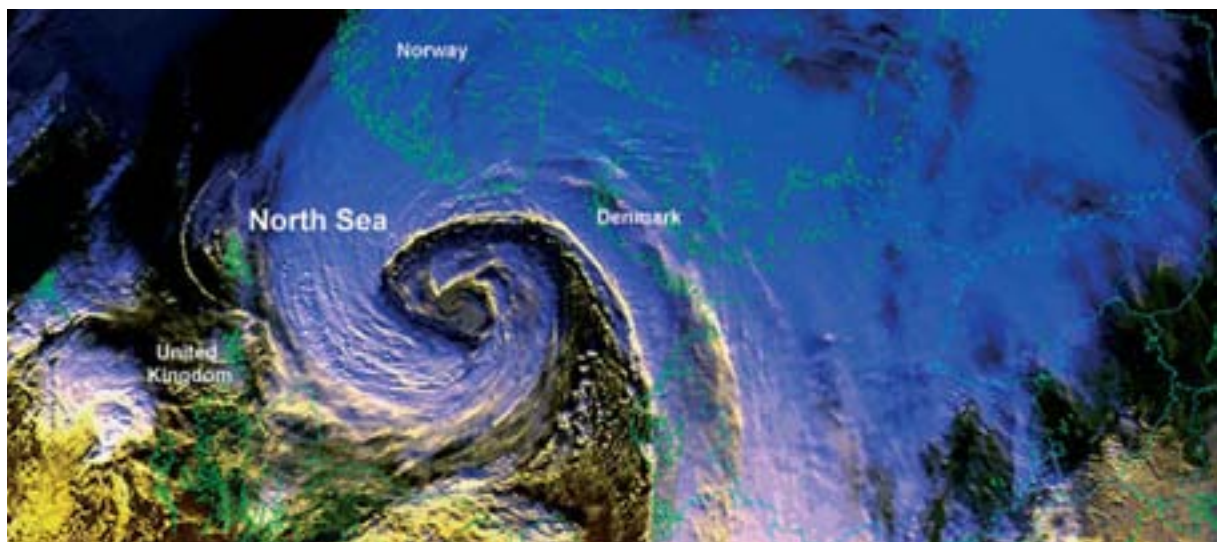
Focus of the ESPACE project

Recognising the vital role of spatial planning in enabling society to adapt to climate change, the ESPACE project aims to change the philosophy and practice of spatial planning. ESPACE has focused on managing climate change impacts on spatial planning for water management, including:

- flooding – coastal, estuarine and riverine,
- water resources,
- water quality.

¹ IPCC. Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. (2007).

² Stern Review: The Economics of Climate Change. (2006). www.sternreview.org.uk.



NOAA/national Climate Data Centre

The 14 recommendations in this strategy are aimed at all levels of governance, including European institutions, national governments and regional and local authorities. The strategy also includes additional messages for specific governance levels where appropriate.



Digital millennium map partnership 2006

1 Make climate change adaptation a core objective of spatial planning.

Create a robust policy framework for integrating climate adaptation into spatial planning to show what should be done and by whom.

- **E:** Adopt a clear policy on climate adaptation through the Green Paper/White Paper process. Make a Commissioner responsible for ensuring climate adaptation is incorporated into all policy frameworks. Make the Court of Auditors responsible for checking compliance with climate adaptation objectives.
- **N:** Develop a National Climate Adaptation Plan showing how the national spatial planning system will ensure adaptation to climate change. Support the plan with a set of strong policies and effective fiscal and legal instruments to deliver adaptive spatial planning and development control at regional and local levels.

- **R:** Develop cross-cutting policies on climate adaptation in spatial plans and fully integrate climate adaptation into the development of sectoral policies. Develop an action plan with a co-ordinated list of measures addressing all stakeholders and helping to deliver climate adaptation policies.
- **L:** Develop cross-cutting policies on climate adaptation in spatial plans and integrate climate adaptation into the development of sectoral policies. Involve communities and the private sector in decisions on how to incorporate climate adaptation into spatial plans.

E: European institutions
N: National governments
R: Regional authorities
L: Local authorities

2

Look beyond the lifetime of your plan by understanding your climate risks.

Keep your future adaptation options open by developing an understanding of changing climate risks over the long-term (100+ years) and incorporating this knowledge into the spatial planning process.

Remember to address how adaptation of existing land-use in vulnerable locations can be managed in the longer-term.

- **E:** Encourage member states to develop 'route maps' for addressing climate risks through the next 100 years.
- **N:** Develop an understanding of climate risks over the long-term and incorporate this knowledge into the national spatial planning process.

- **R:** Encourage the development and land management sectors to adapt to long-term climate risks, inviting them to come up with innovative solutions.

- **L:** Remember to take account of long-term climate impacts in development control decisions.

TU-Berlin, PIK, Marc Zebisch, Marc.zebisich@eurac.edu



Jill cook, ESPACE

TU-Berlin, PIK, Marc Zebisch, Marc.zebisich@eurac.edu

3 Combine change and risk management approaches for integrating adaptation into spatial planning:

- Managing Change - processes for establishing the right governance and management for instigating and sustaining action.
- Risk Management - processes for integrating climate risks into policy-making and identify appropriate adaptation measures.

These two complementary approaches must work together to ensure that adaptation is firmly embedded into spatial planning.

Change management

Spatial planning requires strategic change management both internally, within organisations developing and influencing spatial planning, and externally, with the people their plans will affect. Change management needs a balance of awareness, agency and association, to ensure long-lasting action. People are more likely to move from 'action' to 'awareness' than the other way around so it is useful to engage with people on climate change through actions they are already undertaking.

- 'Awareness' is needed of the risks and opportunities posed by climate change, the impacts it will have, and of what action is required to address them. However awareness alone will not bring about the necessary changes.

- 'Agency' is the sense that actions on climate change are meaningful to those undertaking them.
- 'Association', through groups and networks, encourages people to act on climate change issues.
- 'Action and reflection' processes are needed to help address the key barriers that arise in integrating climate adaptation into spatial planning systems.

Risk management

Embed climate risk management into the processes, procedures and guidelines that are currently used in spatial planning, especially Strategic Environmental Assessments and Sustainability Appraisals, using the following risk management process:

- Identify the objectives of the spatial plan,
- Assess current and future climate risks to achieving these objectives,
- Evaluate the effectiveness of adaptation policies and measures to manage risks to acceptable levels,
- Decide on which adaptation policies and measures to adopt in the spatial plan,
- Communicate to stakeholders the consequences of adaptation policies and measures and explain the consequences, including costs, of failing to act.



Jill Cook, SPACE



Jill Cook, SPACE

The three key principles outlined in the preceding pages can be implemented as follows:

4 Ensure an integrated approach to adaptation – both within an organisation and in partnership with others.

Internally, embed climate adaptation into strategic and operational planning across the whole of an organisation, not just the environment department, to provide the internal context that enables adaptation of its spatial planning functions.

Externally, work together with all organisations involved in spatial planning (e.g. managers of water, health, transport, agriculture and regeneration issues) to assess climate risks and identify appropriate adaptation responses in spatial planning. Work together to develop an understanding of where policies, legislation or actions are constraining progress and what is needed to create solutions. Where other systems operate that influence spaces and how they function, make the linkages between them and the spatial planning system.

5 Review existing plans, policies, directives, regulations, legislation, codes of practice and guidance related to spatial planning as soon as practicable and amend them to ensure they are effective in delivering, rather than hindering, climate adaptation. As new plans, policies etc are developed, use change management and risk management processes, along with the latest knowledge about climate change, to ensure their effectiveness in delivering adaptation.

6 Fund appropriate research on climate risks to inform the spatial planning process at an early stage. Translate technical and scientific research into practical information, showing how climate change will affect spatial planning, political and business objectives and demonstrating the benefits of adaptation. Commission research with other stakeholders on climate risks and their management at different levels and share it with spatial planners at all levels.



Alex Cruickshank



South East England Regional Assembly

Bayerisches Landesamt für Umwelt



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7 Assess the vulnerabilities to, and opportunities from, changing climate across all spatial planning policy areas. Work with politicians and communities to determine the acceptable levels of climate risks.

8 Identify spatial planning policies and measures to manage the risks identified in the vulnerability analyses. When appraising a plan, ensure that appropriate weight is given to climate adaptation policies and measures compared to other issues of importance to the spatial plan's objectives. Manage the inherent uncertainties in climate change by including a mix of policies and measures that do one or more of the following:

- Pay off immediately under current climate conditions,
- Have multiple benefits that contribute to climate adaptation,
- Are low-cost but have potentially large benefits under climate change,
- Are flexible and resilient.

9 Assess the level of climate adaptation provided by the spatial plan as a whole. Make sure that the individual policies in the plan 'add up' to deliver appropriate levels of adaptation. Test the robustness of the plan against average and extreme climate change scenarios. Identify indicators of climate adaptation that can be used to monitor the success of the plan in fulfilling the adaptation objectives.

10 Implement the adaptation policies in individual planning/development decisions and explain clearly to stakeholders what the residual climate risks will be, after the adaptation measures identified have been put in place. Communicate residual risks in language that can be understood by non-experts.

- **L:** Engage with communities concerning their responsibilities for addressing climate adaptation, since spatial planning can not provide the public with '100% protection'. Provide communities and the private sector with information on practical adaptation actions that they can undertake to manage residual risks.

Ministerie van VROM



West Sussex County Council



11 Develop ambitious long-term solutions to address the challenges that climate change poses to existing, unadapted development and other land uses:

- Recognise that previously developed land may not be suitable for new development in the longer-term as climate risks intensify,
- Identify existing settlements, infrastructure and other critical assets that are vulnerable to climate risks and devise strategies for relocating them over the longer-term,
- Provide time-limited planning permission for new developments in locations that may not be sustainable in the longer-term.
 - **E:** Consider time-limited (60 – 100 year) designations under the Habitats and Birds Directives. Include climate risks more explicitly in European funded programmes (e.g. Structural Funds and Common Agricultural Policy).
 - **N:** Develop legal and fiscal instruments so that retrofitting of adaptation measures to existing development can be achieved.

12 Foster ‘climate adaptation champions’ who have a key role in creating and sustaining momentum on climate adaptation initiatives. A healthy ecosystem of champions should be developed, including both politicians and technicians within spatial planning and other organisations, as well as community groups. By working in association, they can be more effective.

13 Politicians must accept that climate change requires long-term perspectives in policy-making – longer than political mandates. They need to be pro-active in policy-making on climate risks, anticipating future trends over the next 100 years. Reactive policy-making in response to extreme climate events is not a sustainable approach, given that climate change is causing gradual changes in average climatic conditions, as well as changes in extreme events (such as floods, heat waves and droughts). Politicians must ensure cross-departmental working on climate adaptation and where appropriate, they need to promote legislation on climate adaptation in spatial planning. They must take account of climate change policies when considering individual planning applications.

Concluding remarks – an ongoing process

- 14** Adopting the change management and risk management processes described in this strategy will provide a first step in adapting spatial planning processes to take account of changing climate risks. However, in line with good practice in policy-making, **spatial plans and adaptation measures must be reviewed and revised**

regularly if they are to be effective over the longer-term. Since knowledge of climate change is evolving fast, it is important that plans are reviewed against the latest climate change information, to ensure that they continue to protect communities appropriately against climate risks and are able to take advantage of any opportunities that climate change may bring.

TU-Berlin, PIK, Marc Zebisch, Marc.zebisch@eurac.edu

Jill Cook, ESPACE



South East England Regional Assembly

The ESPACE Partnership



Waterschap Rivierenland



Bayerisches Landesamt für Umwelt



www.espace-project.org



Alex Cruickshank

ESPACE Project
The Environment Department
Hampshire County Council
The Castle
Winchester SO23 8UD
United Kingdom

Tel: +44 (0)1962 846775

E-mail: enquiries.espace@hants.gov.uk



The final strategy, policy guidance, tools and case studies were developed in close collaboration with Acclimatise.

Funded by

