Meuse and Climate

The AMICE project's newsletter n°1

January 2010

Welcome

We, all of the AMICE partners are very happy to present you the first issue of 'Meuse and Climate' the newsletter of the AMICE project. AMICE means Adaptation of the Meuse to the Impacts of Climate Evolutions so the title 'Meuse and Climate' evokes very well the challenge accepted by the AMICE partners.
In this first issue you can read more about the aims of AMICE, the partnership and some of our actions. In the next issues, we will provide you with more exciting news.
Of course you are very welcome to visit the AMICE website: www.amice-project.eu
We wish you a great time learning about AMICE, the Meuse and Climate Change.

Word from the AMICE Lead Partner

AMICE is a major unifying project of the Mosan basin.

The challenge was to bring together, over the full length of the Meuse basin, nearly 900km from the plateau of Langres to Rotterdam, all the Partners with their different problems, but sharing a common point, the Meuse river.

What is EPAMA?

EPAMA was created in France following the floods in 1993 and 1995. These floods caused major damages in the Ardennes department and had consequences on all the territory. Never had any collective action been taken on the Meuse in France. Under the initiative from the French State and the Regions crossed by the river: Lorraine and Champagne-Ardenne, the river modelling was made. We are now finalizing the flood-protection works resulting from the modelling. EPAMA also has an informative role on flood protection and river rehabilitation. We are working of course with the State services on the improvement of flood forecasting. We are also working on preventive actions with the OSIRIS software. It is dedicated to flood-crisis set-up supported by computer tools and we help municipalities to elaborate scenarios and do exercises. We are also involved in vulnerability reduction for housing and businesses.

Why is EPAMA the Lead Partner?

Well, for a long time now the notion of Mosan culture has been part of EPAMA's policy. EPAMA has a strict ethics of basin solidarity between the upstream and the downstream. It appeared to us, right from the beginning, that we could not be considering only the French territory.

The AMICE project looks like the utopian European project at its beginning: we are now sailing on the same raft. We cast off moorings, we know where we want to go, we absolutely don't know what will happen. What is certain is that from now on we will go all together.

Fair journey to all of you.!

Mr Jacques Jeanteur, President of EPAMA

In this issue:

AMICE: what is it about?

'AMICE' means 'friend' in Italian and the project is all about friendship:

AMICE is all about making friends with the Meuse and helping the river to adjust to climate change. We want the Meuse to become the very best example of a climate-proof river but one that keeps its natural beauty.

AMICE is also about the people who live along the 950 km length of the Meuse and its tributaries. It means building strong relationships between the 17 partner organisations and all Meuse-lovers in the catchment - from where it rises in France to its mouth in The Netherlands via Belgium and a part of Germany. It is a dream, but with commitment and enthusiasm, it can co-me true.

In the future there will be more floods and more droughts. Whatever we do now, we cannot stop climate–change. Adaptation to changing circumstances is a necessity - but we can choose how we take action. AMICE gives us the opportunity to test all the options and build them into one overall strategy. The river is bound to respond in ways we know but we are also anticipating some surprises.

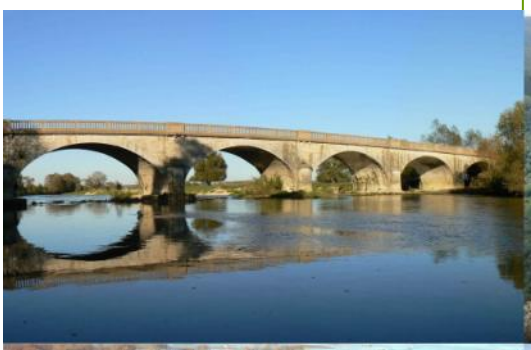
Increasing our knowledge base is the key to success. If we want to help the Meuse adapt we must know everything about the river and how the local climate will change. We need to review all the existing literature, test climate models, quantify the impacts of different factors and prepare good land-use maps. Using reliable climate scenarios and the shared skills of the scientists in the catchment, this international study will help us generate a better understanding of how the Meuse will respond in the future.

Water is the 21st century's essential resource. We must hold onto it and handle it with care! Improvements in 'natural water retention' can often be achieved through low impact, small-scale land-use changes. In AMICE, we are already investigating in three places how water can be held back more naturally where there are different land -use and population characteristics. This experience will help us to develop a more natural Meuse river basin.

There are many flood-water management constructions operating already in the Meuse river basin and more are planned. Herein lie some big challenges. How to design new water management structures that are able to deal comprehensively with flooding, drought and increasing water demand. How to adapt existing flood control measures to cope with ever more extreme events. Through AMICE, new approaches to these challenges are being tested by three highly innovative projects in Germa-ny, Flanders and the Netherlands.

However, construction projects alone are insufficient to cope with some extreme water events. AMICE wants to improve how water managers and the rescue services anticipate and react to flood events. With the help of interactive software and the experience of AMICE Part-ners, flood crisis management can be improved and this will ultimately be tested through a transnational, flood-risk management exercise.

Change will also be achieved through awareness-raising - through newsletters, information packs, posters, leaflets and websites. Site visits to the different pilot projects will be arranged for local authorities and other participants. International events will provide an opportunity to disseminate the results of AMICE's achievements further afield. Best of all will be an AMICE film that will tell the full story of how the Meuse basin is responding to climate-change.



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AMICE partners at the Project Steering Group meeting in Liège, October 15th 2009

The AMICE website

The AMICE website: a great site for all you want to know – and more.

You want to know more details about the project organisation? About the partnership? About the different partners, their role in AMICE and how you can contact them? On water-related issues? On climate change? Or you want to download a leaflet, a photo, a report that is of interest to you?

Then there is just one address: www.amice-project.eu

The AMICE slogan

AMICE is a nice word. Unfortunately it does not say what the project is about.

Adaptation of the Meuse to the Impacts of Climate Evolutions is rather a mouthful; some people may even think it is a pronounciation exercise.

Therefore we felt the need for a slogan: a powerful three-to-five word message evoking the whole of the AMICE challenge. No longer need for lenghtly explanations when somebody asks you: "well, what's AMICE about?", just a key-message.

We found a really good one:

Climate Changing ? Meuse Qdapting !

That's our challenge. That's what we are doing!

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;
Ulg, 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, 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 : Institute of hydraulic engineering and water resources management;
Lehr- und Forschungsgebiet Ingenieurhydrologie: Academic & 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 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

AMICE Kick-off event in Hotton

On April 28th 2009 the AMICE project was officially launched at Hotton (B)

This event had a double objective: first to present the final version of the project to all people interested and second to sign the Partnership Agreement that links all 17 Partners of the project.

70 people attended the AMICE kick-off meeting.

The speeches were followed by the signature of the Partnership Agreement by the representatives of the Partners. This contract sets the working rules in the Partnership for the good implementation of the AMICE project.

Read more..

Launch event in Hotton: the speakers

Some AMICE figures

2009-2012

17 Partners

4 countries

Budget : 8.9 million €

ERDF : 2.8 million €

International Meuse Commission

News from the partners

1. Ny: integrated management of the Naives basin

The village of Ny and the Naives river are located on the basin of the Ourthe, major tributary of the Meuse. The project presents a good example of how flood prevention, adaptation to climate change, ecological conservation and tourism can be combined.

Ny has a high architectural value but is regularly flooded (1/year, 3 times in 2007). Discharges outside of Ny may damage downstream urban areas and infrastructures, so the Naives banks will be designed to allow the extra water to spill on the nearby flat Natura 2000 area. The water of the Naives stream however is in poor quality due to an old sewage system.

Such a complex problem requires an integrated management of the sub-catchment. This will partly be done within AMICE.

Read more..

The Naives stream flowing into the village of Ny

2. Low flows - Gembloux Agro-Bio Tech

The INTERREG IV B - AMICE project is really the occasion for the Walloon region to carry out the low flow frequency analysis on its territory. The objective is to establish a methodology based on techniques used in the neighbouring countries and on recent studies described in literature.

Thanks to the AMICE project, the Walloon region will have a better knowledge of low flows of its rivers; this topic used to be a bit neglected because it is not yet problematic in this area. With the climate evolutions predicted for the end of this century however - increase in the periods of droughts - it is time to improve our knowledge in this field as to manage our rivers as well as possible.

Read more...

One of the sluices on the Albert Canal

3. News from the nv De Scheepvaart

The Albert Canal and the Campine Canals are fed with water from the river Meuse. It is the operating water for the sluices that serve the inland shipping trade. This trade takes on a daily basis about 6000 lorries from the highways. The water is also used for the production of drinking water for the Antwerp conurbation, as cooling water for electricity plants, as processwater for industry and at last also to irrigate farmerland and nature reserves.

In 1995 a treaty was signed between Flanders and The Netherlands to regulate the distribution of the water in periods of low flows. Gathering the ships together before the sluices and guiding them through together is one of the possibilities. To reduce or temporarly stop certain uses is another one.

According again to scientific research the installations of pumps on all of the sluice-complexes of the Albert Canal (Genk, Diepenbeek, Hasselt, Ham, Olen and Wijnegem) would be the best measure to prevent problems due to low flows. Thanks to these pumps part of the shipping water used in the sluices can be pumped upstreams again. By doing so the netto-consumption by the sluices is reduced without impacting the other water users.

The nv De Scheepvaart will design the pumping installations in such a way that in normal times, when there is enough water, they function as water power plants. This is possible thanks to important differences in level at the sluices in the AlbertCanal. The water power plants will produce energy for about 10.000 households.

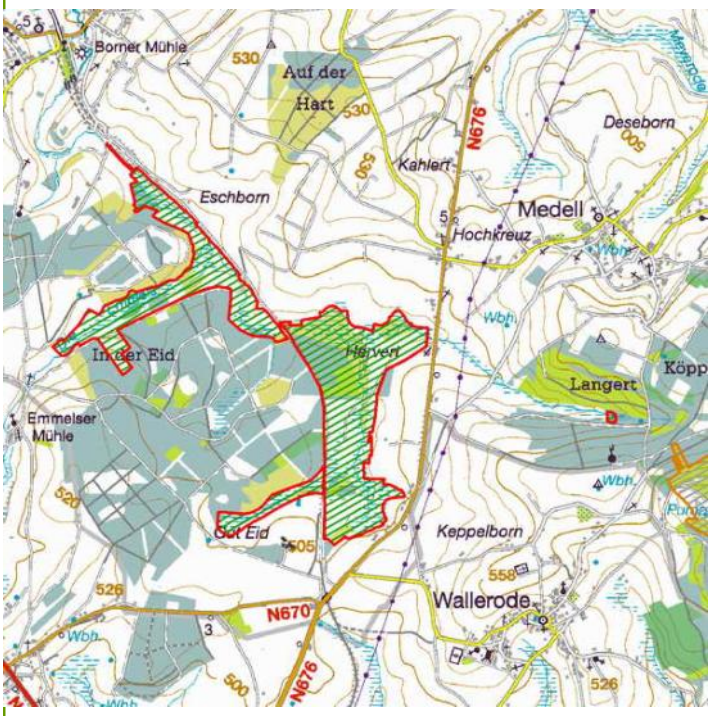
The water in the Albert Canal has a relatively good quality and lots of fish live there. The nv De Scheepvaart has therefore chosen to apply an innovative and ecologically sound design as to minimize the impact of the pumps on the fish populations.

Read more..

4. RIOU: Natural water retention in the Ardennes

Riou is one of the partners dealing with natural water retention. In fact floods and droughts are two aspects of just one problem. The idea is that sources areas and floodplains in the upper parts of the catchment basin can play an important role for the whole of the Meuse basin. Condition is they can function in a natural way.

Read more..



The Emmels valley (http://biodiversite.wallonie.be/)

5. News from Flanders Hydraulics Research (FHR)

1. Climate Change impact scenarios

Flanders Hydraulics Research (FHR) in Antwerp ordered a study on the "Effect of Climate Change on discharges in high and low water situations and total water availability". FHR has no hydrologic models for the Meuse catchment basin and the AMICE-project was a trigger to extend the study. All scenarios are unambiguous for future summer discharge: the average summer discharge becomes lower than half discharge in the control period (1961-1990).

2. Update of Meuse knowledge

In 2004, Flanders Hydraulics Research made a report with an inventory of all types of aspects relevant for water management for the Meuse catchments.

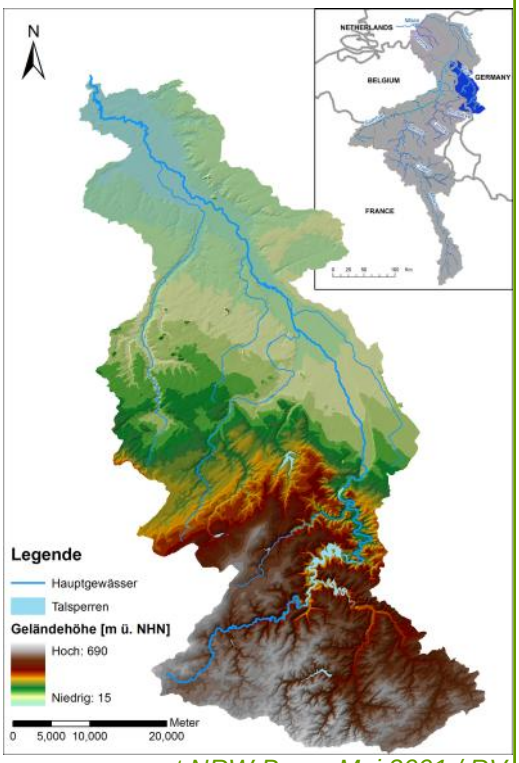
3. Workshop on Climate Change in Flanders

More than 40 Flemish colleagues of the water sector came to Flanders Hydraulics Research on October 29th for a workshop about climate change impact on hydrology with a focus on the effects on the navigable waterways in. For the Meuse, the study of Deltares for FHR and the AMICE project were presented.
Presentations given during this workshop and a link to background documents are given on www.watlab.be
Read more..

6. Work undertaken in the Rur sub-basin

Work at the Institute of Hydraulic Engineering and Water Resources Management at RWTH Aachen University will focus on the hydraulic modelling of the Rur tributary and the development of methods to assess the changes in water related risks due to climate evolution. In preparation of these tasks we collected all needed data and decided upon which software to use. A hydraulic model will be set up for the part of the Rur downstream of the reservoirs using SOBEK 1D/2D. The output of this model will give information on inundation during floods. That information together with data on land use can be used to calculate the impact of different floods, today and for future scenarios of climate change.

Read more..



Landesvermessungs amt NRW,Bonn, Mai 2001 / RV

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