20 – 21 June 2011

Tools & Measures

1st Cluster Expert Board (CEB)

SIC adapt!

Overview about the participating projects in the CEB1 meeting

Climate change cooperation

projects at a glance

Investing in Opportunities

This project has received European Regional Development Funding through INTERREG IV B.

nwe

INTERREG IVB

Climate change cooperation
projects at a glance

SIC adapt!

The Cluster

The Cluster projects

Related projects

Investing in Opportunities

This project has received European Regional Development Funding through INTERREG IV B.

INTERREG IVB

Key Facts

Programme:
6th Call for Proposals, Priorities 2 and 4

Budget:
~ 880.000 EUR (100 % ERDF)
Project implementation:
Sept. 2010 - June 2013

8 approved projects are constituting the cluster:

1 Adaptive Land Use for Flood Alleviation (ALFA), Lead P. (LP): Rijkswaterstaat, NL
2 Adaptation of the Meuse to the Impacts of Climate Evolutions (AMICE), LP: EPAMA, FR
3 Changing Climate - Changing Lives (C-CHANGE), LP: Groundwork London, UK
4 FloodResilienCity (FRC), LP: Rijkswaterstaat, NL
5 Transnational Forestry Management Strategies in Response to Regional Climate Change Impacts (ForeStClim), LP: Landesforsten RP, DE
6 Future Cities - urban networks to face climate change, LP: Lippeverband, DE
7 Innovative Management for Europe's Changing Coastal Resource (IMCORE), LP: National University of Ireland, IE
8 Water Adaptation is Valuable for Everybody (WAVE), LP: Waterschap R en D, NL

Around 100 project partners from 7 Member States of the NWE Programme Area

Contact

www.sic-adapt.eu

Cluster Leader:
Lippeverband, Germany
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Strategic Initiative Cluster: Adaptation to the Impacts of Climate Change

Cluster Summary

The INTERREG IV B North-West Europe (NWE) Programme acknowledges adapting to the impacts of climate change as one of the most fundamental challenges for territorial development in the programme area.

Through the Strategic Initiatives Cluster, "Adaptation to the spatial impacts of climate change", eight transnational approved projects with almost 100 project partners combine their efforts for promoting and achieving effective climate adaptation throughout NWE.
The aim of the cluster is to:

- establish and promote measures,
- call for action and to
- share knowledge

for efficient adaptation to the expected spatial impacts of climate change in NWE.

In addition to the transnational cooperation inherent the cluster will:

- strengthen the impact of each project, especially at higher policy levels
- foster implementation of adaptation measures by widely tested and known good practice examples for regions with similar impacts
- encourage policy recommendations for a stimulating policy framework especially for the NWE regions
- ensure that the outputs from the projects illustrate how existing management instruments can be tailored to facilitate adaptation across a range of sectors and locations
- enhance projects' results
- avoid duplication beyond national boundaries
- increase promotion of the adoption of adaptation measures.

	***SIC adapt!*: Main focus of addressed spatial categories**			
	Built environment	**Water environment**	**Nature environment**	**Social environment**
Future Cities	Future Cities	Future Cities		
ALFA		alfa	alfa	
AMICE		amice	amice	
C-Change	C-Change			C-Change
FRC				
ForeStClim				
IMCORE		IMCORE		IMCORE
WAVE		WAVE	WAVE	

Selected Outputs

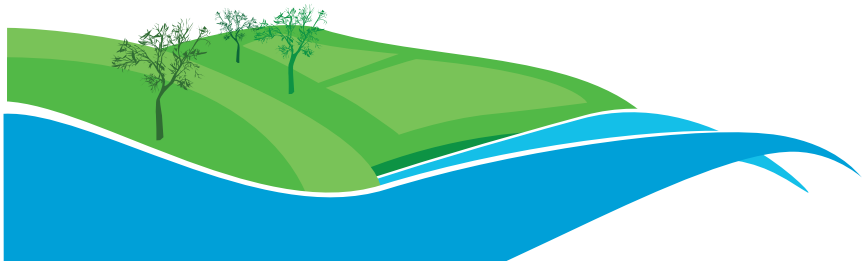
- Review of different strategies and tools for assessing the spatial impacts of climate change
- Catalogue of measures / actions to adapt to climate change in NWE
- Enhanced individual projects' outcomes by cluster partnership networking
- Common policy recommendations and messages from the 8 projects involved
- Presentation of joint results on a web-based network knowledge platform

Why Is This Cluster Needed? Voices From the Programme:

"A strategic impact can be achieved by the coordination of actions of different regular projects."

"… the cluster experiment could (…) be used to monitor how clusters have a positive impact on project implementation."

"There needs to be active cooperation, not just discussion, among the projects in order to have a strategic impact."



ALFA P.O. Box 9070 6800 ED Arnhem Netherlands

ABOUT ALFA

ALFA stands for 'Adaptive Land use for Flood Alleviation'.

It is an EU-funded project (INTERREG IVB NWE) which aims to protect citizens in the North West Europe region against the effects of the risk of flooding due to climate change. This will be done by creating new capacity for water storage or discharge of peak floods within river catchments in Belgium, France, Germany, United Kingdom and The Netherlands.

Partners of the ALFA project can learn from each others' flood management approaches and land use concepts. The project focuses on flood adaptation measures and interventions in one area to protect another area which is more vulnerable from an economic, social and/or ecological perspective. The vulnerable area can be either an urban or a rural area, situated up- or downstream of the project area.

New capacity for water storage or discharge will reduce the impact of climate change effects. For example, new floodplains will be created in areas that have not been flooded recently. These project areas will only be flooded in extreme situations to protect citizens in more vulnerable areas up- or downstream from the project areas. Therefore, the present land use functions in these areas will be retained as much as possible. Optimal combinations have to be found between river and other functions, such as agricultural land use, recreation and nature preservation or development.

AIM OF THE PROJECT

The ALFA project aims at protecting citizens in the North West Europe region against the effects of (the risk of) flooding due to climate changes.

All partners face the same problems and challenges due to climate change: creating new flood plains, their effects for inhabitants and their effects for the landscape. The technical adjustments that have to be made are also relatively new for all partners. Via transnational cooperation in developing and implementing policy measures in the project areas, knowledge and experiences will be shared between the six river catchments.

The project aim can be broken down into three objectives:

- To develop and implement innovative technical solutions for increased capacity for water storage or discharge in the project areas.
- To raise awareness and increase solidarity between citizens in upstream and downstream areas within river catchments in Europe through public involvement measures.
- To optimise social, economic and ecological benefits by preserving the current land use function in the project areas and combining this with desirable and suitable new functions, such as nature and recreation.

ACTIVITIES

The timeframe of the ALFA project runs from 1 January 2007 until 31 December 2013.

There are three types of activities in the ALFA project:

- Regional cases with measures and investments in each partner regions to make the river catchment areas safer and healthier.
- Transnational meetings between the partner regions to benefit from each other's knowledge and experiences. For example road shows, intervision, thematic workshops and staff exchange.
- National symposia to show the project results to external target groups.
  The ALFA project will be concluded with a final conference in 2013.

EXPECTED RESULTS

Planned outputs of the ALFA project are:

1. **Innovative technical solutions for increased water storage capacity or discharge:**
   - Management concepts to combine river and other land use functions
   - Technical water management measures
   - Innovative solutions for water storage/discharge capacity
2. **Public involvement measures:**
   - Communication concepts for dialogue with inhabitants and stakeholders
   - Information and educational schemes
   - Methods to create up-/downstream solidarity between stakeholders
   - Methods to compensate stakeholders
3. **Social, economic and ecological benefits:**
   - Measures to protect and rehabilitate ecological values
   - Measures to develop and maintain the economic potential of temporary flooded areas by combining land use functions
   - Spatial planning tools to reduce damage potential of flooding
   - Land use concepts and recreational facilities

PILOT PROJECTS

The ALFA project partners are situated in six river catchments:

- Eden (United Kingdom)
- Emscher (Germany)
- Kleine Nete (Belgium)
- Meuse (The Netherlands)
- Rhine (Germany)
- Seine (France)

To make these river catchment areas a safer and healthier place to live and work several measures and investments are planned in each partner region.

PARTNERS

- Programme Directorate Room for the River of the Directorate General for Public Works and Water Management (NL)
  (www.ruimtevoorderivier.nl)
- Flemish Environment Agency (BE)
  (www.vmm.be)
- Emschergenossenschaft (DE)
  (www.portal-eglv.de)
- Struktur- und Genehmigungsdirektion Süd (DE)
  (www.sgdsued.rlp.de)
- Interdepartmental Institute Grand Lacs de Seine (FR)
  (www.iibrbs.fr)
- Eden Rivers Trust (UK)
  (www.edenriverstrust.org.uk)

Adaptation of the Meuse to the Impacts of Climate Evolutions

Climate evolutions impact the Meuse basin creating more floods and more droughts. The river managers and water experts from 4 countries of the basin join forces in this EU-funded transnational project to elaborate an innovative and sustainable adaptation strategy. The project runs from 2009 through 2012.

Objectives

- Defining a common strategy of adaptation to the impacts of Climate Change on floods and droughts, recognized at the scale of the international river basin of the Meuse. Climate scenarios for the time periods 2020-2050 and 2070-2100, existing measures, on-going projects as well as the Floods Directive (2007/60/EC), will be taken into account in the elaboration of the strategy.

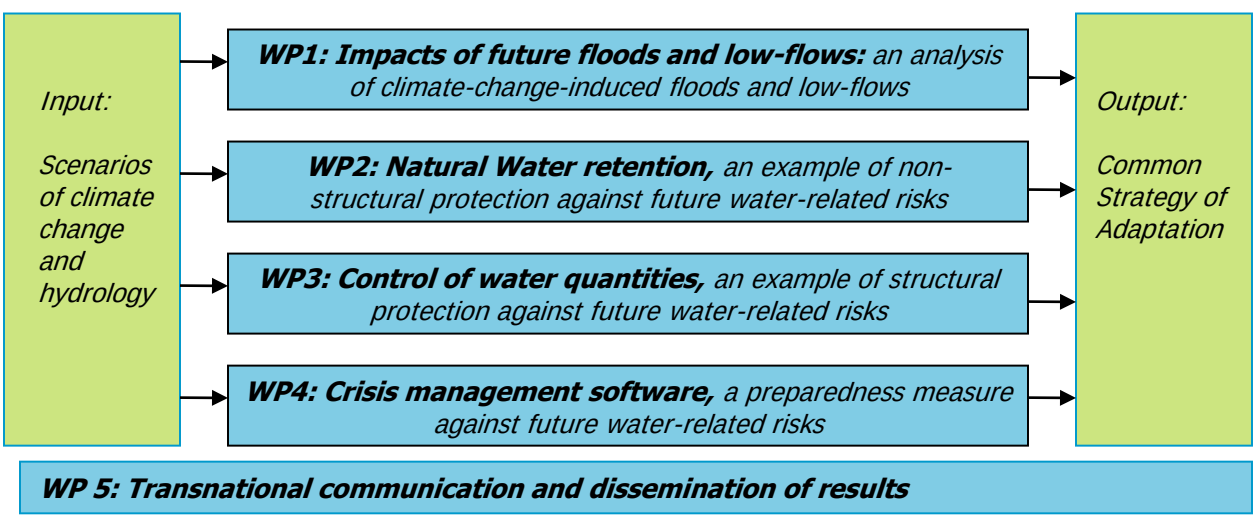
- Realising a set of measures beneficial and transferable to the whole Meuse basin.

- Strenghtening and widening the partnership of stakeholders in the international Meuse basin.

- Involving the population and the public bodies through a better knowledge and the feeling of belonging to the Meuse basin, as well as the consciousness of flood and drought risks.

Expected outputs

- Definition of scenarios, shared at the scale of the international basin, related to climate change and extreme discharges;
- Realization of a first hydraulic simulation of the river and its associated risk maps;
- Identification of hot spots, i.e. sectors and water uses threatened by future floods and droughts : definition of the cost of inaction ;
- Definition of a shared adaptation strategy ;
- Three technical reports, one interactive documentary and a website, eight site visits ;
- Definition of new management rules for the dams of the Rur, tributary of the Meuse (Germany) ;
- Reduction of the floodability, renaturation of cropland and creation of reservoirs for multi-purposes (Wallonia and the Netherlands) ;
- An innovative system of pumps and powerstation for the reduction of water consumption in the Meuse (Flanders) ;
- An international exercise on flood crisis management based on the software OSIRIS and FLIWAS ;
- An international event for the sharing and transfer of the project's results.



The Partnership

The AMICE project involves 17 partners from the Meuse basin. The International Meuse Commission hosts the Partners' meetings of the AMICE project and acts as an observer.

France

EPAMA (Public Establishment for the Management of the Meuse and its tributaries), also **Lead Partner** of the AMICE project;
Université de Metz – department CEGUM (Centre for Geographical studies);
CETMEF (Institute for Maritime and Inland Waterways).

Belgium - Wallonia

Région Wallonne, through the cross-disciplinary working group on floods (GTI);
Université de Liège – Department of Hydrology, Applied Hydrodynamics and Hydraulic Constructions (HACH) & Aquapôle;
Gembloux Agro-Bio Tech – department Hydrology and Hydraulics;
Municipality of **Hotton**;
Agence Prévention et Sécurité (APS).

Belgium - Flanders

nv De Scheepvaart, manager of the channels for water transport and drink water production;
Waterbouwkundig Laboratorium, the research center for hydraulic sciences in Antwerp;
RIOU asbl, association for communication and renaturation.

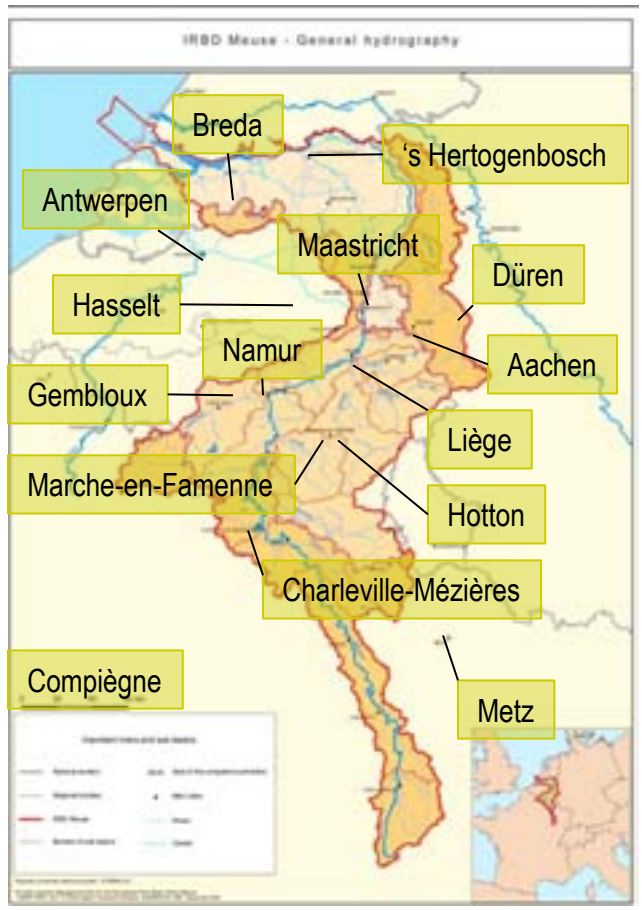
Germany

WasserVerband Eifel-Rur, manager of the Rur tributary;
RWTH Aachen Universität:
Lehrstuhl und Institut für Wasserbau und Wasserwirtschaft : the institute of hydraulic engineering and water resources management;
Lehr- und Forschungsgebiet Ingenieurhydrologie: the academic and research department engineering hydrology.

The Netherlands

Rijkswaterstaat (Ministry of Transport, Public Works and Water Management) is involved through two of its departments: ***Waterdienst*** and ***Limburg****;*

Waterschap Aa en Maas and
Waterschap Brabantse Delta,
water authorities in the Province of Noord- Brabant;
water managers of the sub-basins among the 5 of the Meuse basin in the Netherlands.



The budget

The AMICE application form was approved on the 3rd call for projects of the INTERREG IV B Programme on the 5th of December 2008; 2,8 M€ ERDF were granted to the project.
The total budget of the AMICE project is nearly 8,9 M€ .

The NWE INTERREG IV B Programme

The Programme funds innovative transnational actions that lead to a better management of natural resources and risks, to the improvement of means of communication and to the reinforcement of communities in North-West Europe.
www.nweurope.eu

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Changing Climate, Changing Lives

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www.cchangeproject.org

C-Change

Changing Climate, Changing Lives

Who are we?

C-CHANGE is a transnational territorial cooperation project funded under Priority 4 of the European Union's INTERREG IVB Programme. The C-CHANGE Partnership incorporates national, regional and local government players representing city regions with major economic significance in Europe. It is led by Groundwork London, an NGO internationally recognised as an expert in the field of engaging communities in sustainable development through environmental action. The partners are:

- Groundwork London (UK)
- The Greater London Authority (UK)
- Ministerium für Umwelt des Saarlandes (Germany)
- Planungsverband Ballungsraum Frankfurt Rhein-Main (Germany)
- Ministère du Développement durable et des Infrastructures Département de l'aménagement du territoire (Luxembourg)
- Dienst Ruimtelijke Ordening Amsterdam (Holland)
- Forestry Commission (UK)
- Provincie Gelderland (Holland)
- Région Île-de-France (France)

The C-Change partner regions

What does C-Change aim to do?

"We will engage with citizens, practitioners and policy makers to facilitate changes in behaviour, land use and policy that will help to 'climate proof' our cities now and in the future".

C-Change has three thematic strands:

I. Community Engagement & Behaviour Change

C-Change will not only inform but truly involve different communities in all Partner Regions in its projects. The projects demonstrate how changes to both our local open spaces and to our day-to-day behaviour can help our city regions cope with a changing climate. Many of our engagement projects will see young people taking the lead and becoming a catalyst for change right in the heart of their communities.

2. Creating Multi-functional Spaces

Our Regions' open spaces can be adapted to provide practical responses to climate change such as managing rising temperatures, preventing flooding, reducing CO2 emissions and improving the quality of life for us all in many other ways.

C-Change will deliver a number of multi-functional open space adaptation projects in the Partner Regions. From green roofs to community food growing spaces, these projects will provide a focus for engaging different communities, professionals and politicians, help promote the climate change agenda to a wide audience and demonstrate the enormous potential of open spaces in helping our cities cope with the negative effects of climate change.

3. Adapting Spatial Planning Strategies

C-Change will enable all its Partner Regions to examine their spatial planning strategies and adapt them in response to the challenges posed by climate change. The projects will identify the potential social and economic impacts of climate change for each Region and help planners and other relevant professionals develop a sound understanding of how their work can respond to these challenges.

Each theme has a 'Work Package' comprising of demonstration projects and a programme of transnational learning activities involving all partners. We believe that the integration of all three thematic responses is key to 'climate proofing' our cities.

How will we work together?

Transnational learning

Each partner is actively involved in every theme, through the Expert Joint Planning Groups (EJPGs). These interactive transnational groups are at the heart of the project, enabling all partners to learn from each other's experiences and steer the implementation of the practical and strategic responses to climate change in each Work Package.

With the involvement of a range of professionals from all partner regions (planners, landscape architects, community and youth workers, experts in renewable energy, communications, education and behaviour change) the EJPGs utilise this international expertise to contribute to the design, on-going review and evaluation of the C-Change projects and Work Packages.

Using this methodology, individual projects can have far reaching impacts. Good practice, strategies and policy tested and demonstrated by the Partnership will be publicised and promoted with a view to wider implementation in other cities and countries in Europe.

Find out more

The C-Change website gives you access to live project updates, news of C-Change events including conferences and Expert Joint Planning Groups (EJPGs) and project resources and materials for you to download. The site also acts as a professional network for all those involved in C-Change across North West Europe and a wider network of stakeholders.

Stay informed

Visit the C-Change project online to learn more about individual projects, emerging themes, what works well and the lessons we learn.

www.cchangeproject.org

FloodResilienCity

FRC Postfach 9070 6800 ED Arnhem Niederlande

ABOUT FRC

FRC stands for 'FloodResilienCity'.

It is an EU-funded project which enables responsible public authorities in eight cities in North West Europe to better cope with floods in urban areas. This will be done through a combination of transnational cooperation and regional investments.

Partners of the FRC project can learn from each others' flood management and urban planning approaches, not only at the level of technological experts but even more importantly so at the level of the political decision makers and the general public.

AIM OF THE PROJECT

The FloodResilienCity project aims at integrating the increasing demand for more houses and other buildings in urban areas with the increasing need for more and better flood risk management measures in North West European cities along rivers.

Demographic resettlement and increasing populations in North West European countries has resulted in pressure on cities to build more houses. Furthermore commerce and industry constantly increase the need for building in and around cities. Conflicts can arise between urbanisation and flood risks in particular in cities.

Recent floods in European cities have shown that most cities (authorities, businesses and inhabitants alike) are insufficiently engaged in or aware of or prepared for the actual flood risks. Due to climate change the flood risks will increase further. Therefore conventional flood protection on which we have been so reliant is likely to be inadequate and unsustainable in the future. Integrated, adaptable and flexible solutions are needed to allow for climate uncertainty.

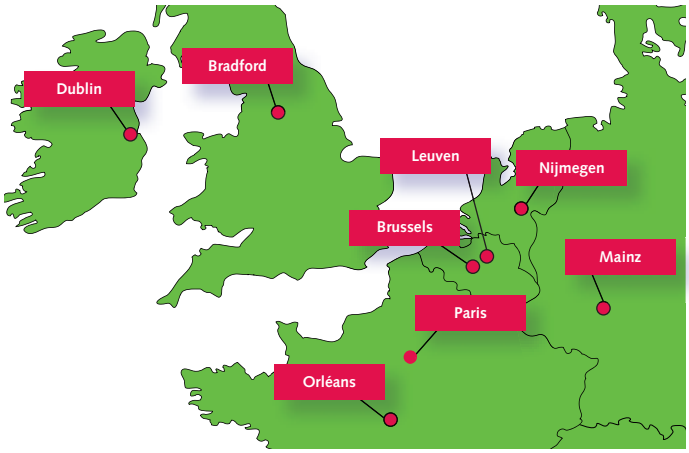
FloodResilienCity wants to turn the problem into a positive opportunity for the further development of cities in North West Europe. More room for city and water resulting in multiple benefits and a more attractive city to work and live in.

REGIONAL PROJECTS

The FloodResilienCity regional projects are located in eight cities along rivers in North West Europe:

- Bradford (UK)
- Brussels (BE)
- Dublin (IR)
- Leuven (BE)
- Mainz (DE)
- Nijmegen (NL)
- Orléans (FR)
- Paris (FR)

Several regional/local measures and investments are planned in order to make these cities better and safer place to live and work.



EXPECTED RESULTS

The FloodResilienCity project will ultimately result in better solutions, more awareness and increased capacity in flood management in the cities Bradford, Brussels, Dublin, Leuven, Mainz, Nijmegen, Orléans and Paris.

The project will activate a structural change in the mindset of the politicians, professionals and public in these partner cities. That change concerns an integrated approach in their sustainable flood risk management policies.

The main output of the FRC project is an intense cooperation between 11 partners in 8 cities in North West Europe. The regional investments deliver tangible results in each partner city. The transnational actions will prepare the ground to implement the FloodResilienCity strategy in plans and policies of each partner city.

STRATEGY

The FloodResilienCity project has chosen to apply an integrated approach to sustainable flood risk management which has been developed and tested by the Scottish Government. This approach comprises four 'A's to be addressed in flood risk management plans and policies in the partner cities: Awareness, Avoidance, Alleviation and Assistance.

The FRC strategy is to test and adapt the 4-A approach by applying it on the political, professional and public level (the 3 P-s) in the partner cities. The objectives of the FRC project are linked to this 4-A approach.

ACTIVITIES

The FloodResilienCity project runs from 1 Mai 2007 until 30 April 2012.

There are two types of activities in the FRC project:

- Transnational work packages with meetings between the politicians and technical experts of the eight partner cities to benefit from each other's knowledge and experiences
- Regional pilot projects with measures and investments to reduce flood risks in each partner city

Transnational activities and meetings comprise international conferences, international theme sessions for detailed discussions between experts, '8-cities summits' for informal discussions between politicians from the partner cities, field trips, partner staff exchanges, intervision and other project meetings.

WORK PACKAGES

Five thematic work packages, each with detailed action programmes have been defined in line with the project aim and the 4-A approach: WP1 - Awareness, WP2 - Avoidance, WP3 - Alleviation, WP4 - Assistance, WP5 - Strategy & Capacity

All partners are working together to deliver all of the actions. Each WP includes one action to compare the current practices in the involved cities and to facilitate the exchange of best practices between them with the aim to improve the cities' initiatives on that objective. WP 5 integrates the other work packages, and ultimately prepares the ground for each partner city to implement the FRC strategy in their plans and policies.

At the end of the project each city will produce a statement which will clearly define the changes in policy that they will adopt as a result of the FloodResilienCity cooperation.

Partnership

Programme Directorate Room for the River of the Directorate General for Public Works and Water Management (NL) (www.ruimtevoorderivier.nl), Flemish Environment Agency (BE) (www.vmm.be), Utility Services of City of Mainz (DE) (www.zollhafen-mainz.de), City of Orléans (FR) (www.orleans.fr), Community of Orléans City – Loire (FR) (www.agglo-orleans.fr), County Council of Loiret (FR) (www.loiret.com), The City of Paris Engineering School (FR) (www.eivp-paris.fr), The Great Lakes of the Seine (FR) (www.iibrbs.fr), Dublin City Council (IR) (www.dublincity.ie), City of Bradford Metropolitan District Council (UK) (www.bradford.gov.uk), University of Sheffield (UK) (www.sheffield.ac.uk)

WORK PACKAGES

Team C Climate Scenarios

The regional effects of climate change will vary considerably.
Team C calculates regional scenarios for the ForeStClim experimental sites and provides an important base for the other ForeStClim teams.

Chair: Dr. Klaus Görgen · Public Research Centre - Gabriel Lippmann
41, rue du Brill · L-4422 Belvaux · Luxembourg · Tel. +352 (0)470261-461 · goergen@lippmann.lu

Team D Development of forward-looking tools

Team D develops climate-dynamic planning instruments.
Among others, they will serve to detect changes in site quality, tree growth, tree species competition or exposure to biotic risks and windthrow.

Chair: Prof. Dr. Frank Thomas · Institut für Geobotanik · Universität Trier · Behringstr. 21 · 54296 Trier Germany · Tel. +49 (0)651/201-2236 · thomasf@uni-trier.de

Team M Management Strategies

Based on the project results, Team M develops forest management and protection strategies. They will show how existing concepts can be extended and improved in order to enable ecologically as well as economically stable forests also in the future.

Chair: Dr. Ir. Luc Boerboom · International Institute for Geo-Information Science and Earth Observation (ITC) · P.O.Box 6 · 7500 AA Enschede · The Netherlands · Tel. +31 (0)53 4874 247 · boerboom@itc.nl

FORESTCLIM PROFILE

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INTERREG IVB

Programme
INTERREG IVB North West Europe (NWE)

Duration of the Project
01.01.2008 - 31.12.2012

Financial Support for the Project
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Title photo Josef Steiniger

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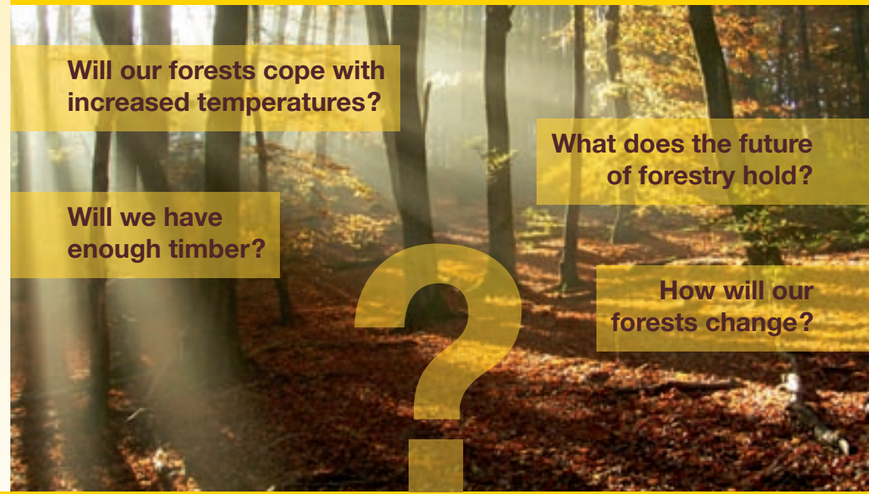
ForeStClim

Transnational Forestry Management Strategies in Response to Regional Climate Change Impacts



MOTIVATION

High population densities, strong economic activities and climate change, place natural environments in North West Europe (NWE) under increasing pressure. The sustainable management of these natural resources is of vital importance for the advancement of the entire NWE zone.

Forests cover about 17.4 million hectares of NWE and, as long-lived ecosystems, will be especially vulnerable to the effects of climate change. Adaptation strategies are necessary to preserve the present diversity of forests and to use them sustainably in a changed climate.

ForeStClim is an environmental project concerned with forests and climate change, and is supported by the European Union. Partners from 21 organisations across the UK, Germany, France, The Netherlands, and Luxembourg are combining efforts to develop transnational forest management strategies for the future.

PARTNERSHIP

OBJECTIVES

ForeStClim aims to strengthen the ecological and economic stability of North West Europe's forests through producing recommendations for trans-nationally harmonised forest management and protection strategies.

ForeStClim examines the consequences of climate change on

- tree growth
- tree species composition (competition)
- site changes (water, carbon)
- forest functions (e.g. flood protection)
- silvicultural targets (high grade wood, energy wood)

The results will feed into a newly developed decision support system for forest owners, administrations and policy makers. This system is designed to highlight the respective ecological and economic consequences of different silvicultural strategies, and will thereby help to minimise risks associated with decisions.

The utility, protection and recreational functions of forests will have to be maintained under climate change conditions!

Germany

Landesforsten Rheinland-Pfalz

kontext U

Universität Trier

Technische Universität München

France

Association Syndicale Libre
Forestière d'Allaire et du Pays de Redon et Vilaine
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56350 ALLAIRE
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sertit

United Kingdom

BANGOR UNIVERSITY

Centre for Ecology & Hydrology

MNV Consulting Ltd.

Forest Research

THE MERSEY FOREST more than trees

Benelux

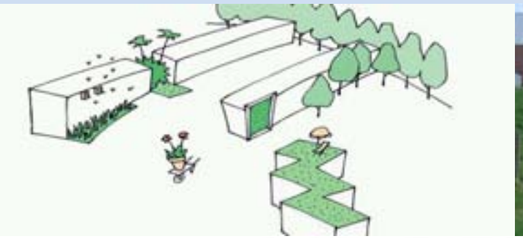
ITC

Centre de Recherche Public Gabriel Lippmann

VERENIGING NEDERLANDS CULTUURLANDSCHAP

The green transformation of Nijmegen, NL

The third aspect where Future Cities is working on solutions, is the town as a whole. In the Netherlands Nijmegen is initiating radical measures as part of a climate campaign entitled “Green Attacks on the Town”. The green transformation of Nijmegen comprises the systematic greening of roofs, facades, urban squares and streets. Follow-up monitoring studies will investigate what positive effects on the urban climate can be achieved in reality.



The systematic greening of Nijmegen’s housing stock

The town of Ieper is being made sustainable – with the participation of many stakeholders.

The climate town of Ieper, BE

The Belgian town of Ieper will be initiating a pilot project combining the water economy with green structures. 7 ha of mixed area will be ecologically redeveloped, as will be the water economy. Further themes like waste processing will then be included. Planners are placing a particular emphasis on including decision-makers in their considerations: construction techniques leading to sustainable towns are often already known, but these have to be implemented by the right persons at the right time.

The green-blue corridor at the Heerener Mühlbach, DE

Natural waters have a positive effect on urban climates. However, this is not the case with waterways which have been heavily affected by urban activities like the Heerener Mühlbach in Kamen. The Lippeverband intends to redevelop the waterway into a quasi-natural river. A preventative high-water protection will be linked with a decentralised rainwater economy. In addition, planned screening measures will help to reduce heat accumulation in summer.

Urban waters offer a high potential to improve the climate in towns.

Heat island effects: a model for Arnhem, NL

Alongside flooding caused by extreme levels of rainfall, urban heat islands are a second result of climate change which need urgent attention. The city of Arnhem is developing a model which allows it to illustrate the creation and spread of heat islands. As early as the planning phase the model will be used to try out countermeasures. This will ensure that only effective measures will be implemented as a result.

The overheating of a town creates a great problem – heat accumulation must be reduced.

Exemplary buildings

Necessary actions begin with existing building stock. Badly insulated buildings require a huge amount of energy to cool them in summer, and heat them in winter.

Green roofs make a considerable contribution to insulation and cool the urban climate.

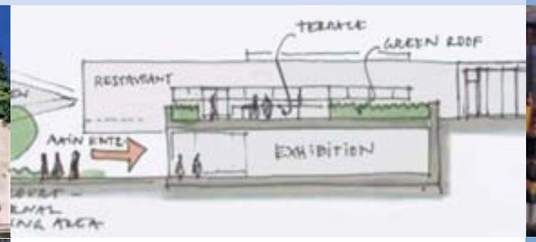
“Mobile“ green is an alternative when there is a lack of space.

Green roofs in Nijmegen, NL

As part of a climate campaign, the Dutch town of Nijmegen will be reconstructing 10 existing public buildings. Green roofs and green facades will help to cool the buildings, retain water and reduce energy needs. In addition other aspects will cover measures to reduce CO_2 emissions, and encourage water retention and air purification.

The ENVIRO21 exhibition building, UK

A good example of a new climate-conscious construction is the ENVIRO21 exhibition building in the region of Hastings / Bexhill in the south of England.



The exhibition building ENVIRO 21 will be a prototype for climate-conscious building.

The right location, an architectural design which favours a healthy climate, with natural ventilation, the use of renewable energy, rainwater systems and roof greening make this an ideal example of how to construct new buildings to face the challenge of climate change.

An exhibition of techniques and materials within the building gives visitors further insights in how to construct buildings to meet the challenge of climate change. ENVIRO21 is simultaneously a conference centre offering optimal facilities for future events dealing with sustainability themes.

ENVIRO 21 is part of a whole range of sustainable business sites.

Future Cities
urban networks to face climate change

Urban networks to face climate change

www.future-cities.eu

European Cooperation

Urban structures have to adapt to climate change.

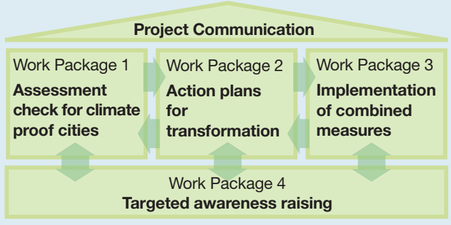
Transnational strategy

Rising temperatures and weather extremes like floods and storms endanger the quality of life in our towns and cities. Waiting and doing nothing are not an alternative – what is needed are adaptable and cost-effective solutions which have a definite effect.

The “Lippeverband” has joined forces with eight partners from five different countries to create a project entitled “Future Cities – urban networks to face climate change”. The aim of the project is to initiate the pro-active transformation of urban structures to face the challenge of climate change.

The Future Cities strategy combines three key urban key components: water systems, green structures and energy efficiency.

The project budget for Future Cities amounts to 11 million €. The EU is supporting the project within the framework of the InterregIVB programme to the amount of 5.500.000 €.



Common working packages in the project partnership

Future Cities-Partnership

Furthermore, water boards, local authorities, planning companies and project developers in north-west Europe will all be co-operating on the project until 2012. Taking into account individual national climate adaptation strategies, solutions will be developed and implemented at a local level, but these will also be transferable to other European regions. Four transnational working groups will ensure a targeted transfer of knowledge.

- Common evaluation methods for climate-adapted towns and cities (climate assessment)
- Action plans for current urban structures to enable the participating regions to adapt their strategies in a concrete manner
- Selected construction solutions in eight investments
- Awareness raising of decision-makers and multiplicators for pro-active ways of tackling problems.

Sustainable business sites

The second aspect to be considered by Future Cities is examining urban quarters. There is a special need for action in respect of old business sites.

Rouen on the River Seine

Comprehensive greening and drainage strategies for new business sites

The sustainable business site Luciline/Rouen, F

The French city of Rouen is developing the “quartier Luciline” on the banks of the Seine into a sustainable business site. The first measures to be taken concern the reconstruction of the water economy in order to deal with weather extremes more efficiently. These include decentralised percolation, water retention, landscape-greening and the aeration of the currently completely sealed 12.000 square metre area.

This reconstruction will result in considerable private investment in geothermal energy.

Dry feet for the business site in Latenstein/Tiel, NL

During very heavy rainfall water levels rise as high as the inhabitants’ houses, and in dry summer periods groundwater levels sink remarkably.

It is vital for Tiel to have secure business sites. Greening measures and intelligent surface-water economy measures are now being implemented on the business site in Latenstein.

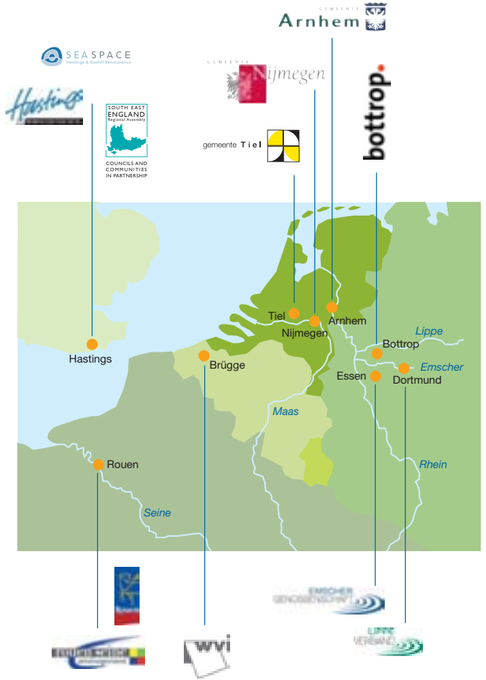
Tiel in the year 2015: the vision of a climate-proof city.

Climate-sensitive businesses on the business site in Scharnhölzstraße, Bottrop, DE

The town council aims to co-operate with local business companies to adapt the buildings on the business site to face the challenge of climate change. The “Emschergenossenschaft“ is supporting a sustainable, decentralised rainwater economy in the area. The co-operation between the town council, the water board and private businesses will enable the business site to be reconstructed in an integrated fashion.

The Scharnhölzstraße business site is adapting itself to face climate change.

Project partner



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IMCORE

INNOVATIVE MANAGEMENT FOR EUROPE'S CHANGING COASTAL RESOURCE

February 2010

IMCORE stands for Innovative Management for Europe's Changing Coastal Resource. Funded under the Interreg IVB programme. The €6m IMCORE project will be led by the Coastal & Marine Resources Centre in University College Cork until its end in November 2011.

COASTAL COMMUNITIES AT RISK . . .

Coastal zones are amongst the most dynamic and diverse ecosystems on our planet. They are also the busiest; 37% of human population lives within 100 km of the coast.

The IPCC has recognised that coastal change, induced by climate change as well as by other factors, could become a serious issue for coastal societies, especially those which are more vulnerable or less resilient to change.

TO REDUCE RISK . . . ADAPT!

IMCORE is all about building adaptive capacity to deal with coastal climate change. Nine partnerships from across North West Europe's coastal areas are developing **adaptation strategies** to address the **economic**, **social** and **environmental** implications of climate change.

Contact the IMCORE Project Manager

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Contact the IMCORE Communications Officer

Manuela de los Rios: manuela.delosrios@coastnet.org.uk

IMCORE'S 9 EXPERT COUPLET NODES

IMCORE's Expert Couplet Nodes, partnerships of **local authorities** with **research organisations**, are "learning by doing" while addressing the following adaptation **challenges** from each of the project's workpackages:

5 CHALLENGES OF COASTAL ADAPTATION

CHALLENGE 1:
Building **institutional capacity** for coastal adaptation

IMCORE is **building the adaptive capacity** of the 9 research-practice partnerships, -Expert Couplet Nodes (ECNs). The ECNs are **bridging the gap** between scientific output and the needs of local practitioners

CHALLENGE 2:
Using the **ecosystem approach** to understand the implications of climate change

IMCORE ECNs have identified **site specific issues** in their coastal area. These range from impacts on coastal protection and port industries to marine recreation and fishing

CHALLENGE 3:
Finding the right **tools** and **techniques** for planning coastal adaptation

IMCORE ECNs are testing a variety of tools and techniques to identify those that work well in different situations: **future scenarios, visualisation tools, a legal codex, a database of experiences in managing coastal risk** to mention a few

CHALLENGE 4:
Developing **adaptation strategies** or **climate-proofing** existing plans

IMCORE ECNs are developing 9 adaptation strategies based on the Future Scenario Workshops in the context of Integrated Coastal Management and Coastal Climate Change Adaptation.

CHALLENGE 5:
Involving the right people, raising **public awareness** about coastal adaptation and sharing key lessons

IMCORE ECNs have been involving stakeholders and **raising awareness** locally and transnationally. Tools,techniques, case studies and lessons learnt through the IMCORE adaptation processes will be shared through an **Online Learning Tool**

IMCORE

INNOVATIVE MANAGEMENT FOR EUROPE S CHANGING COASTAL RESOURCE

CAN WE TELL THE FUTURE?

SCENARIOS FOR COASTAL CLIMATE CHANGE

Imcore partners shared their experience and knowledge of future scenario methodologies with coastal practitioners and researchers at a workshop coordinated by Cardiff University during the Littoral 2010 conference.

Gethin While, from Glamorgan University explained: “Participants had largely never used exploratory scenarios in approaching strategy making so were on the whole very keen to have the chance to use the rich and real cases study materials supplied by the Donegal Expert Couplet Node”.For further information: www.imcore.eu/severn

HOW TO MANAGE COASTAL RISK?

FIND OVER 50 CASE STUDIES TO BE INSPIRED!

Searching for case studies has never been easier.

To learn how others are addressing the challenges of coastal risk in North West Europe just browse through the Imcore database. Using categories, tags or search mechanisms you can find a comprehensive range of well explained experiences and the contact details of those who have been managing the initiatives.For further information: www.imcore.eu/tagazan

COMING SOON . . .

- **1000 voices** on climate change from the Golfe du Morbihan
- Create your own **visualisations** of climate change scenarios
- The **Foresea initiative**: bringing people together in North East England
- **Learn coastal adaptation**: the IMCORE **online learning tool**
- Your **one stop website** for **coastal law** in Belgium

www.imcore.eu

The “TRUST” Guide

LEARN HOW TO ENGAGE STAKEHOLDERS

Envision has developed a “sweet and short” guide for coastal practitioners to learn how to effectively involve stakeholders to influence change. TRUST stands for the initials of the five step guide: Think, Reason, Understand, Share and Test. The guide quotes from a policy advisor working on the UK “Making Space for Water” programme: “Being honest and transparent with people helps to build trust from the outset. It's as important to explain what you cannot do as much as it is to explain what you can”. For further information: www.imcore.eu/durham

“THE COAST IS CHANGING,

ALWAYS HAS AND ALWAYS WILL”

Over 20% of England's sand dunes can be found in the Sefton Coast. Although coastal climate change may bring about loss of habitats and infrastructure, opportunities are also arising for tourism development. Sefton Council have been working with Secondary Schools to develop educational resources and to increase the understanding of how coasts change and the implications of this. For further information: www.imcore.eu/sefton

JOIN OUR LINKED IN NETWORK

FOR COASTAL ADAPTATION PROFESSIONALS

The Imcore partnership has created a Linked In Group to stimulate more effective communication between coastal and climate change managers and officers. Extend your networks, share information, discuss issues or announce relevant events or publications by joining our Coastal Adaptation group. It is very easy, just visit www.linkedin.com

WAVE: working towards climate-proof regional water management

Text: Magazine Het Waterschap

"How can regional water management anticipate the consequences of climate change?" Two Dutch water boards and their partners in Belgium, France, Germany and the UK have joined forces to investigate this question in the international WAVE project. WAVE stands for "Water Adaptation is Valuable for Everybody". Piet van Erp of Waterschap Regge en Dinkel is the project manager, and the European Union is covering half the costs.

"Climate change is a hot issue," says Van Erp, who previously worked with the same partners in a European cooperation project on regional water management. The focus in that project was entirely on controlling flooding in streams and rivers. "We now know that climate change can also lead to more periods of drought. Climate-proof water management has to address that problem as well, so we have extended our area of investigation," explains Van Erp.

Climate-related

The project partners have the same ideas about comprehensive water management. They also agree that adaptation to climate change creates new opportunities. And all of them are, in one way or another, working on projects that can be called climate-related. Flood protection naturally remains important. Various participants are working on the renaturation of previously canalised streams and rivers, often combined with improving the flow profile and constructing overflow areas. What is new about the WAVE project is that the partners are paying more attention to retention areas in order to combat drought.

Besides the plans themselves, the preliminary stages are also important. The partners are considering the following questions: how do we combine urban expansion with more room for the water in order to alleviate flooding and drought problems? How do we involve other public authorities, nature conservation organisations, the public and other stakeholders in our plans? What must we do and what must we avoid in order to build consensus?

These are the kinds of questions faced by all of the various partners in their everyday work. "We can make considerable progress by sharing the expertise that's been acquired at various locations in Europe," says Van Erp. "So the project also involves a number of joint activities to encourage knowledge-sharing."

Joint activities

One of the joint activities focuses on giving water management the role that it deserves in spatial planning. Although politicians and policy-makers usually say that they recognise the importance of water, they often "forget" to take it into account in their decision-making. By pooling resources, the partners can help make the advantages and risks of water a greater priority on the regional political and policy-making agenda.

A second joint activity is to conduct a region-by-region risk analysis. Each partner will analyse the vulnerability of its water systems in light of climate change predictions. Mutual consultation should help the partners tighten up their risk analysis methods. They are also working towards mutual agreement as to which risks are acceptable and which are unacceptable.

The third joint activity concerns the progress from policy to implementation. There are plenty of plans about, but how do we execute them? How do we go about running these projects? What should we do when stakeholders resist? How do we get our own public administrators to back us up? And last but not least: how do we get funding? The findings are to be collected in a manual bearing the title Towards a spatial balance between water and land use and a set of guidelines for project managers.

The final joint activity concerns dealing with emergencies. The Belgians have already set up a website that the public can consult to check on flood threats and whether a particular home or piece of property is at risk. The British have a hotline that members of the public can call for personalised information. The other partners have done nothing in this respect, but they have been inspired by the Belgian and British initiatives. They will also be comparing and discussing their safety plans.

Partnership

Do the advantages of the WAVE project weigh up against all the paperwork involved in writing project proposals, submitting timesheets and producing deliverables? "Absolutely," says Van Erp without a moment's hesitation. "The expertise generated by this project is of inestimable value for all the partners. In addition, our networks are much bigger now, and WAVE is generating a lot of publicity, so our reputation is growing with other official organisations and the public."

Van Erp is also very pleased about the EU funding. The money is naturally more than welcome, but more than that, he sees the EU's support as a seal of approval. "If you've got European funding, it means you're on the right track. It has a knock-on effect in making it easier to get funding from other potential sources," he says. "So the WAVE project is not only generating knowledge and European funding, but it is also leading to a Europe-wide network of contacts in water management." ■

WATERSCHAP Regge en Dinkel

Publication information

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WAVE Magazine is published annually and compiled by the WAVE partners:
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Case Studies

FINLAND:
- Helsinki and Helsinki metropolitan area
- Hanko
- Tampere

ESTONIA:
- West Estonian coast

LATVIA:
- North Vidzeme Biosphere Reserve
- Riga

LITHUANIA:
- Klaipeda and Klaipeda district

GERMANY:
- Mecklenburg-Western Pomerania
- Hamburg metropolitan region

DENMARK:
- Kalundborg
- Island of Falster

NORWAY:
- Bergen

Partners:

FINLAND:
- Geological Survey of Finland (GTK, lead partner)
- Helsinki University of Technology/Centre for Urban and Regional STUDIES (TKK/YTK)
- Hanko Water and Wastewater Works
- Union of the Baltic Cities – Commission on Environment (UBC)
- Helsinki Metropolitan Area Council (YTV)
- City of Helsinki
- City of Tampere

ESTONIA:
- Geological Survey of Estonia (EGK)

LATVIA:
- University of Latvia
- North Vidzeme Biosphere Reserve

LITHUANIA:
- Municipality of Klaipeda
- Municipality of the Klaipeda district
- Environmental Centre for Administration and Technology (ECAT)
- Vilnius University
- Lithuanian Geological Survey under the Ministry of Environment

DENMARK:
- Kalundborg Municipality
- Danish Board of Technology (DBT)
- Geological Survey of Denmark and Greenland (GEUS)

SWEDEN:
- Nordic Centre for Spatial Development (Nordregio)

NORWAY:
- Norwegian Institute for Urban and Regional Research (NIBR)

GERMANY:
- Leibniz Institute for Baltic Sea Research Warnemünde (IOW)
- HafenCity University/Institute for Urban-, Regional- and Environmental Planning (HCU)
- EUCC – The Coastal Union Germany
- Potsdam Institute for Climate Impact Research (PIK)

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www.baltCICA.org

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Avenue Oy 2009. Cover photo: Jari Väätäinen, GTK

Climate Change: Impacts, Costs and Adaptation in the Baltic Sea Region

Photo: Henry Vallius, GTK

PROBLEMS TO BE ADDRESSED

The BaltCICA Project is designed to focus on the most imminent problems that climate change is likely to cause in the Baltic Sea Region. The concentration of large parts of the population and many larger cities in coastal areas make the region especially sensitive to climate change. **Changes in precipitation and flood patterns as well as rising sea level can affect not only the built environment but also water availability and quality**.

Photo: Jari Väätäinen, GTK

AIM OF THE PROJECT

Adaptation to climate change cannot be solved solely locally and in isolated attempts, but calls for cooperation and integrated approaches in the Baltic Sea Region. **The BaltCICA project with local and regional partners prepares regions and municipalities to cope with a changing climate**.

APPROACH

The BaltCICA project uses climate change scenarios to discuss and develop adaptation measures with relevant planning authorities and stakeholders. The project assesses costs and benefits of adaptation in case studies and on a pan-Baltic level. Case studies results support multi-level and transnational approaches in the Baltic Sea Region.

BACKGROUND

The BaltCICA project counts with excellent science-stakeholder cooperation – the involved local partners are developing their climate change adaptation strategies within the framework of the project.

Photo: Jari Väätäinen, GTK

The BaltCICA Project is part of the Baltic Sea Region Programme 2007 – 2013. The lead partner of the project is the Geological Survey of Finland (GTK) and the partnership comprises 24 partners including municipalities, regional authorities and research institutes. Project duration: February 2009 to January 2012. Total budget: 5,3 million Euro.

Target Areas

BalticClimate activities are pilot implemented in 7 Target Areas in Estonia, Finland, Germany, Latvia, Lithuania, Russia and Sweden.

Partners

BalticClimate team is comprised of 23 Project Partners from Estonia, Finland, Germany, Latvia, Lithuania, Poland, and Sweden plus further 16 Associated Organisations, including from Russia. The five project Work Packages are transnationally managed by:

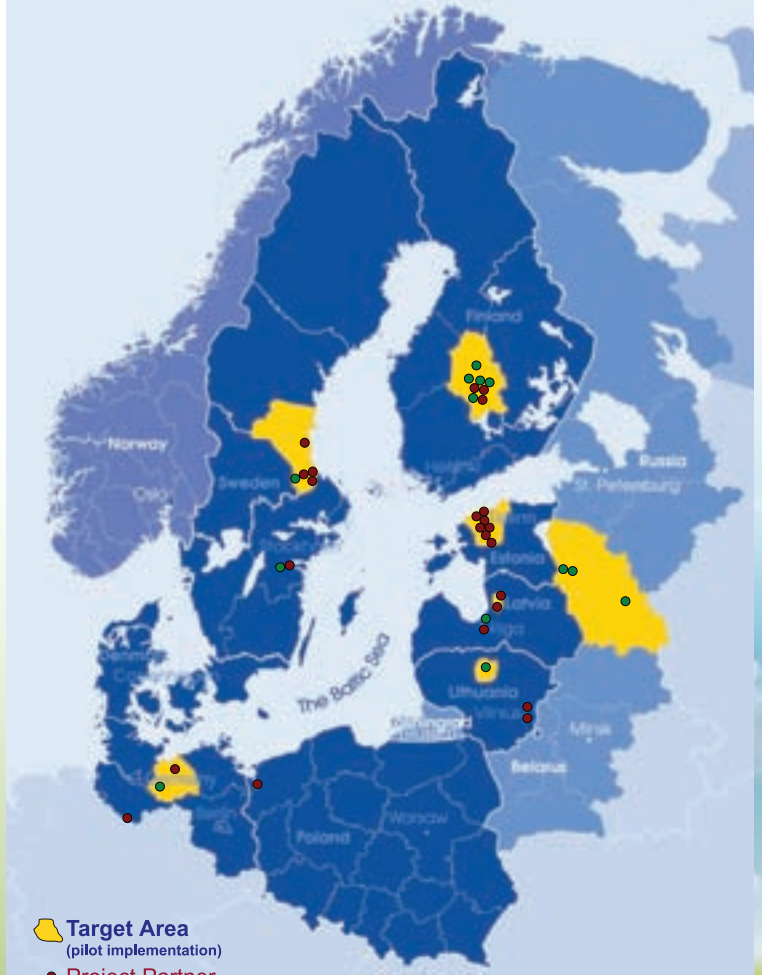
Academy for Spatial Research and Planning (ARL), Germany

Environmental Projects Ltd (State Ltd "Vides Projekti"), Latvia

Centre for Climate Science and Policy Research (CSPR), Sweden

Regional Council of Central Finland (RCCF), Finland

Stockholm Environment Institute Tallinn Centre (SEIT), Estonia



Target Area
(pilot implementation)

Project Partner

Associated Organisation

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Baltic Sea Region Programme 2007–2013
Part-financed by the European Union
(European Regional Development Fund)

BalticClimate PROJECT

Baltic Challenges and Chances for local and regional development generated by Climate Change

BalticClimate PROJECT

Aim of the project

BalticClimate works to make the climate change phenomenon understood as a challenge as well as a chance for overall and sustainable development of the economics, environment and social sector in all Baltic Sea Region countries.
The project enables municipalities, local and regional stakeholders to deal with the issue of climate change in a cooperative, integrated and sustainable way. Thus, BalticClimate makes municipalities and regions more competitive for the future to maintain and enhance the common existing identity of the Baltic Sea Region.

Duration and Budget

The project is implemented from 2009 to 2011. The budget of BalticClimate is contributed from ERDF (within the Baltic Sea Region Programme 2007-2013) as well as own contributions of all Project Partners and amounts to a total of 4,220,720 €.

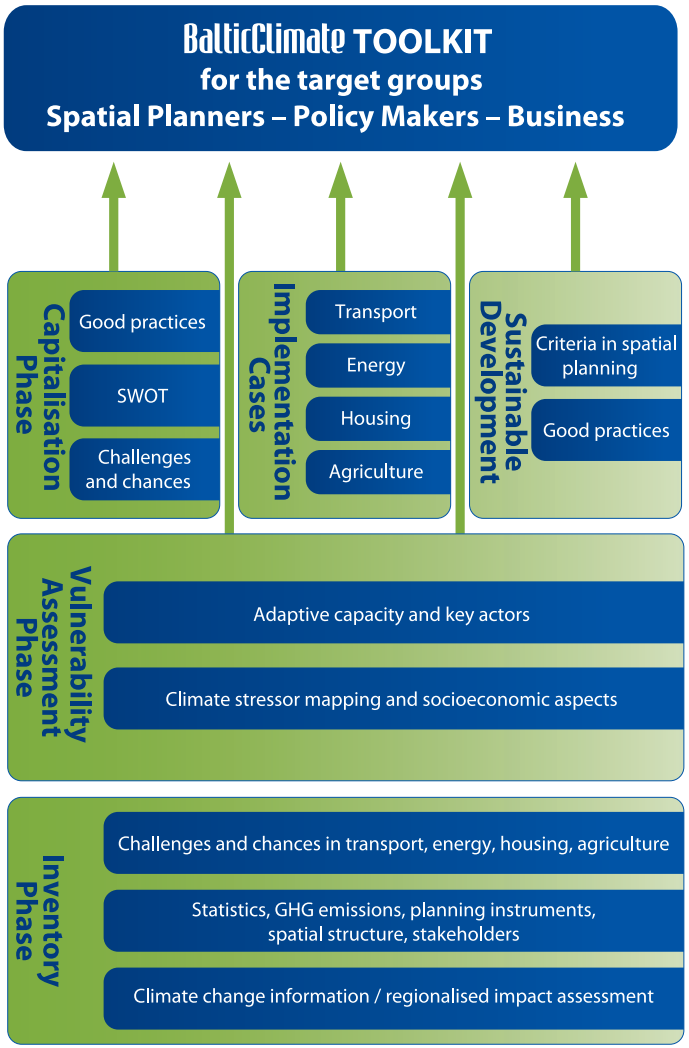
Approach

BalticClimate's project process is divided into three main stages: Inventory phase, Vulnerability Assessment phase and Capitalisation phase.
Challenges and chances generated by climate change are identified in special Target Areas and deeper analyses focus on selected Implementation Cases in the sectors of transport, energy, housing and agriculture. The development of climate change adaptation and mitigation strategies and measures takes spatial, socioeconomic, demographic, ecological and cultural factors into consideration in order to lead to an overall sustainable development in each Target Area.
Based on the activities implemented locally and regionally with scientific guidance the approach is to be generalised and integrated in a Toolkit. This central project output is characterised as

- A process-oriented pathfinder
- ICT-based
- Multilingual
- Transferable and easy to apply

The BalticClimate Toolkit will be widely distributed to be applied for free within all Baltic Sea Region countries in order to further multiply the achieved project results on local and regional level.

Enabling municipalities and local / regional stakeholders in the Baltic Sea Region to deal with climate change



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Munich | April 2009

clisp
Climate Change | Adaptation by Spatial Planning in the Alpine Space

Climate Change Adaption by Spatial Planning in the Alpine Space

www.clisp.eu

THIS PROJECT IS CO-FUNDED BY THE EUROPEAN REGIONAL DEVELOPMENT FUND

Alpine SPACE EUROPEAN TERRITORIAL COOPERATION

investing in your future

Topic Overview

Climate Change –
A Challenge for Spatial Planning

Climate change is expected to affect spatial development, including land use, socio-economic activities and life-sustaining ecosystem services, in the Alpine Space more severely than in other European regions. Temperature increase, changes in amount, distribution and intensity of precipitation, decreasing snow cover, and more severe weather extremes could cause a variety of adverse climate change impacts, but may also present new opportunities. Growing risks from water scarcity, heat waves and natural hazards (floods, landslides, storms, rockfalls, forest fires) might threaten settlements, physical infrastructure, utilities, material assets and human lives.

As a consequence, future development options may be confined and new spatial conflicts, e.g. between risk prevention and land use interests, may emerge. Doing nothing could increase vulnerability of Alpine regions and municipalities, and therewith damages and costs.

Spatial planning has major steering capacity in accomplishing adaptation, containing vulnerability and increasing resilience. However, the knowledge, procedures and tools required for fulfilling the key role in adaptation attributed to spatial planning by the EU Green Paper on Adaptation and the EU Territorial Agenda are still widely lacking.

Project Content & Objectives

CLISP –
Climate Change Adaption by Spatial Planning in the Alpine Space

CLISP is focusing on the challenges to spatial planning in the face of climate change and shall contribute to climate change adaptation by providing climate-proof spatial planning solutions. The project aims at preventing, reducing and mitigating climate-change related spatial conflicts, vulnerability of spatial development and spatial structures to adverse climate change impacts and consequential damages and costs. As climate change adaptation, including an integrated approach to adaptation and mitigation issues, is still a novel field for spatial planning policy and administration – CLISP is to be regarded as a strategic pilot project.

CLISP intends to contribute to sustainable, climate-proof spatial planning and territorial development in the Alpine Space by being committed to the following main objectives:

- Developing new climate-proof planning strategies for sustainable and resilient spatial development on transnational, national and regional level.
- Developing and applying a transferable concept and methodology of regional spatial vulnerability assessment and providing knowledge of vulnerabilities in model regions.
- Evaluating the 'climate change fitness' of spatial planning systems (legal and institutional framework, instruments, procedures) and identifying strengths, weaknesses and enhancement options.
- Promoting risk governance approaches to the management of climate-related risks by conducting risk communication activities in model regions and by investigating the performance of existing risk management systems.
- Establishing a transnational expert network on spatial planning and climate change.
- Raising awareness of policy- and decision-makers, planning authorities, stakeholders and the public for climate-related risks and the need for adaptation, stimulating implementation processes and transferring results and experiences to the entire Alpine Space and to other regions.

Project Data & Structure

Programme:
European Territorial Cooperation
Alpine Space Programme 2007–2013

Priority:
Priority 3 – Environment and Risk Prevention

Timeframe of the project:
01/09/2008 – 31/08/2011

Total project costs:
€ 2.522.990

Content – related Work Packages:

Work Package 4:
Vulnerability Assessment | Responsible: Umweltbundesamt GmbH, Abteilung Umweltfolgenabschätzung und Klimawandel, Austria

Work Package 5:
Spatial Planning Fitness | Responsible: Bundesamt für Raumentwicklung, Sektion ländliche Räume und Landschaft, Switzerland

Work Package 6:
Risk Communication & Governance | Responsible: Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, Forstsektion, Austria

Work Package 7:
Climate Proof Planning | Responsible: Amt der Steiermärkischen Landesregierung, Abteilung 16 – Landes- und Gemeindeentwicklung, Austria

Partnership

Project Partners

Umweltbundesamt GmbH, Abteilung Umweltfolgenabschätzung und Klimawandel | Austria
www.umweltbundesamt.at *Lead Partner*

Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, Forstsektion | Austria
www.lebensministerium.at

Amt der Salzburger Landesregierung,
Abteilung Raumplanung | Austria
www.salzburg.gv.at/raumplanung

Amt der Steiermärkischen Landesregierung, Abteilung 16 – Landes- und Gemeindeentwicklung | Austria
www.raumplanung.steiermark.at

Amt der Oberösterreichischen Landesregierung,
Abteilung Raumordnung | Austria
www.land-oberoesterreich.gv.at

Bayerisches Staatsministerium für
Wirtschaft, Infrastruktur, Verkehr und Technologie,
Abteilung Landesentwicklung | Germany
www.stmwivt.bayern.de

Ministero dell'Ambiente e della Tutela del Territorio
e del Mare | Italy
www.minambiente.it

Europäische Akademie Bozen
Accademia Europea di Bolzano
Institut für Angewandte Fernerkundung
Istituto per il Telerilevamento Applicato | Italy
www.eurac.eu

Provincia di Alessandria | Italy
www.provincia.alessandria.it

Urbanistični Inštitut Republike Slovenije | Slovenia
www.uirs.si

United Nations Environment Programme,
Interim Secretariat of the Carpathian Convention | Austria
www.unep.org

Bundesamt für Raumentwicklung, Sektion ländliche Räume und Landschaft | Switzerland
www.are.admin.ch

Graubünden, Amt für Raumentwicklung | Switzerland
www.are.gr.ch

Fürstentum Liechtenstein, Ressort Umwelt,
Raum, Land- und Waldwirtschaft | Liechtenstein
www.llv.li

Observers

Direction de l'agriculture, de la foret, du tourisme, et de l'environnement Région Alsace | France
www.region-alsace.eu

Ministrstvo za okolje in prostor, Direktorat za prostor | Slovenia
www.mop.gov.si

Bundesamt für Bauwesen und Raumordnung | Germany
www.bbr.bund.de

Bundesministerium für Verkehr, Bau und Stadtentwicklung | Germany
www.bmvbs.bund.de

Permanent Secretariat of the Alpine Convention | Austria
www.alpconv.org

Österreichische Raumordnungskonferenz (ÖROK) | Austria
www.oerok.gv.at

What are *dynaklim*'s goals and activities?

- Developing application-oriented measures, concepts and solutions for climate change adaptation together with stakeholders from the project region
- Interlacing stakeholders from the project region, transferring knowledge, analyzing and using adaptive capacities, organizing synergies in the region
- Implementing pilot and application projects to testing climate-robust adaptation concepts and measures
- Researching a more flexible water infrastructure and an optimized organization of water management, developing new financing models for water management
- Facilitating the alignment of regional economic development with climate change, strengthening of innovative capacities and competitiveness of the region
- Developing and sustainably implementing the **Roadmap 2020 "Regional Adaptation to Climate Change"** process

dynaklim considers itself a …

Regional network
Platform of cooperation

Research partner
Think tank

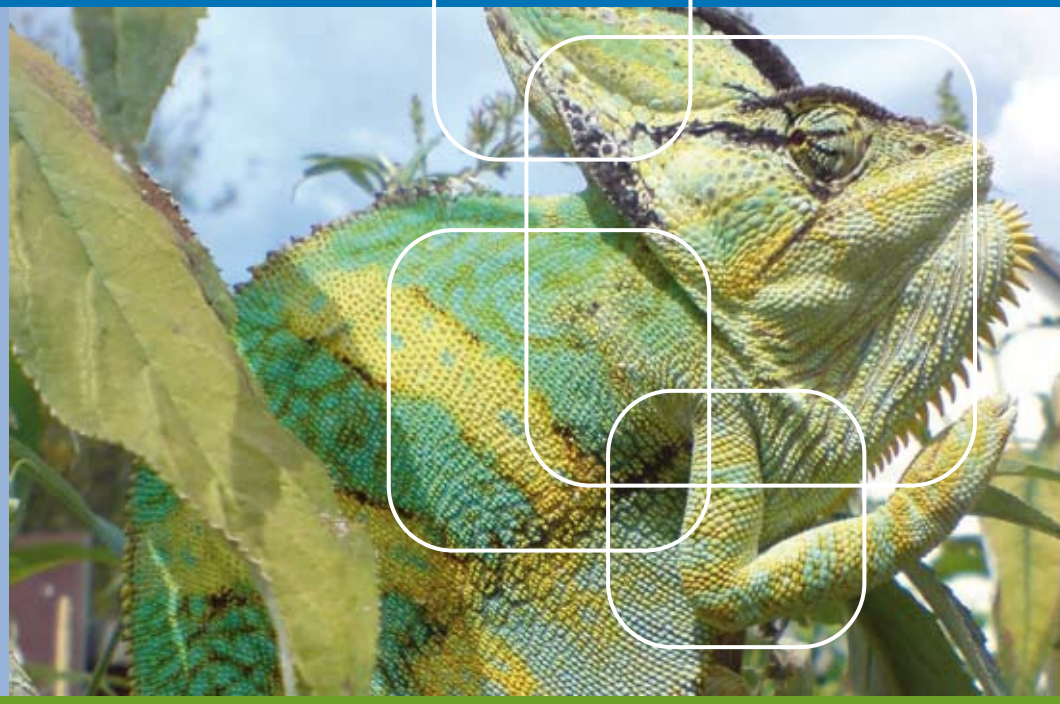
Competence partner
Knowledge manager

… of the project region Emscher-Lippe

Networking and Research Project

dynaklim

Dynamic Adaptation of Regional Processes to the Effects of Climate Change in the Emscher-Lippe Region (North Rhine-Westphalia, Germany)



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Project coordination

FiW Research Institute for Water and Waste Management at RWTH Aachen University

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www.dynaklim.de

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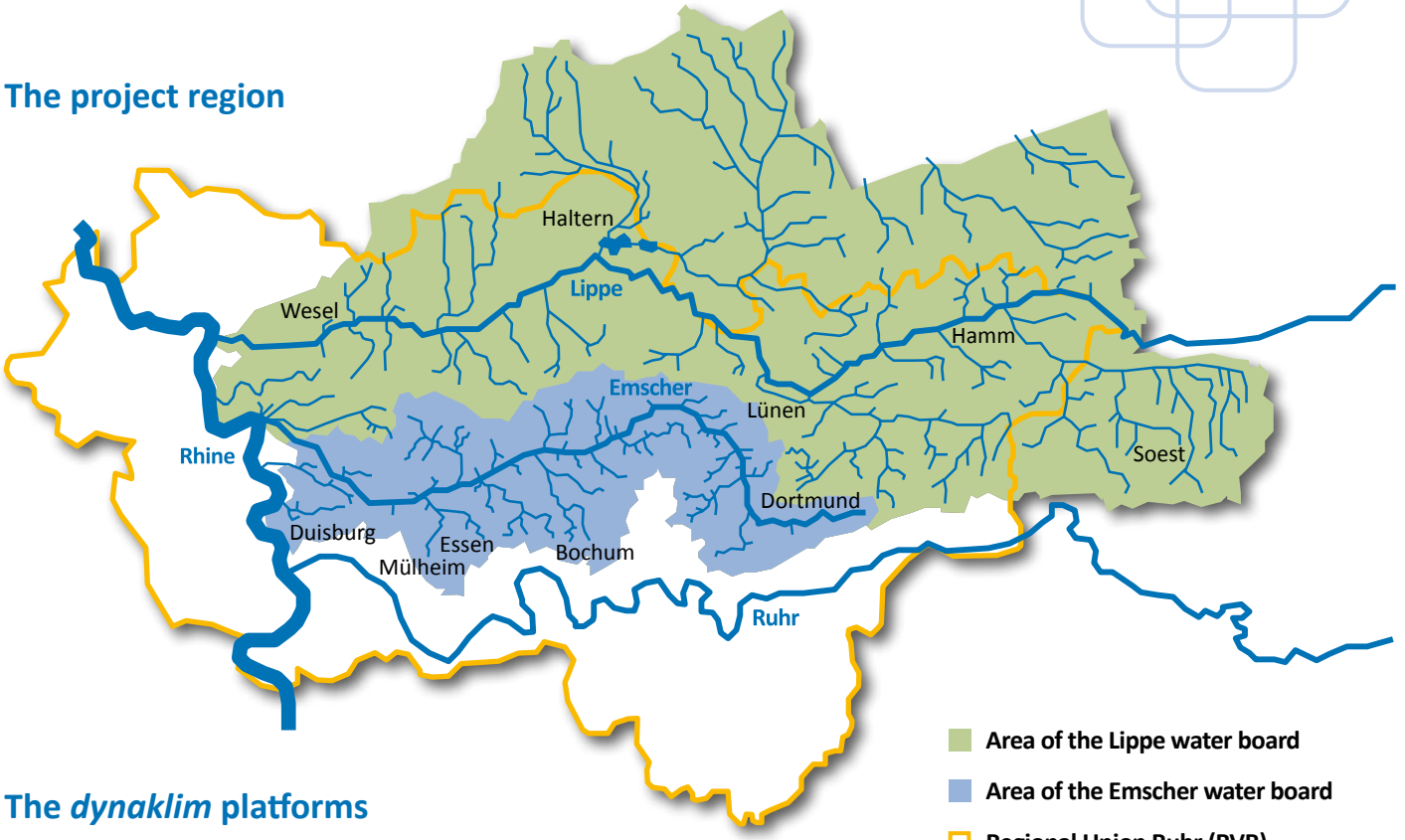
Why *dynaklim?*

According to long-range climate forecasts, Western German climate will develop – besides wet and moderate winters – particularly hot and dry summers with recurring events of extreme rainfall. These climatic changes will leave lasting effects upon the regional water balance and upon the region's productivity and competitiveness.

Therefore, *dynaklim* focuses on the effects of climate change on the water balance of the Emscher-Lippe region and on the question how population, economic sector and local administrations can forward-looking adapt to the impacts of climate change.

By setting up a **regional network**, an **across-the-region process of adaptation** and a **continuous knowledge management**, *dynaklim* will support the project region in developing into a pro-actively acting, future-based conurbation with a significantly improved ability to adapt and innovate.

The project region



The *dynaklim* platforms

To exchange knowledge and experiences in the field of climate adaptation *dynaklim* network partners and stakeholders meet in Thematic Platforms. So far, five *dynaklim* platforms have been established:

- Water balance, infrastructure
- Civil society, participation
- Climate-focused economic development
- Organisation and financing
- Politics, planning, administration

You are interested to take part in one of the platforms? Then do not hesitate to contact us!

Our front office will be glad to inform you about the latest activities of our network.

The network is open to new partners!

"We have to start adapting to climate change now so as to not be overwhelmed by its economic and social consequences later"

German Environment Minister - Sigmar Gabriel

This document summarises the final outputs of the ESPACE Project which recommends how adaptation to climate change can be incorporated into the spatial planning system.

These recommendations need to be considered by those working at local, regional, national and European levels including:

- Organisations and individuals involved in spatial planning
- Politicians & policy makers
- Managers of water, health, infrastructure, design, agriculture and regeneration issues

in brief

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Photos

- Front cover: TU-Berlin, PIK, Marc Zebisch, Marc.zebisch@eurac.edu
- Pussy Willow, Field of Hay, Trees in silhouette, Butterfly - Alex Cruickshank
- Man in Flood - Environment Agency

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The ESPACE Partnership

Hampshire County Council
Environment Agency
Regionaal Landschap Zenne Zuun & Zoniën
South East Climate Change Partnership
South East England Regional Assembly
Surrey County Council
WaterschapRivierenland
west sussex county council
VROM
Bayerisches Landesamt für Umwelt

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ESPACE – Planning in a Changing Climate

...putting adaptation at the heart of spatial planning

Focus on adaptation

However successful we are at reducing emissions, we expect 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 risks and are able to take advantage of any opportunities.

Role of ESPACE

ESPACE (European Spatial Planning: Adapting to Climate Events) is a ground-breaking project that recognises that spatial planning has a vital role to play in helping society respond to the impacts of climate change.

Concentrating on water management issues, it was one of the first projects of its kind to focus on:

- increasing awareness of the need for spatial planning systems to adapt to the impacts of climate change
- providing some of the necessary policy guidance, tools and mechanisms to incorporate adaptation into planning systems and processes.

'Planning in a Changing Climate' is the final project strategy which aims to influence the philosophy and practice of spatial planning by recommending how adaptation to climate change can be incorporated. Each of the 14 recommendations contained in the strategy is complemented by a series of case studies and examples of policy advice developed by the ESPACE Partnership.

A summary of the key messages is shown overleaf. For the full set of recommendations and case studies, visit **www.espace-project.org**

3 key ESPACE recommendations:

1

Make climate change adaptation a core objective of spatial planning

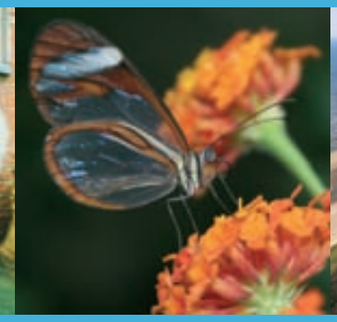
Create a robust policy framework for integrating climate adaptation into spatial planning to show what should be done and by whom.

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 and incorporating this knowledge into the spatial planning process.

ESPACE – Planning in a Changing Climate



3

Combine two 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 identifying appropriate adaptation measures.

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

For the full set of recommendations visit www.espace-project.org

"The ESPACE project takes us a big step towards meeting the challenge of adapting to climate change"

Professor Jacqueline McGlade – Executive Director of the European Environment Agency

ESPACE – Planning in a Changing Climate

Project Partners

The 14 partners, drawn from eight member states, represent a broad spectrum of authorities and climate change challenges, all with varying degrees of strategic policy and experience.

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Province of Genoa
University of Catania

Lithuania
Klaipeda University Coastal Research and Planning Institute

Netherlands
Amsterdam, City District of Geuzenveld-Slotermeer

Slovakia
Regional Environmental Centre for Central and Eastern Europe, Country Office Slovakia

Sweden
City of Malmö

UK
London Borough of Sutton
Southampton City Council
Northwest Regional Development Agency (NWDA)
Town and Country Planning Association (TCPA)
University of Manchester

www.grabs-eu.org

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green and blue space adaptation for urban areas and eco towns

All photos are courtesy of the City of Malmö

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green and blue space adaptation for urban areas and eco towns

INTERREG IVC
INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS

European Union
European Regional Development Fund

New era in European partnership to plan for climate change adaptation

A network of leading organisations involved in integrating climate change adaptation into regional planning and development has been established across Europe in the new Green and Blue Space Adaptation for Urban Areas and Eco Towns (GRaBS) project.

The GRaBS project will facilitate the much needed exchange of knowledge and experience and the actual transfer of good practice on climate change adaptation strategies to local and regional authorities.

The project has been co-financed by the European Union European Regional Development Fund (ERDF) and made possible by the INTERREG IVC Programme.

The case for climate change adaptation

Atmospheric carbon dioxide concentrations are now at their highest for 3 million years and as a result urban areas are vulnerable to increased temperatures and flooding.

Regional spatial planning and urban design can provide solutions that make our communities less vulnerable to these risks. Green infrastructure including gardens, parks, productive landscapes, green corridors, green roofs and walls and blue infrastructure such as water bodies, rivers, streams, floodplains and sustainable drainage systems, play a vital role in creating climate resilient development – a role, which is currently not sufficiently recognised and utilised and lacks integration in mainstream planning.

By advancing the knowledge and expertise of partner staff through the GRaBS project, decisions makers, politicians and communities, and regional and local municipalities across Europe will be able to make a more informed and strategic response to climate change adaptation. In the long term communities will reduce their vulnerability to the environmental, social and economic damage related to climate change impacts including extreme temperature increases and flooding incidents.

grabs
green and blue space adaptation for urban areas and eco towns

Get involved in the GRaBS project through:

International study tours and workshops

Best practice case studies

Expert papers

Newsletters and articles

To find out more about the project and how you can get involved visit

www.grabs-eu.org

The GRaBS project has four main objectives

1 To raise **awareness** and increase the **expertise** of key bodies responsible for spatial planning and development as to how green and blue infrastructure can help new and existing mixed use urban development adapt to projected climate scenarios.

2 To assess the delivery mechanisms that exist for new urban mixed use development and urban regeneration in each partner country and to develop good practice **adaptation action plans** to co-ordinate the delivery of urban greening and adaptation strategies, as well as cooperation amongst:

- Planners
- Policy-makers
- Stakeholders, and
- Local communities.

3 To develop an innovative, cost effective and user friendly **risk and vulnerability assessment tool**, to aid the strategic planning of climate change adaptation responses.

4 To improve stakeholder and community understanding and involvement in planning, delivering and managing green infrastructure in new and existing urban mixed use development, based on **positive community involvement** techniques.

Tools & Measures

20 – 21 June 2011

1st Cluster Expert Board (CEB)

SIC adapt!

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Investing in Opportunities

This project has received European Regional Development Funding through INTERREG IV B.

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INTERREG IVB