



Launch Conference and 2nd Working Group Meeting

Union Portuaire Rouennaise, Rouen

19 – 20 March 2009

Report





Contents

Programme

The Launch Conference of <i>Future Cities</i>	1
Thursday, 19 th March 2009	2
Welcome to Rouen	2
European and national approaches	2
Adaptation to climate change by the building and water sector	6
The Future Cities-project	9
The Luciline-project in Rouen	10
Wrap-up	12
Friday, 20 th March 2009 - Working Group Meeting	14
Welcome and introduction to the working group meeting	14
Joint issues of working groups 1 and 2 on the topic of the climate assessment	14
Working Group 1 “Climate assessment”	18
Working Group 2 “Action plans”	23
Working Group 4 “Awareness raising”	28
Wrap-up of 2 nd Working Group Meeting	34

Annex

- List of participants
- Presentations (on CD ROM)

Programme - Thursday, 19th March 2009 – Launch Conference

- 9.00 [Welcome speech](#)
Valérie Fourneyron, Deputy & Mayor of Rouen
- 9.15 [European aspects of adaptation to climate change](#)
Ruut Louwers, Director of JTS
- 9.30 [French approach of climate change](#)
Daniel Delalande, in charge of Greenhouse Effect at the French Ministry of Environment
- 10.15 [Climate change: the answers of Belgium](#)
Johan Bogaert, Flemish Government
- 11.00 [Coffee break](#)
- 11.15 [Impacts of climate change on tomorrow's buildings](#)
Olivier Gaudron, Project manager – PUCA, and Cécile Fort, Architect – Atelier des deux anges
- 12.00 [Sustainable management of stormwater](#)
Jean-Luc Bertrand-Krajewski, Professor INSA of Lyon - LGCIE
- 12.30 [Lunch break](#)
- 14.00 [Future Cities – urban networks to face climate change](#)
Anke Althoff, Lippeverband – Lead Partner
- 14.30 [Answers brought through the Luciline's project – How can an urban project be a vehicle for a sustainable and liveable future](#)
*Yvon Robert, First Deputy of Rouen;
Thierry Verrier, Director General of Rouen Seine Aménagement;
Christian Devillers, urbanist architect;
Lily Taloni, environmental studies office;
Jean-Yves Ausseur, Technical Director – Cabinet ANTEA;
Sophie Boulon, Project manager – ANTEA;
Thomas Buhler, Project manager – Planair;
Régis Berlier, Project manager – Egis Aménagement*
- 17.15 [End of the conference](#)

Programme – Friday, 20th March 2009 – Working Group Meeting

9.15 Welcome and introduction to the second day

Anke Althoff, Lead Partner

9.30 Joint issues of working groups 1 and 2 on the topic of the climate assessment - Plenary

Outline of the Climate Assessment: all aspects of climate change in relation to project activities

Ton Verhoeven, Nijmegen / Vincent Kuypers, Alterra

Set up of the Heat Island Study *Hans van Ammers, Arnhem*

Outline of the energy/mitigation study and the linkage to adaptation *Albert Anijs, Arnhem*

11.00 Working Group 1 – plenary discussion

Input: Regional Vulnerability Assessment

Jörn Peters, SEERA

12.00 Lunch break

13.00 Working Groups 2 and 4 – parallel sessions

Working Group 2: “Action Plans” moderated by chair *Hans van Ammers, Arnhem*

1) Definition of an “Action Plan” *Stijn Saelens, WVI*

2) The idea of twinning in more detail *Hans van Ammers*

Working Group 4: “awareness raising” moderated by chair *Eveline Huyghe, WVI*

1) Results of questionnaire *Eveline Huyghe*

2) Public consultation Enviro21 *John Williams, Sea Space*

3) Climate campaign “our green heart” *Veroniek Bezemer, Nijmegen*

14.30 Plenary discussion and wrap-up

Work group planners WG 1, WG 2, WG 4 presented by the chairs

15.00 End of meeting

The Launch Conference of *Future Cities*

The organisations Rouen Seine Aménagement, the City of Rouen and the Lippeverband as Lead Partner of the INTERREG IVB-Project Future Cities - urban networks to face climate change invited to the *Future Cities* Launch Conference on Thursday 19th March 2009 in Rouen, France. 120 participants from the European partnership as well as French representatives of the local, regional and national authorities attended to the conference.

The conference was dedicated to European and national framework of climate change in urban areas as well as presenting a details of the case study in Rouen.

Key presentations were held by political stakeholders and professional experts:

Valérie Fourneyron, Mayor of Rouen

Ruut Louwers, Director of the InterreglVB-programme secretariat JTS in Lille

Johan Bogaert, representative of the Flemish government

Daniel Delalande, representative of the French national government

Prof. Jean-Luc Bertrand-Krajewski, INSA Institute Lyon

Thierry Verrier, director of Rouen Seine Aménagement and colleagues presenting the pilot project Luciline in Rouen.

The morning session started with the INTERREG IVB-programme and its priorities set for adapting to climate change. What came out clearly in the discussion was the importance of communication and cooperation within the European project partnership. The further session was dedicated to the national adaptation strategies in France and Belgium.

In the afternoon the project *Future Cities - urban networks to face climate change* was presented and especially the joint working was highlighted. The following presentations gave a clear view about the special approach in the pilot project Luciline in Rouen.

Following the conference on Friday 20th March 2009 the *Future Cities*-working groups met.

Also, at the conference the project's website www.future-cities.eu was launched.



Thursday, 19th March 2009

Welcome to Rouen



Valérie Fourneyron, deputy and mayor of Rouen welcomed the conference participants to Rouen and the *Future Cities* launch conference. The conference addresses the striking problems climate change is imposing on the urban environment. The city of Rouen and its project developer Rouen Seine Aménagement have committed themselves to develop the new Luciline neighbourhood as part of the European partnership. Valérie Fourneyron presented the city of Rouen with its exceptional historic sites, and its cultural history of famous painters. The gathering of the biggest sailing boats of the world – the Armada of Rouen – attracts 10 million visitors in ten days every 5 years, and figures among the largest international events in France. Being a metropolitan area close to Paris Rouen is located on a major axe along the river Seine. The aim of sustainable

development is the leading principle for the restoration of the vast port area of Rouen. While respecting the importance of the port – for the handling of cereals cargo Rouen is the biggest port in Europe - two main sectors (Flaubert on the left side, Luciline on the right side of the river) along the Seine will use recent architecture for sustainable and climate adapted development for business and residential use. As representative of the city of Rouen she stressed the point that working together with the European partners using their expertise will help to face the challenge which the consequences of climate change impose on the city of Rouen.



European and national approaches

The European aspects - why does the EU fund such a project as Future Cities - were introduced by **Ruut Louwers** from the INTERREG IV B programme Northwest-Europe. The European Commission has launched the green paper on cohesion for public consultation. From the early 1990s the importance of territorial cooperation was acknowledged, which led to the cooperation programmes (INTERREG). The programme area North West



Europe which comprises 8 countries has a high potential for development but also faces threats e.g. of natural hazards. Over the period from 2007 to 2013 87 million Euro out of a total of 355 million Euro of funding will be invested in cooperation projects which take on the challenge of handling natural resources and the risk management of a densely populated area. Also, a strategic initiative on adaptation to climate change will fund exceptional scoring projects for exchange to spread their messages. The upcoming annual event of the programme in October 2009 especially will address the topic of climate change. Mr Louwers stressed the point that throughout the project implementation cooperation and



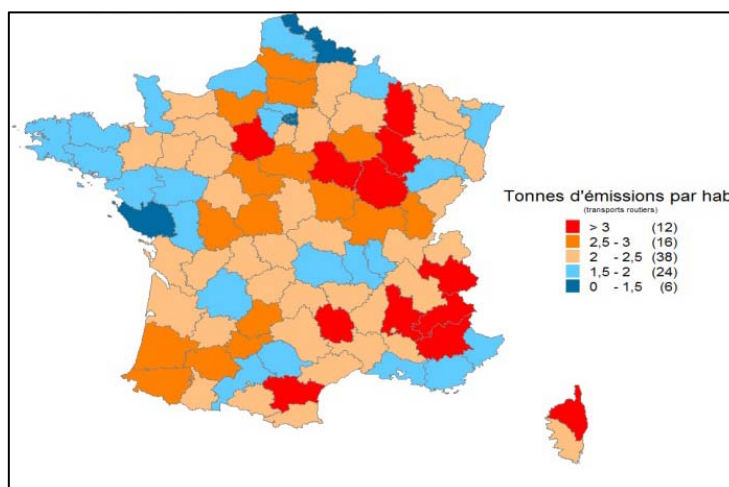
communication are indispensable. This means taking decisions together as well as linking the policy level and the local level of daily life. The speaker requested Future Cities to actively communicate its contribution to territorial cohesion and he wished the partnership a successful project.

The French approach to tackling the impacts of climate change were presented **Daniel Delalande** from the French Environment Ministry. Following the emissions trading scheme which was adopted in December 2008 France will reduce 21 % of greenhouse gas emissions between 2005 and 2020. Beyond the trading scheme, in the sectors agriculture, transport and housing 14 % less are the aim. In 2020 renewable energy shall have a quote of 23% of energy used. In the actual situation of finance crisis less investment leads to less emissions but also less commitment to reduce greenhouse gas emissions must be stated.

Mr Delalande explained to the audience that national measures were started for the different sectors. Transportation, in 2007 responsible for over 140 million tons equivalent CO₂ shall be reduced back to the level of 1990 meaning under 120 million tons equivalent CO₂. This shall be achieved by introducing a bonus-malus-system for cars, by measures to strengthen the railroad traffic and improving the modal split.



Concerning adaptation the handling of uncertainties is a major dilemma. The optimal strategies differ according to which prediction model is used. Flexible and robust strategies need to be developed and applied. Compared to the centres of Lille or Paris, in the region surrounding Rouen higher emission rate per capita must be stated due to a high transportation rate caused by the urban sprawl. Therefore an important aim is to balance the negative impacts of urban sprawl on the CO₂-emissions with improved energy efficient buildings.



The French Environment Round Table ("Grenelle d'environnement") concluded on actions for adapting the built environment to climate change. Here, developing "eco-quarters", fighting urban sprawl, environmental impact studies for new urban development zones, integrating transport and the use of agricultural land and natural environments, with a view to protection are foreseen together with widespread implementation of national and regional climate-energy plans by the end of 2012. The regional planning scheme shall be co-developed by the regional council and the state department including the issues of climate change and climate protection. Ending his presentation Mr Delalande stressed the importance of the local and regional level with regard to climate change because there, the consequences become evident and the local level is the level where measures actually have to be implemented.

Johan Bogaert from the Flemish government introduced the **proposed answers to climate change consequences** in Belgium. From his point of view the approval of the Future Cities-project must be highlighted because the topics included are very important and need to be addressed urgently.



For an overview he presented a comparison of the strategies and adaptation measures of European countries and explained the status of the Belgium planning and implementation. The Belgium adaptation network comprises the consultation between the federal and regional members, a regional adaptation steering group and a sector working group. Belgium has to deal with impacts concerning river floods and sea level rise and in the eastern part also with heat waves. Accordingly, the aims of adaptation in Belgium have a clear focus on water issues in terms of quantity and quality, the coastal zone management and the landscape management. Also, studies on adaptation to climate change were conducted or are ongoing addressing water issues, but also biodiversity, spatial planning and the human health are in the focus. Mr

Bogaert explained this in more detail at the example of two city development projects: For example the sigma-plan addresses the problem of the river Schelde where sea level rise will cause a higher impact of the tide inland, e.g. in Antwerp. For compensating the future spring tide a surplus wall of over 2 meter height is needed which would cut off the city from the quai. Here, a tender for finding solutions was launched. An important basic question is the uncertainty: What will actually happen? How much will the sea level rise? Thus, concepts that go beyond traditional building concepts might have to be developed such as floating cities. Still, these might not be appropriate for 60 or more meters of sea level rise in case Antarctica melts. The question is: How will buildings still be possible and what could they look like?



In the **discussion** which was lead by the moderator Bertrand Tierce it became clear that in the Interreg-programme there exists a high competition between project applications and funding money available. Ruut Louwers advised to use the contact points, to involve them and seek their advice before submitting a project application. Also, it is important to find a thematic niche in order not to repeat work which has been already executed in former transnational projects. In the cooperation it should become clear that the knowledge from transnational projects can be used to convince the politicians that with the cooperation projects better territorial cohesion can be created. Anke Althoff from the Lead Partner of Future Cities, made clear that the two C's – Cooperation and Communication are a decisive feature of a transnational project, e.g. this conference in Rouen disseminates the ideas of what will be implemented in Rouen.

Daniel Delalande added that especially in France the system of funding territorial cohesion is implemented e.g. in the "contrat de plan" contracts between the national and the regional level determining and funding the infrastructure development. However, at the moment there exists a difference between the EU and French funding aims: France wishes more support for energy efficient buildings.

The presentation of the two different governmental approaches highlighted the different impacts on regions and the differences in vulnerability. For Mr Bogaert local initiatives are very important because there are different problems which need to be tackled by adequate solutions. All speakers stressed the importance of communicating possible solutions to show the local level, which is decisive for implementation, what could be done. Mr Delalande added that the only answer to the high level of uncertainties are no-regret strategies looking at the local and regional risks and adapting buildings and planned developments. Decision-makers must be supported in the task of assessing the risk.



Adaptation to climate change by the building and water sector

The sustainability strategy in views of climate change was presented by **Olivier Gaudron** from the French national research coordination for urban development, construction and architecture. The urban development construction and architecture plan or PUCA from its French initials (Plan Urbanisme Construction Architecture) was created in 1998 by the French Ministry of public works in order to advance knowledge of territories and cities and to shed light on public action. Mr Gaudron explained that a long term strategy on all levels – the national, regional and local level is of high importance. The experimental programme of PUCA aims at enhancing the environmental quality and energy efficiency of building constructions. Integrated approaches are important which include all issues of architecture and social aspects. The PUCA represents the national ministerial level. The architects are requested to fill in their role within the relationship with the local communities in solving the problems on the local basis within the framework set by the national level.





Examples of the programme “sustainable city” in a part of Rouen were demonstrated by the architect **Cécile Fort**. On the left side of the river Seine an urban development with 100

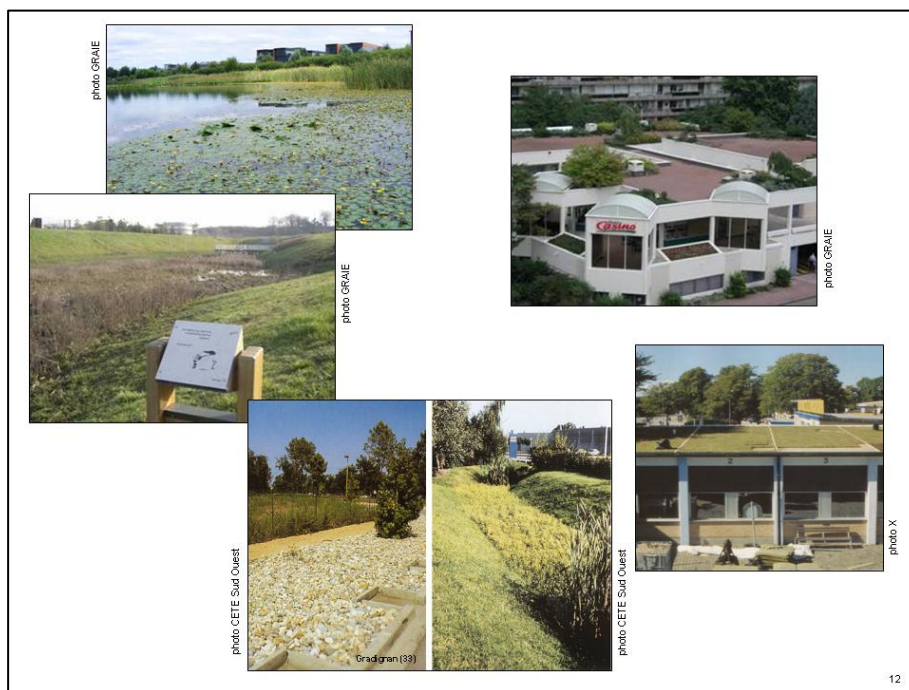


accommodations was developed. When the development was installed in 2001, building energy efficiently was not as high on the agenda as nowadays. Nevertheless, in the quarter many aims of sustainable development were implemented, e.g. the heating consumption was reduced by good insulation and appropriate building orientation. However, by designing compact buildings for low energy consumption less daylight is the consequence a problem which was solved by an innovative skylight system.

Jean-Luc Bertrand-Krajewski presented the evolution of strategies and available techniques for **sustainable management of urban stormwater**

responding to the question what strategies are there available for the restoration of the Luciline area. The urban stormwater management has evolved from an urban nuisance to water as a valuable resource as well as looking at it only in terms of hydrology and hydraulics but rather taking a multi-purpose approach. Multifunctional systems consider hydraulic control, quality treatment, water as a natural resource and water as a means for urban climate control as well as possible other function or use. A great variety of techniques is available for singular and multi-purpose tasks. Mr Bertrand-Krajewski stressed the point that long term maintenance should be considered with the integrated approaches. Here, systems that use the city's surface areas are easier to maintain than underground systems. An important question is how to transfer the existing systems into the new multifunctional ones. In new developments this is possible but solutions in existing urban areas are more difficult. Also, flexible systems are needed for changing framework conditions in existing areas, e.g. decreasing population.

In the **discussion** Pascal Victor from the architect's organisation "maison l'architecture" explained that projects like the one presented are the starting point for larger scale environmentally friendly neighbourhoods. The architect's organisation contributes to the dissemination of the guidelines of the



environmental round table by the training of architects and stakeholders. Working together with different disciplines and stakeholders for added value becomes more and more important compared to the former attitude of architects tending to have the overruling view what buildings should look like. He added that European programmes are helpful for exchange on sustainable buildings and gathering information for making effective progress.

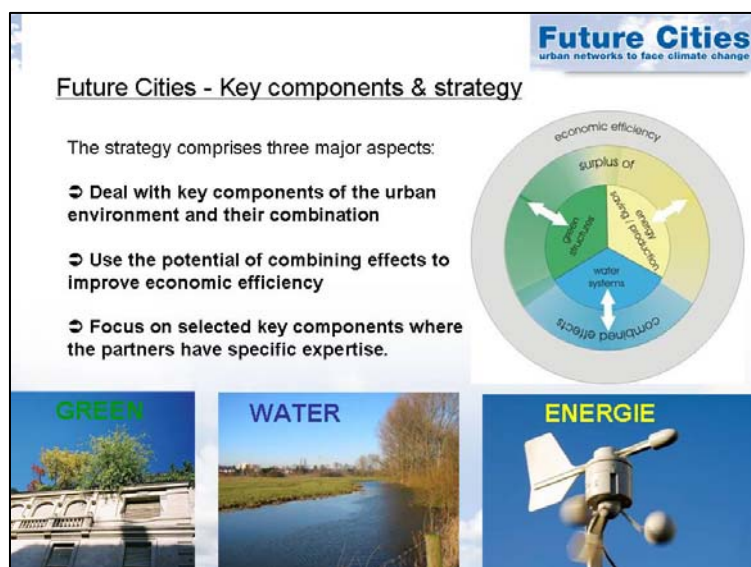
Although progress has been made in recent years, in France there is a need for more interdisciplinary and regional interactions e.g. working together up- and downstream as Mr Bertrand-Krajewski explained. Also, monitoring of the effects more broadly is needed for improved actions. Best practice in Europe for collecting rainwater can be learned from Germany and the UK as well as outside of Europe from Australia. Altogether the speakers expressed the progress made in the different fields of action and highlighted the necessity of working together and networking to achieve implementation on local level. Anke Althoff remarked, that as the Interreg IIIB-project "Urban Water" has shown the international exchange of know how can lead to actual transfer of instruments or improved procedures from one country to another. The transfer of know how made it possible that a Dutch planning instrument was transferred in an adapted way to Scotland. Insofar the European Interreg funding allows for trying out new ideas. Often the new developments by architects or new techniques available are not new for scientists but the implementation on the local level has not been executed yet.



The Future Cities-project

Aims and strategy of the Future Cities-project

were presented by **Anke Althoff**, the project manager of *Future Cities* for the Lead Partner Lippeverband. The project's aim is to make city regions in Northwest Europe fit to cope with climate change impacts. The focus lies on proactive transformation of urban structures. Until the end of 2012 eight project partners from Belgium, France, Germany, the Netherlands and the UK work together to develop and implement effective means for adapting the urban environment. 11 million euros will be spent whereof 5.5 million euros will be funded by the European Regional Development Fund. Key components of the urban environment – water systems, green structures and energy saving - will be addressed, combining the key components for more economic efficiency. Existing city networks broadly focus on mitigation meaning greenhouse gas reduction. Laying the focus on adaptation is not thoroughly in the focus yet although it is a very urgent topic to be tackled. Actions are carried out to develop an assessment check for climate proof cities and action plans for transformation. Combined measures will be implemented in all participating countries and the long term impact will be fostered by targeted awareness raising activities. The joint working of the project partners will allow for comprehensive encouragement of best practice solutions for problems which need to be tackled soon. The transnational assessment check to assess the climate proofness of



urban structures and planned measures shall allow for improved acting in an anticipatory manner. No regret measures will be implemented in the light of uncertainties of the climate change impacts. On the website of Future Cities the project is presented in more detail and all project accomplishments will be can be found there. Being one pilot project the Luciline area will be presented in detail by representatives from Rouen and Rouen seine Aménagement.

The Luciline-project in Rouen

Yvon Robert, former mayor of Rouen and elected representative for town planning, reflected the steps of the development of the Luciline-project area. For more than 20 years he has been involved in the planning of Luciline. He started the first ideas when it became clear that the area was declining and was not enough developed to be able to change without major measures. The goal of the project was to develop both sides of the river which is a difficult condition. Access to the area and public transport were in the focus of the first ideas. This led to the “TEOR”, the bus system that connects east and west Rouen. This created also an important axis along Luciline. Improvement of access was also the reason to realise the new bridge which now is an attractive symbol.



In the planning phases it became obvious that, to raise attractiveness, the area not only needed good access but also needed to refer to different framework conditions. Housing and economic uses are the main focus of land use in the area. But to gain sustainability other aspects were added in the further planning process. Close cooperation with the port authority is a key element since the port is closely linked with the development.

Mr Robert reflected that 20 years ago, when his greatest problem was to connect the area with the rest of Rouen by public transport it was not predictable that now the project is part of an EU-project-network. But this cooperation brings many attractive elements into the area. And cities live from the links between heritage and modern structures. That is why Future Cities will create an added value for Luciline.



Thierry Verrier, the general director of the city's project development organisation Rouen Seine Aménagement, explained that part of the development strategy was the creation of visible elements and the a development that limits the risk for the public site. Cooperation with real estate companies ensured that public budgets are not at risk. Another dogma was the involvement of many different expert in an early stage, like city planners, infrastructure planners, energy experts, financial experts etc.

Christian Devillers, civil engineer working on the **urban development planning for Luciline** explained the plans for the 100 ha area in detail. The area close to the city center (30 min walk) is well integrated. The whole area is used but not too densely so that re-use is possible. This "2nd phase of city planning" that focuses on re-using certain areas creates great chances for the cities.

Important aspects for the conception is the urban and green framework, the morphology and the view-axis from the existing housing areas up on the hills north of the area. The goal is to mix the structures and styles and uses to create multifunctional structures. 40 % will be reserved for social housing.

Water plays also a role in the development: the Luciline River was covered under ground years ago and shall be made visible again along the street axis. It will be connected with the Seine via a sewer.



Also, in other aspects the realisation will go beyond the original plans and expectations: more water, sustainable technologies and e.g. a modern car park system that requires only 0.8 parking lots per dwelling to limit the cars in the area and to force public transport, instead of 1.5 recently. Similar the businesses will be treated. The project completion is projected in 15 years.

Overall Christian Devillers called the project Luciline an "example for a new approach in city planning": sustainable and social with social housing etc. Also there is a close relationship to economy to create new jobs in the area and to ensure existing jobs. Energy saving is one of the next goals.

Lily Taloni, engineer, presented the **energy concept for Luciline**. First, the conditions were checked: geology survey, climatic criteria assessment which showed only few wind and much sun, wood supply evaluation. Based on that, options for the energy concept were developed and compared: individual heat pump solutions, gas heating for single buildings, central geothermal solutions for an ensemble of buildings or for the total planning area, wood heating system.

The decision was taken together with different stakeholders, but the city was decisive. The first two possibilities were cancelled since they were not effective enough. The best solution seems to be the central geothermal system as most adaptable solution, since wood heating systems create emission in the area. Good practise examples from other cases were evaluated. However, one experience is already the importance of early integration of energy supply aspects in the early planning phases for such a development project.

Jean-Yves Ausser and Sophie Boulin, engineers in the company ANTEA, explained the **solutions for geothermal energy**. Experience from 30 years of research on geothermal solutions is available today. But for practical solutions it is crucial to reduce the energy consumption for a whole area, to find individual constructions for all houses and to combine regenerative energy sources. For Luciline different drillings were made to evaluate the potential. This is not completed yet. The potential depends on the underground, the groundwater table and temperature and other conditions. Three options are possible for Luciline that can be characterised by the temperature they work with (high, medium and low temperatures). At present the survey of the potential for Luciline shows good results and the team expects possibilities for geothermal solutions.

Thomas Buhler is working on applications for **heat exchangers in sewer pipes**. He demonstrated examples and experience from different other locations. For Luciline this technique is not being actually planned yet. He stressed the point that reliable monitoring of the use of geothermal potential and of heat in sewer systems is needed. As long as it works on the “first-come-first-serves” approach, investments could be lost if the potential is insufficient due to “overloading” the natural supply.

He recommended adjusting the concepts for energy, supplying infrastructure etc. in early planning phases with the urban planners. Changes in the urban planning can cause difficult changes in the technical planning efforts and cause costs.

Régis Berlier explained the planned **water management for the Luciline area**. The Luciline river is fed by 3 springs but is nowadays totally channeled while crossing the area. It is planned to restore the surface flow which will have an educational impact and at the same time solve the existing sewer problem. Monitoring the effects is an important part of the project. Here, flora and fauna upstream and downstream will be included for monitoring the quality of rainwater run off and the Luciline stream water.

Wrap-up

Thierry Verrier thanked the Interreg partners that with the help of the partnership the Luciline project will be implemented in an improved way being part of a transnational project. An important part will be the communication e.g. with the inhabitants. Here, the working group on communication will help moving forward on crucial themes. He thanked Charlotte Masset for bringing Rouen Seine Aménagement into the European partnership. At the moment the project Luciline is in its first steps and will be developed together during the partnership based on the expertise of all partners. All this will have to be done with optimal use of public money or by saving public money in the actual circumstances of finance crisis.



La **CHRONIQUE**
de NORMANDIE

«Récits des hauts faits, projets, humeurs et ambitions des responsables de la région»

Et pendant ce temps là...

Pièce maîtresse du grand projet urbain "Seine-Ouest", la construction du futur quartier "Luciline", à Rouen, 10 ha de bureaux et de logements pour accueillir 1 500 habitants et 2 500 emplois entre le Mont-Riboudet et la Seine, commencera en 2011. D'un montant évalué à 500 M€, l'opération se déploiera sur une dizaine d'années. La maîtrise d'ouvrage est assurée par Rouen Seine Aménagement ; la maîtrise d'œuvre urbaine est pilotée par l'architecte Christian Devillers.

Valérie Fourneyron veut faire de Luciline un projet environnemental exemplaire dans trois directions :

- L'efficacité énergétique avec la valorisation du potentiel géothermique du site.
- La gestion douce des eaux pluviales urbaines.
- L'utilisation des modes doux pour les déplacements.

Les études sont en cours. Elles bénéficient du financement du programme européen Interreg IVB - Future Cities qui vise à partager les connaissances et les innovations entre plusieurs villes européennes.



Friday, 20th March 2009 - Working Group Meeting

Welcome and introduction to the working group meeting

Anke Althoff welcomed the working group members to the second working group meeting of *Future Cities*. She explained the schedule:

- In working group session I, joint issues of WG 1 and WG 2 are the topic in order to provide close linkage between the working groups.
- In working group session II, WG 1 meets plenary including all project partners because of the topic of WG 1 – the climate assessment – being one of the central joint outcomes of Future Cities. Therefore, all project partners should be given the possibility to take part in the discussion of the outline of the assessment check.
- WG 2 and WG 4 are scheduled as parallel sessions in the afternoon.



Joint issues of working groups 1 and 2 on the topic of the climate assessment

The session was chaired by Ton Verhoeven who reported about the work accomplished after the last working group meeting. In the 1st working group meeting it was agreed on the following products to be worked out until the 2nd working group meeting:

- To develop a list of direct and indirect impacts of climate change (background for the WG1) (PP2/Alterra) – For this Vincent Kuypers from Alterra was assigned by PP2 to analyse the pilot projects of the partners regarding their potential information for a climate assessment check (results see below)
- To gather existing information on assessment checks and research results of water, green and energy (PP4/SEERA) – Here, Jörn Peters from SEERA has summarised

the status of the vulnerability assessment in the South East of England (results see WG 1 below) and asks the partners to give input about existing information in their countries and fields of work.

- Other partners shall deliver their knowledge on the basis of a rough outline of the assessment check made by the chair – The rough outline could not be worked out yet because it had to be acknowledged that more basic work and information was needed (e.g. from the first point). It is now scheduled to be worked out further for the next working group meeting of WG 1 in June 2009 on the basis of the table “tools and issues”.

Furthermore 2 inputs from partner projects were given whose results are meant to feed into the climate assessment check.

- Outline of the set up of the Heat Island Study (PP2) (see below)
- Outline of the energy/mitigation study and the linkage with adaptation (PP2) (see below).

Aspects of climate change in relation to project activities

Vincent Kuypers presented the results from assessing the existing information on partner projects. The table (see figure) combines the different levels of city structures (vertical) with clustered issues of climate change (horizontal). Urban morphology applies to the city level whereas building technology is related to the building level. Water and green structures can be summarised as “outdoor infrastructure”.

	Issues										
	cluster urban climate				cluster water-problems			cluster environm. protect.		energy efficiency	
	UHI-rel. risk	humidity	wind	outdoor th. comf.	flood-prevention	water-retention	drought	air pollution	key-habitats	energy use	energy prod.
water structure											
Arnhem	x			x							
Nijmegen	x			x		x	x			x	
Tiel					x	x				x	
Rouen	x	x		x		x				x	
leper						x			x		
Bottrp										x	
green structure											
Arnhem	x	x	x	x		x		x		x	x
Nijmegen	x	x		x		x		x		x	
leper				x		x			x		
Kamen	x	x	x	x					x		
Tiel	x	x			x	x					
urban morphology											
Arnhem	x		x	x						x	x
Nijmegen	x		x	x							
building technology											
Hastings										x	x
Nijmegen								x		x	x
leper										x	x

Issues for climate change were clustered relating to urban climate, water problems, environmental protection and energy efficiency.

In the **discussion** it was remarked that concerning water problems the distinction between flood prevention and water retention is not clear because water retention is part of flood

prevention. Ton Verhoeven explained that for the structure of the table flood prevention was related to the sea and big rivers whereas water retention was meant in terms of urban storm water retention. Jörn Peters remarked that the consistency of headlines should be thought over because they relate to problems as well as to solutions.

In the discussion it was clarified that the table is meant for seeking information from the partners. It is not meant as structure for the climate assessment check. Therefore it was decided that all project partners will assign their project input according to the structure as well as comment on the proposed structure in the plenary session of WG 1 (see below).

Outline of the set up of the Heat Island Study

Hans van Ammers introduced the urban heat island (UHI) study which is being conducted by Arnhem.

Due to the urban absorption of solar heat and radiation during the day and radiation at night, the temperature in urban areas is several degrees higher than the surrounding areas. The climate change will enforce this effect and increase the energy demand.

The aims of the study are:

- Reducing the UHI-effect by achieving a balance between red (warm radiation), blue and green (fresh air, heat sink, cool spots from water and green structures) resulting in a liveable, workable urban surrounding
- Achieving a blue-green, climate proof' framework closely related to an energy transition strategy (mitigation) with renewable energy.

Results envisaged are:

- A method to judge the climate proofness of an area (3 levels)
- A toolbox of (combined) measures to reduce the effect of the climate change and improve the air quality.
- (Combined) measures that contribute to the reduction of the change itself (mitigation).

The focus is on 4 issues:

- Green structures, also related to fine dust and the CO₂-balance
- Water structures / humidity balance
- Heat / energy balance (thermal heat)
- City morphology (urban landscape), also related to wind patterns

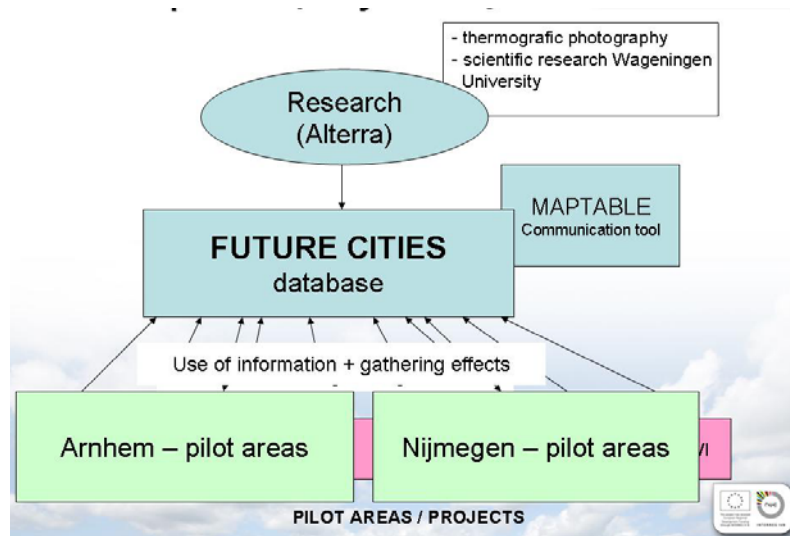
Since other Future Cities partner focus on the same issues the broader set up of the study will include the input from project partners (see figure). Arnhem will visit or request project partners for gathering information.

The time table for the study is as follows:

- The investigation stage: 2nd half 2008 – 1st half 2009
- The research stage: 2nd half 2009 – first half of 2010
- The testing stage: 2010 and 2011
- The building stage: 2012

In the study a 'design table' will be used. The software of the connected model can calculate the effect measures have on the UHI-effect for a global assessment. Arnhem will visit the project partners with the design table in order to improve it and get information from the partners. Existing information and models will be included such as the ventilation data available from Germany (e.g. Freiburg, Stuttgart). The design table will be presented at the working group meeting in Hastings in September 2009.

Outline of the energy/mitigation study and the linkage with adaptation

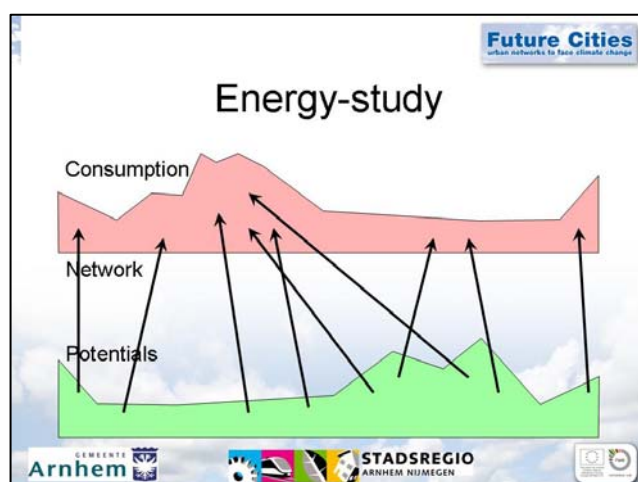


Albert Anjls from Arnhem presented the outline of the energy study which is undertaken in Arnhem. The main aim is reduction of greenhouse gas emissions. In the study consumers and potential for energy supply are compared. Here, solutions need to be found to the problem that consumption and the potential are not steady and not always compatible in time and location. This means that location, modality and time need to be adapted to the

requirements.

The main energy flows in the city (except transport and production) are for heating, lighting and cooling which means potential energy supply in form of heat and electricity.

As an example for heating a city heating net for parts of the northern and southern part of Arnhem exists. For the northern part the heat from a waste incineration plant will be connected to Arnhem. A big chance for Arnhem was opened by the planning of a new harbour at the river Rhine. Due to this harbour an existing sewage pipe has to be relocated. Together with building the new sewer pipe connections for heating can be build. A coal plant in the south west shall be connected to Nijmegen. Here, the problem has to be solved, that the plant supplies between 80 and 120 degrees Celsius whereas houses need only 40 degrees Celsius.



For lighting the production of electricity by renewable means is the main challenge because solar panels and wind power are not widely accepted by now.

- Adapt the city
- Adapt the energy-infrastructure
- Integrate heating with cooling

Working Group 1 “Climate assessment”

Chair: Ton Verhoeven, Nijmegen

Working group 1 was conducted in a plenary session, all participants of the working group meeting attended to this session.

Presentation: Assessing Climate Change Impacts in the South East of England

Jörn Peters from SEERA presented the status of the regional vulnerability assessment in his planning region. Regional vulnerability assessments are required by UK planning guidance as a basis for identifying nature and location of adaptation measures.

The direct impacts of climate change in the region - more frequent severe weather (storminess, flooding, heat waves, droughts) and the gradual climatic change increase in average temperature and sea-level rise and storm surge height will have different consequences for the different sectors. For the regional vulnerability assessment sectors were selected, according to their applicability for the region:

- The built environment (existing building stock, construction material, urban spaces)
- Infrastructure (transport and utilities, services for water, heat, electricity, waste, telecommunication)
- Economic development (opportunities and threats for key sectors)
- Population (public health and especially of vulnerable groups)
- Natural resources (such as biodiversity, water resources and quality, agriculture and forestry).

The study will be supported by the Johns University which will look into the economic impact. Problems arise from lack of information e.g. of the private water companies. Furthermore, in the aggregation of risks it is difficult to decide which problem is caused by climate change. The focus of SEERA is to find out the significance of impacts in order to understand the big obstacles for regional development.

In the discussion the working group agreed that the vulnerability assessment could be used as possible 1st step of the climate assessment check.



In mini groups the partners worked on the table issues and tools describing the input and information available from their projects. The results were put together.



3 STEPS:

- What are the impacts of climate change? (on your area)
- What are the consequences of this for the different sectors?
- undertake most appropriate measures to reduce the consequences

Issues

"Quality of public space incl. indoor th." (Vand'indoor)

cluster urban climate

UHI-rel. risk	humidity	wind	outdoor th. comf.	flood-prevention	water-retention	drought
Rouen	X				X	
Leper					X	
Bottrop					X	
green structure	X				X	
Amhem	X	X	X	X	X	
Nijmegen	X	X		X	X	
Ieper				X	X	
Kamen	X	X	X	X	X	
Tiel	X	X	X	X	X	
urban morphology	X				X	
Arnhem	X		X	X	X	
Nijmegen	X		X	X	X	
building technology	X		X	X	X	
Hastings				X	X	
Nijmegen				X	X	
Ieper				X	X	

tools

LEGEND

- good knowledge basis exists
- some knowledge basis exists
- knowledge basis lacking

x to be investigated in future cities

(Generalis)

Nijm.

Agreements for the next months

The working steps until next working group meeting in Nijmegen, in June 2009 were agreed on:

- On the basis of this working group meeting the table “issues and tools” will be revised by PP2/ Vincent Kuypers. The revised version will be put on the website and project partners are asked for reactions before the next WG meeting.
- Jörn Peters asked the project partners to supply information about the background work on adapting cities. He will send around a paper with an initial overview of existing data and information with request for amendments by project partners.

Working Group Planner: WG1 – Climate Assessment

WG - meeting n° /date	WG – topics / agenda	Preparation of PP / Input	Output / products of PP (action no. as in application)
2 3/2009	<ul style="list-style-type: none"> Background: list of direct/indirect impacts (prepared by PP2/Alterra) Review on existing research results (prepared by PP4/SEERA) Exchange existing information of project partners, determine gaps (organised by chair) <p>➡ ROUGH OUTLINE OF ASSESSMENT preparation table (prepared by chair)</p>	◀ presentation for WG	◀ Report cost-effective low carbon design; 3/PP4 SEERA
		◀ finished input for WG, if sensible	◀ Report ground water policy plan for adaptation; 2/PP5 NI
		◀ Part 1 “Keep dry feet” done Part 2 “Experimental Building” 2010	◀ Report water adapted development; 2/PP7 T1
2bis 6/2009	<ul style="list-style-type: none"> further discussion of the input papers and reports Discussion and improvement of the outline <p>➡ ROUGH OUTLINE OF ASSESSMENT</p>	◀ definition of criteria, presentation for WG 2bis	◀ Regional climate change guideline; 5/PP1 LV, PP3 EG
		◀ definition of criteria, presentation for WG 2bis draft	◀ Report on vulnerability/adaptation examples; 4/PP4 SEERA
3 9/2009	<ul style="list-style-type: none"> Discussion of inputs / criteria to the assessment check check list combination of different inputs <p>➡ PRELIMINARY ASSESSMENT CHECK (LIST)</p>	◀ Case study city of Arnhem available	◀ Climate map of City region UHI; 4/PP2 AR
		◀ Only draft –very rough version available	◀ Rough Outline climate toolkit; 4/PP2 AR
		◀ Direct input for checklist	◀ Regional sustainability guideline wvi; 5/PP8 WV
		◀ Combined use of energy and groundwater	◀ Masterplan underground Nijmegen; /PP5 NI (link to report ground water policy plan see above?)
		◀ Contribution to assessment check	◀ Report /maps for energy measures in urban structures; 3/PP5 NI
		◀ definition of criteria, presentation for WG 3	◀ Energy study cold/heat storage; 3/PP2 AR
		◀ definition of criteria, presentation for WG 3	◀ Energy map Arnhem and area with manual explanation; 3/PP2 AR
		◀ definition of criteria, presentation for WG 3	◀ Report combination green/water in the city (courtyards; roofs, walls) – general part, 1/PP5 NI
4 3/2010	<ul style="list-style-type: none"> Prepare presentation of preliminary assessment check for midterm conference Meeting date not foreseen for WG 1, decide on need at 3rd meeting 	◀ List of possible measures to reduce heat island effect	◀ Rough Outline climate toolkit; 4/PP2 AR
		◀ Direct input for checklist	◀ Regional sustainability guideline wvi; 5/PP8 WV
		◀ Contribution to assessment check	◀ Business Plan for “Retrofit Demonstration”; 3/PP4 HA
		◀ INPUT FOR WG 2 ➡	◀ Plan for local Green Homes Service; 3/PP4 HA
		◀ Contribution to assessment check / WG 4	◀ Report on state of art green/ water in the city (courtyards, roofs, walls) - details; 1/PP5 NI

WG - meeting n° /date	WG – topics / agenda	Preparation of PP / Input	Output / products of PP (action no. as in application)
		◀ presentation for WG 4	◀ Report on climate robust development (energy efficiency, durable energy); 3/PP7 TI
5 10/2010 Conf.	<ul style="list-style-type: none"> Improve assessment check with input from evaluation interim results WG 2 and 3 <div>→ PRESENTATION OF PRELIMINARY ASSESSMENT CHECK</div>	◀ Available for City region Arnhem Nijmegen	◀ Climate map of City region UHI 4/PP2 AR
6 3/2011	<ul style="list-style-type: none"> Improve and adjust assessment check 	◀ Check: Experiences for participation strategy (WG 4?)	◀ Cooperation with housing companies/other parties 1/PP5 NI
7 10/2011	<ul style="list-style-type: none"> Improve and adjust assessment check with confirmed evaluation results from WG 2 and 3 		
8 3/2012	<ul style="list-style-type: none"> Prepare input for final report Climate model as one building stone of assessment check 	◀ Including experiences of <i>Future Cities</i> partners	◀ Climate model, adapted, tested in City Region 4/PP2 AR
9 6/2012	<div>→ FINAL RESULT INPUT REPORT</div>	◀ Check: Interim results earlier available?	◀ Synthesis report of possible options for combined measures 4/PP6 RS
11/2012 Conf.	<div>→ FINAL ASSESSMENT CHECK/ PRESENTATION</div>		

Working Group 2 “Action plans”

Chair: Hans van Ammers, Arnhem

Participants:

Hans van Ammers	PP 2 AR
Erik Zweers	Stadsregion Arnhem Nijmegen (with PP2)
Marion Visser	PP 2 AR
Vincent Kuypers	Wur, Alterra (with PP2)
Matthias Stumpe	PP 3sub EG
Torsten Frehmann	PP 3 EG
Chantal Lass	PP 4 HA
Ton Verhoeven	PP 5 NI
Ad Koolen	Van Hall Larenstein University (with PP 2 / PP 5)
Bénédicte Salle	PP 6 RS
Amélie Jacquette	PP 6 RS
Ine van den Hurk	PP 7 TI
Nathalie Garré	PP 8 WV
Stijn Saelens	With PP 8
Peter Heiland	Infrastruktur & Umwelt

Hans van Ammers introduced to the working group that has two goals in this session:
Discuss the definition of an action plan based on the presentation of Stijn Saelens and to develop the twinning approach further.

Stijn Saelens (WVI): “Masterplan Ieper Oostsector”

The planning process for the area is ongoing for over 15 years. In 2000 the spatial planning structure scheme was published and work on the land use plan for the area started. However, in 2006 the process was stopped due to increasing and more ambitious goals and unsatisfying solutions for waste water treatment, rain water use, use of green space and others. So the decision was made to start a new approach. A collaboration agreement between the municipality Ieper, the intermunicipal organisation WVI, the social housing company “Ons Onderdak” and the province West Flanders was signed. This was the start of an integrated planning process.

In September 2008 a workshop with different stakeholders and external experts brought three visions for three given topics:

- *density and public space*
- *smart mobility*
- *blue-green network*

Each of the themes was developed independently by different teams. WVI planners combined the ideas to create a holistic approach including different issues of sustainable development in the area. The current concept is characterised by:

- 4 terraces in the areas with different heights and long steps
- building lines that regulate the building locations

- 25 dwellings per ha (which is a comparatively high density for the region)
- terraces are used for water paths and ponds
- rainwater-use conception
- garden sharing as part of the public green concept
- car parks in central locations to limit cars in the area
- public space is designated for “living and playing”.

An important finding of the process is that all elements are linked closely not only in the area and by their functions but thus also by planning and construction. Changes in one system cause changes in the others. Therefore very careful planning is necessary.

The presentation finished with the overview of the process: Formal procedures, control of sustainability, communication issues and the linkage with the Future Cities Project actions like climate assessment and experience exchange in twinning etc.; Energy aspects are still under development.

PROCESS	POP – ROP PROJECT DEVELOPPEMENT SPATIAL PLANNING	DO-IT SUSTAINABILITY DEVELOPMENT AND IMPLEMENTATION TRAJECTORY	CP COMMUNICATION PROCESS	FC (Future Cities – interreg project)
INITIATIVE	IEPER	Wvi	IEPER	Wvi
STRUCTURE	Project-team	Sounding-board team		
Process stages	1 Demarcation plan	1 Ambitions (CBS 08/07/08)	1 Training officials and politicians	1 Guidelines
	2 Land-use plan	2 Masterplan + checking developpement and spatial planning plans	2 information to/from key figures	2 Action plans
	3 Visual-quality plan	3 Realization: coaching of the process	3 sensibilisation architects, contractors, devellopers	3 Implementation and evaluation
	4 Allotment plan	4 communication process (cfr. CP)	4 Public sensibilisation	4 Creating support
	5 Subsidies		5 Participation future inhabitants and surrounding quarters	
	6 Infrastructure plans			

Discussion

First the discussion focussed on the question “What is especially new in the approach?” Stijn Saelens explained that the integration of stakeholders and different experts in the early stage of planning was new. Usually the first scheme is made by architects and planners; after that infrastructure etc. is planned. For this more sustainable concept the early integration is of high importance.

The second part of the discussion concentrated on questions of energy – concepts for the area. Since the energy concept is still under development details are not known yet.

Twinning in the project

One of the major issues in working group 2 will be the twinning activities. The goal is not only to see other sites but also to discuss solutions and to analyse the transferability.

In the working group the partners were asked to name the “inputs” they can deliver to the other partners and the “outputs” they are seeking in twinning actions. During the application phase this question was already discussed in more general terms.

To draw a complete picture of twinning activities is not possible at the begin of the project. Thus the working group agreed to start with two twinning actions in the next months and to reflect the methods in the next meeting. Based on this further twinings will be agreed. The first twinning activities in the next months will be:

1. “blue-green-networks” (initiative by WVI; partners Tiel and Bottrop/EG)
2. “building techniques: water, energy” (initiative Rouen / Arnhem)

A further issue will be “Water board assessment on climate issues”; This will be developed further in the next meeting.



Realisation of the twinning

The following steps were agreed to realise the twinning:

- a) Paper: description of the twinning approach, background (from application), practical questions, responsibilities, twinning partners ideas from the application phase, twinning reports etc.
IU / Peter Heiland/Birgit Haupter in coordination with Hans van Ammers, mid April
- b) Form for the “twinning search” (request / offer)
IU / Peter Heiland/Birgit Haupter in coordination with Hans van Ammers, mid April
- c) Form for the “twinning report” (content, questions, form)
IU / Peter Heiland/Birgit Haupter in coordination with Hans van Ammers, mid April
- d) Initiation of the twinning action “green-blue-structures”
WVI, April (by filling the request, sent to partners, plan action)
- e) Initiation of the twinning action “building techniques”
Rouen/Arnhem, April (by filling the request, sent to partners, plan action)
- f) Review of the experiences from the two activities;
next WG meeting in Hastings, prepared by Hans van Ammers/ IU

Working Group Planner: WG2 - Action Plans

WG - meeting n° /date	WG – topics / agenda	Preparation of PP / Input	Output / products of PP
2 3/2009	<ul style="list-style-type: none"> Definition of “Action Plan” (vrs. Master Plan, other terms); (prepared by WVI) Examples for actions: (1) green roofs (prepared by NIJM) Which information is needed in which phase by whom? (prep. by ARNH) ➡ ISSUE FOR TWINNING Outline of the Heat Island Study (prepared by ARNH) presented Twinning concept and schedule (WG chair) 	<ul style="list-style-type: none"> ◀ presentation of the status for WG on going ◀ presentation of the status for WG 	<ul style="list-style-type: none"> ◀ Feasibility study groundwater and 3 action plans on climate adapted use of groundwater for more energy efficiency ; (PP5 NI) ◀ Feasibility for replacing coal with shredder fibres for sludge dewatering in at the waste water treatment plant; (PP3 EG)
3 9/2009	<ul style="list-style-type: none"> Definition of criteria for the evaluation report (prepared by ... - WG chair) Agreement on the set up of the evaluation report / outline / responsibilities (prepared by WG chair) Paper on twinning approach (prepared by chair/ IU) Formats: twinning report/ twinning search (prepared by chair/ IU) Review on 2 twinning actions (prepared by chair) ➡ 4 twinning reports on the improvement of the action plans 	<ul style="list-style-type: none"> ◀ contribution to the definition of evaluation criteria; presentation of proposals ◀ presentation of the status for WG 	<ul style="list-style-type: none"> ◀ Jointly designed action plan for a climate friendly industrial zone (EG/Bottrop); (PP3 EG) ◀ Integrated plan to face climate change and for a sustainable industrial park (EG/Bottrop); (PP3 EG) ◀ Implementation programme for roofs combining green structures and water management for an industrial zone (Tiel-East) ; (PP7 TI) ◀ A feasibility study on wateradapted and energy efficient development in Tiel East; (PP7 TI)
4 3/2010	<ul style="list-style-type: none"> Criteria and concept evaluation report continued 	<ul style="list-style-type: none"> ◀ presentation of status and progress ◀ concept available for WG 4 ◀ contribution to the definition of “action plans”; for WG 4 ◀ presentation of the status for WG 4 	<ul style="list-style-type: none"> ◀ Integral design plans of combining green structures with water retention in public city courtyards (Nijmegen); (PP5 NI) ◀ Feasibility study/action plan for renewable energy measures in the district of Luciline; (PP6 RS) ◀ Energy strategy for Arnhem including a report with concepts/measures/ SMART targets per type of urban project; (PP2 AR) ◀ Action plan for implementation of green structures with water retention (Nijmegen) ; (PP5 NI) ◀ Action plan for the use of energy roofs including energy saving/production, green roofs and water retention; (PP5 NI)

WG - meeting n° / date	WG – topics / agenda	Preparation of PP / Input	Output / products of PP
4bis 6/2010	<ul style="list-style-type: none"> Test of the evaluation methods; exemplary evaluation of measures (expert hearing ... role play ... (prepared by)) <p>→ INTERIM EVALUATION REPORT</p> <p>→ 5 twinning reports on the improvement of the action plans</p>	<p>◀ input to test evaluation; presentation of examples;</p> <p>◀ exemplary rest evaluation</p>	<p>◀ Energy city-map with best practices examples to disseminate results - support awareness raising; (PP5 NI)</p> <p>◀ Checklists/handouts for project developers (Arnhem); (PP2 AR)</p> <p>◀ Concepts for adapting water infrastructure to climate change with green spaces (feasibility studies, architectural concepts, plans ; (PP6 RS)</p>
5 10/2010	<ul style="list-style-type: none"> further development / improvement of the evaluation concept, improvement of test evaluation method 	<p>◀ • Map and Toolkit: presented to WG</p>	<p>◀ Scenarios for reconstruction sites ; (PP2 AR)</p>
6 3/2011	<ul style="list-style-type: none"> twinning reports presentation and discussion of twinning results 	<p>◀ • presentation of the working plans</p>	<p>◀ Detailed working plans (PP8 WV)</p>
7 10/2011	<ul style="list-style-type: none"> Preparation of the evaluation report <p>→ 4 twinning reports on the improvement of the action plans</p>	<p>◀ presentation of the status</p> <p>◀ presentation of the status</p> <p>◀ presentation of the status</p>	<p>◀ A climate proof master plan for Ieper Oostsector (WVI); (PP8 WV)</p> <p>◀ Evaluated planning to see, if ecological planning complies with improving the climate proofness of cities (Kamen); (PP1 LV)</p> <p>◀ 4 twinning reports on the improvement of the action plans;</p>
8 3/2012	<ul style="list-style-type: none"> Evaluation report of partner experiences; to improve the preliminary check WP1; use for spreading integrated results <i>Future Cities</i> in WP4 action 16.; WG 2 <p>→ EVALUATION REPORT</p>	<p>◀ presentation of the status</p> <p>◀ presentation of the status</p> <p>◀ presentation of the status</p>	<p>◀ An example climate change adaptation plan (strategy and implementation plan) for a city; (PP4 HA)</p> <p>◀ Map of the City Region Arnhem Nijmegen with bottlenecks and opportunities to reach a climate proof region; (PP2 AR)</p> <p>◀ Toolkit “city climate”: models, guidelines, road-maps for municip. to estimate effects of climate change, effective measures; (PP2 AR)</p>

Working Group 4 “Awareness raising”

Chair: Eveline Huyghe, West Vlaamse Intercommunale

Participants:

Anke Althoff	PP 1 LV
Albert Anijis	PP 2 Municipality of Arnhem
Dean Morrison	PP 4 HA
John Williams	PP 4 Sub HA Sea Space
Jörn Peters	PP 4 Sub HA South East England Regional Assembly
Veroniek Bezemer	PP 5 NI
Henk-Jan Nijland	PP 5 NI
Wim Timmermans	Van Hall Larenstein University (with PP 2 / PP 5)
Thierry Verrier	PP 6 RS
André Jacques Chatillon	PP 6 Sub City of Rouen
Annemieke de Kort	PP 7 TI
Eveline Huyghe	PP 8 WV
Trui Naeyaert	PP 8 WV

Eveline Huyghe presented the agenda for the working group:

- Results of questionnaire
- Presentation of examples: Climate campaign Nijmegen and Public consultation Enviro21
- Conclusion and next steps

Results of questionnaire

Eveline Huyghe reported about the results of the questionnaire on climate change communication actions of the project partners. Most actions aim at mitigation and adaptation and are conducted at local or regional level due to the project partners coming from these levels. As a conclusion it could be worthwhile to invite also national authorities to give their contributions. The main target group are authorities. Citizens and the private sector are less addressed. Authorities seem to be easiest to reach because the project partners come from the same field. A wide range of instruments was reported ranging from print products (brochure, newspaper) to events and experimental application. However, the most popular instrument is presentation which is probably the easiest way but might not



create long term effect. In campaigns instruments were combined. The messages disseminated with the communication actions were featuring diverse goals. A focus could be found in asking for commitment and cooperation and convincing about the cost effectiveness. In all actions the message seemed to be understood by the audience but this does not necessarily imply a change of behaviour or other adequate reaction.

Monitoring the action was only done in half of the surveyed actions. Divers indicators were applied but often it is unclear whether the action can create long term commitment.

In the **discussion** it became evident that monitoring communication actions is important and would be helpful and is necessary for determining the success and the commitment created as well as whether the message was understood and will be applied by the target groups. However, this is hard to do with reasonable effort.

Dean Morrison explained that in Hastings a citizens' panel is used for monitoring. Here, questions are asked on particular subjects of interest. In the first round the answers are set as a baseline. After 1 – 2 years the same questions are put again and the answers are measured against the baseline to find out about the level of awareness.

Concerning the instruments Anke Althoff reported that an actual survey of the EU has stated the recent development in importance of different instruments:

- The importance of printed media and TV decreases
- The importance of the internet stays on the same level
- The importance of social media via the internet increases

Concerning the target groups children and young people should be integrated to engage parents through the children. Children rather believe in climate change than adults. Furthermore, address companies and professionals by communicating the benefits and possible profits. Creating personal concernment is important since solving of problems often is conveyed to the authorities.

It is important to break down the global message to regional and local level by communicating concrete effects and demonstrating concrete adaptation measures.

Example: Public Consultation Enviro21



John Williams from Sea Space presented the communication tools which were used for the public consultation to raise awareness of the first phase of the Enviro21 sustainable business park development and the Innovation Exchange. The aim was to achieve planning consent and public buy-in. Particular instruments used were (among others) a youth workshop (where models were created), workshops with councillors, council officers, special interest groups and businesses, an environmental quiz and a public exhibition.

Messages conveyed were that the project set out the following business objectives:

- To create environmentally sustainable business space
- To design and build exemplar business space
- To market exemplar business to related enterprises
- To ensure the availability of skills for business
- To foster a unique partnership community

In the workshops attendees were asked to vote against the statement/s that reflected their views. As a result 44% supported the proposals, 29% had concerns, 17% would like to have more information. Result of action was monitored through number of objections to planning application and enquiries to marketing team. The action was rated successful as planning consent was granted.



Example: Climate campaign Nijmegen “our green heart”



Veroniek Bezemer from Nijmegen presented the climate campaign which is being conducted in Nijmegen. The climate campaign is part of the climate action plan 2008 – 2013 of Nijmegen. In this framework the aims are saving energy in houses and buildings, promoting smart transport (e.g. bicycle use, clean fuel, urban distribution), green energy production (biomass, wind, solar, rest warmth from industry) and adaptation measures. With the climate campaign the citizens of Nijmegen shall be involved in the achievement of these aims. The campaign was called “Ons groene hert” which in Nijmegen’s dialect means “our green heart” and at the same time “hert” in Dutch means “deer”.

With the green deer a recognisable face was created to activate energy aware living with the objective of 3% energy reduction per year. The message should be transported with humour, be positive, informative, understandable and concrete. Two main voices were selected to transport the message – a local celebrity actress and an alderman. A website and various activities, such as free cards with messages, buttons, stickers, key chains, the night of the green “hert”, 1 page in the local newspaper every month, shall create ongoing visibility.



The campaign started in mid April 2008 and was evaluated in July 2008. Out of 1.260 inhabitants

37 % had heard something about the campaign

14 % vaguely heard something

33 % made directly the connection with saving energy.

The concrete actions like insulation of houses and clean traffic were unknown by the majority. An exception was the flight to look for heat-loss through roofs which got a lot of publicity.

80 % felt that climate-campaigns is useful and are willing to take measures themselves to help reach the goal of reduction 3% energy-use per year in the city. Also 80% already used less energy by means of turning the thermostat lower and using energy saving lamps.

The total costs of the campaign are not known yet, depending on the total duration.

In the **discussion** the link between the communication tools and the target groups was stressed. Both example presentation focussed on citizens involvement. The assessment tool which will be developed in working group 1 could be a helpful tool to convince authorities and professionals. Promotion is necessary and should be done adequately, this perhaps could be done maybe by WG 4.

Agreements for the next months

The working steps until next working group meeting in Nijmegen, in June 2009 were agreed on:

- A 2nd request will be send to the project partners asking for missing items of the communication actions by the chair Eveline Huyghe.
- Monitoring and evaluation of awareness raising will be an important topic of WG 4. Also, this can be of value for monitoring the Future Cities-project.
- Lippeverband and Tiel will present their communication actions at the next meeting.

Working Group Planner: WG4 – Targeted Awareness Raising

WG - meeting n° /date	WG – topics / agenda	Preparation of PP / Input	Output / products of PP and dates
		<ul style="list-style-type: none"> ◀ ◀ ◀ ◀ ◀ 	<ul style="list-style-type: none"> ◀ “Wonen ++” / Nijm / Energy saving advice for citizens, 2008 (PP5 NI) ◀ Forum discussions Nijmegen, 2007 (PP5 NI) ◀ Nijmegen energy agreement, 2008 (PP5 NI) ◀ Climate campaign / Citizens of Nijmegen, 2008 (PP5 NI) ◀ Brochure Tiel East, 2008, Target groups: residents, external parties (promotion) (PP7 TI)
3 10/2009	<ul style="list-style-type: none"> • Send results of questionnaire (= collection of measures) to WG members to add what's missing • Make compilation of all measures, assess • As a result: joint list of good practices of the partners <p>➡ COLLECTION OF COMMUNICATION ACTIVITIES OF PP</p>	<ul style="list-style-type: none"> ◀ preparation of reports on status of the activities ◀ prepare good practice examples 	<ul style="list-style-type: none"> ◀ Information of members of LV and EG about effects of climate change and options. Set up an action plan in regional consensus. (PP1 LV, PP3 EG) ◀ Website Tiel East 2008 newsletters 2009 – 2012 (PP7 TI) ◀ Tiel game 'living with water', 2008 / 2009; Target groups: project developers, residents, decision makers, water boards, etc. (PP7 TI)
4 3/2010	<ul style="list-style-type: none"> • Monitor communication strategies 	<ul style="list-style-type: none"> ◀ preparation of reports on status of the activities ◀ prepare good practice examples 	<ul style="list-style-type: none"> ◀ Innovation exchange: project website, blog-overall project brand, complete by end 2009; sea space PP4sub HA) ◀ Forum / Network: Sustainable Construction + Environmental Technologies, commence → Nov. 2009 (PP4 HA) ◀ Sustainable Construction Conference, Oct. 2009 PP4 HA) ◀ Training for individuals and businesses: “Eco-retrofit” + “Training” video; Sept. 2009 (PP4 HA)
5 10/2010 Conf.	<p>➡ BEST PRACTICE COMMUNICATION STRATEGIES OF PP</p>		<ul style="list-style-type: none"> ◀ Site visits, 2010 – 2011 (PP8 WV) ◀ Further complementary outputs as stated in the communication plan, 2008 – 2012 ◀ The results of action plan on energy measures on buildings are communicated to the citizens, PP5 NI, June / 2011
6 3/2011	<ul style="list-style-type: none"> • Focus on participation strategies 	<ul style="list-style-type: none"> ◀ Check: Experiences for participation strategy) 	<ul style="list-style-type: none"> ◀ Cooperation with housing companies/other parties action 1/PP5 NI

WG - meeting n° /date	WG – topics / agenda	Preparation of PP / Input	Output / products of PP and dates
7 10/2011	<ul style="list-style-type: none"> Best practice participation strategies 		<ul style="list-style-type: none"> ◀ Disconnection at Heerener Mühlbach, 2011 Information flyer produced, article placed, (PP3 EG) ◀ Awareness leaflet, Hastings, 2011 (PP4 HA) ◀ Sustainable construction conference Oct. 2011 (PP4 HA)
8 3/2012	<ul style="list-style-type: none"> Prepare communication input for final report Support editing of final report 		<ul style="list-style-type: none"> ◀ Information sessions (2 or 3) Information counter (1), 2011 – 2012 (PP8 WV) ◀ Citizens, persons concerned with construction work are informed about innovative techniques (of storm water disconnection), 1 / 2012, (PP3 EG) ◀ Information sessions – on possibilities in the water system (with inhabitants next to Heerener Mühlbach), 2 /2012, (PP3 EG) ◀ Information brochure, 2012 (PP8 WV) ◀ Activities targeted at university students, school children Nov. 2012 PP4 HA ◀ Rouen: Partnership with the “Maison de l’Architecture” to elaborate exhibition materials / brochure(s) / slides / presentations(s) on the topic of “adapting the architecture in Luciline” to climate change: 2009 – 2010 – 2011 (Note: Maison de l’Architecture: association of architects, firms and institutions interested in promoting architecture. Rouen Seine Aménagement is a member of it)
11/2012 Conf.	<ul style="list-style-type: none"> ◀ COMMUNICATION AND PARTICIPATION STRATEGIES FOR ADAPTATION – PRESENT 		

Wrap-up of 2nd Working Group Meeting

The chairs presented the results of the working group's work (see previous pages).



Dean Morrison invited all working group members to the next complete working group meeting of all working groups of *Future Cities* which will take place on 23rd – 24th September 2009 in Hastings (UK). Working group members are welcome to attend to the regional sustainable construction conference which will take place on 25th September 2009 in Hastings.

Ton Verhoeven invited the working group members of WG 1 to the extra meeting in Nijmegen (number 2bis) on 17th – 18th June 2009.

The organising partners for working group meetings n° 6 – 8 were revised according to the following schedule:

- 6th WG meeting (March 2011) PP2 Arnhem (date is corresponding with a conference on the heat island issue)
- 7th WG meeting (Sept/Oct 2011) PP8 West Vlaamse Intercomunale
- 8th WG meeting (March 2012) PP5 Nijmegen

Anke Althoff thanked all participants and all speakers as well as the hosting partner – Rouen Seine Aménagement together with the city of Rouen.

The 2nd working group meeting of *Future Cities* was closed at 3pm.

List of participants – Launch Conference

Name	Organisation
Moulay-Ahmed ABDELGHANI IDRISSI	UNIVERSITÉ DE ROUEN
Nadine AIRE	AGENCE DE L'EAU
Marie Hélène ALBERT	ROUEN SEINE AMENAGEMENT
Anke ALTHOFF	Lippeverband
Albert ANIJS	Municipality of Arnhem Senior Planner
Olivier ARQUIE	ALTO INGENIERIE BUSSY SAINT MARTIN
Ludovic AUGER	Communauté de l'Agglomération Rouennaise
Jean-Yves AUSSEUR	ANTEA, Orleans Cedex 2
Sophie AVENEL	ROUEN SEINE AMENAGEMENT
Georges BARBOTEU	SOGEPROM
Nicolas BAUDUFFE	INGETEC
Lily BERBESSON TALONI	Bureau d'études environnement
Regis BERLIER	EGIS Aménagement
Dominique BERTIN	Mairie de Rouen
Jean-Luc BERTRAND-KRAJEWSKI	INSA Lyon
Veroniek BEZEMER	Municipality of Nijmegen
Richard BLANCHARD	Communauté de l'Agglomération Rouennaise
Thomas BOCKELEE	Mairie de Rouen
Johan BOGAERT	Gouvernement Flamand
Stephane BOLLEN	Marché d'intérêt National (M.I.N.)
Lucien BOLLOTTE	EPF Normandie
Nathalie BONNEL	Omnium Général d'Ingénierie (OGI)
Emmanuelle BOUDOT	EDF
Sophie BOULIN	ANTEA
Albon BOURCHER	Université du Havre
Béatrice BOY	Grand Port Maritime de Rouen
Emmanuelle BREARD	Mairie de Rouen
Thomas BUHLER	PLANAIR
Cédric CAILLER	CERQUAL
Laurence CALTOT	Mairie de Rouen
Jérôme CHAIB	AREHN
André-Jacques CHATILLON	Mairie de Rouen
Sylvie CHAUVET	ATTICA
Bruno CHRISTIN	Quille
Frédéric CIEUX	LOGISEINE
Jean CLARISSE	Préfecture de Haute Normandie
Pierre-Yves CLEMENT	ROUEN SEINE AMENAGEMENT
Coucillor Robert COOKE	Hasting Borough Council
Thomas CORNIER	CNRS UMR IDEES 6266
Serge CRAMOISAN	Communauté de l'Agglomération Rouennaise
Brayima DAKYO	Université du Havre
Benoît DAMIEN	
Annemieke DE KORT	Municipality of Tiel
Hubert DEHAYS	ANTEA

Daniel DELALANDE	Ministère de l'Ecologie
Gérard DENOYER	DREAL Haute-Normandie
Jean-Marc DEVERRE	PTC
Christian DEVILLERS	Agence DEVILLERS et Associés
Philippe DJIAN	Omnium Général d'Ingénierie (OGI)
Patrick DOREAU	ID+ Ingénierie
Ilse DRIES	Flemish Government Department of Environment Nature & Energie
Geneviève DUBOIS	
Véronique DUPONT	ROUEN SEINE AMENAGEMENT
Alain ELIE	Cabinet Alain Elie
Vincent FERAT	UNIBAIL-RODAMCO
Jean-Claude FERRIOL	Communauté de l'Agglomération Rouennaise
Dominique FEUR	ROUEN SEINE AMENAGEMENT
Agnès FIEVEZ	Mairie de Rouen
Agnès FLEURY	TOTAL LUBRIFIANTS
Matthieu FOUQUET	
Valérie FOURNEYRON	Mairie de Rouen
Jérôme FRECAUT	EGIS AMENAGEMENT
Dr. Torsten FREHMANN	Emschergenossenschaft 11-SF
Gilles GAL	EPF Normandie
Nathalie GARRÉ	WVI
Olivier GAUDRON	PUCA
Julien GOOSEN	Mairie de Rouen
Agnès GRAMDOU	Syndicat Mixte SCOT de l'Agglomération Rouen - Elbeuf
Hermine GREGIS	CIRMAD PROSPECTIVES
Fabien GROUSELLE	Mairie de Rouen
Pierre-Yves GUERAULT	HMS PRO FRANCE
Antoine GUERAULT	HMS PRO FRANCE
Lionel GUERET-LAFERTE	Mairie de Rouen
Pierre-François GUIMONT	CETE NORMANDIE CENTRE
Dominique HAUG	Marché d'intérêt National (M.I.N.)
Dr. Birgit HAUPTER	Infrastruktur & Umwelt Prof. Böhm und Partner
Pierre-Marie HEBERT	Union Portuaire Rouennaise
Dr. Peter HEILAND	Infrastruktur & Umwelt, Professor Böhm und Partner
Audrey HIRBEC	ROUEN SEINE AMENAGEMENT
Chantal HURARD	IRSEEM -ESIGELEC
Eveline HUYGHE	West-Vlaamse Intercommunale
Amélie JACQUETTE	Mairie de Rouen
Didier JULIEN	IOSIS CENTRE OUEST
Ad KOOLEN	Van Hall Larenstein
Vincent KUYPERS	Alterra, WUR
Julie LABORIE	ROUEN SEINE AMENAGEMENT
Michel LANDRY	ROUEN SEINE AMENAGEMENT
Geneviève LARMARAUD	Syndicat Mixte SCOT de l'Agglomération Rouen - Elbeuf
Chantal LASS	Hastings Borough Council
Anne LE BELLEGO	Maison de l'Architecture
Emilie LE CAVORZIN	
Patrick LE PAGE	Communauté de l'Agglomération Rouennaise
Cécile LEFORT	Atelier des 2 Anges
Eric LEPONT	Caisse d'Epargne Normandie
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Eric LOBO	SOGEPROM
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Stéphane MAILLET	EPF Normandie
Stéphanie MALETRAS	ROUEN SEINE AMENAGEMENT
Alain MARION DE PROCE	Mairie de Rouen
Charlotte MASSET	ROUEN SEINE AMENAGEMENT
MAULAY	
Michel MENDRAS	GDF SUEZ - Réseau Distribution
Bert MEYER	Van Hall Larenstein
Helene MOGELHOJ	Sea Space
Nathalie MOLINA	Université de Technologie de Compiègne
Gérard MOREAU	SOGETI
Gilles MOREL	Université de Technologie de Compiègne
Dean MORRISON	Municipality of Hastings
Nassima MOUHOU-SVOYNEAU	Université de Technologie de Compiègne
Trui NAEYAERT	West-Vlaamse Intercommunale
Zeineddine NOUACEUR	Université de Rouen
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Gladiz PALNEIRA	SOGEPROM
Jörn PETERS	South East England Regional Assembly
Alain PIEL	Université du Havre
Christian PLATTIER	Square des Arts
Marie PREVOST	Conseil Régional Nord-Pas-de-Calais
Xavier PREVOST	Centre des Jeunes Dirigeants
Antoine RABIOT	ROUEN SEINE AMENAGEMENT
Cécile REGNIER	Mairie de Rouen
Stéphanie RENET	ATIS REAL
Yvon ROBERT	Mairie de Rouen
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Frédéric SALLE	CIRMAD PROSPECTIVES
Alain SCHAPMAN	DRIRE
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Henri WATTIER

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Hubert WULFRANC

Erik ZWEERS

PTC

Maison de l'Architecture

TOTAL LUBRIFIANTS

Conseil Général de Seine-Maritime

Municipality of Arnhem sr. Advisor of policy environment

Devillers associés

GrDF

Lippeverband 12-FI

Communauté de l'Agglomération Rouennaise

City Region Arnhem Nijmegen

Participants 2nd Working Group Meeting

Name	Project Partner
Anke Althoff	PP1 Lippeverband
Marion Visser	PP2 Municipality of Arnhem
Hans van Ammers	PP2 Municipality of Arnhem
Albert Anijns	PP2 Municipality of Arnhem
Torsten Frehmann	PP3 Emschergerossenschaft
Matthias Stumpe	PP3 sub partner Municipality of Bottrop
Chantal Lass	PP4 Hastings
Jörn Peters	PP4 Sub-Partner South East England Regional Assembly
John Williams	PP4 Sub-Partner Sea Space
Henk-Jan Nijland	PP5 Municipality Nijmegen
Veroniek Bezemer	PP5 Municipality of Nijmegen
Ton Verhoeven	PP5 Municipality of Nijmegen
Thierry Verrier	PP6 Rouen Seine Aménagement
Bénédicte Salle	PP6 Rouen Seine Aménagement
Amélie Jacquette	PP6 sub-partner Rouen
André-Jacques Chatillon	PP6 sub-partner Rouen
Annemieke de Kort	PP7 Municipality of Tiel
Ine van den Hurk	PP7 Municipality of Tiel
Nathalie Garré	PP8 West-Vlaamse Intercommunale
Stijn Saelens	PP8 West-Vlaamse Intercommunale
Trui Naeyaert	PP8 West-Vlaamse Intercommunale
Eveline Huyghe	PP8 West-Vlaamse Intercommunale
Vincent Kuypers	Alterra, WUR (with PP2)
Erik Zweers	City Region Arnhem Nijmegen (with PP2)
Ad Koolen	Van Hall Larenstein University (with PP 2 / PP 5)
Wim Timmermans	Van Hall Larenstein University (with PP 2 / PP5)
Birgit Haupter	Infrastruktur & Umwelt Prof. Böhm und Partner - facilitation
Peter Heiland	Infrastruktur & Umwelt Prof. Böhm und Partner - facilitation



Presentations and materials (included on CD-ROM)

Thursday, 19th March 2009

- 1 Welcome_ Fournayron.pdf
- 2 European aspects_Louwers.pdf
- 3 Climate change French approach_ Delalande.pdf
- 4 Climate change Flemish approach_ Bogaert.pdf
- 5 Impact on buildings_ Gaudron_Fort.pdf
- 6 Sustainable water_ Bertrand-Krajewski en.pdf
- 6 Sustainable water_ Bertrand-Krajewski.pdf
- 7 Future Cities strategy_ Althoff en.pdf
- 7 Future Cities strategy_ Althoff fr.pdf
- 8 Luciline project_ RSA.pdf

Friday, 20th March 2009

- 1_Introduction WG1_Verhoeven.pdf
- 2_Urban Heat Island_van Ammers.pdf
- 3_Energy Study Arnhem_Anjis.pdf
- 4_Regional Vulnerability Assessment_Peters.pdf
- 5_Agenda WG2 20-3-2009.pdf
- 6_Sustainable masterplan Ieper_Saelens.pdf
- 7_Introduction_WG4_Huyghe.pdf
- 8_Enviro21_Consultation_Williams.pdf
- 9_Campaign Nijmegen_Bezemer.pdf
- 10_Future Cities Communication Plan_Althoff.pdf

Material

- WG 1_Impact climate change on metropolitan areas - WUR.pdf
- WG 1_Vulnerability Assessment - SEERA.pdf
- WG 4_090205_SummaryInputPartners.pdf

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