Accueil d'une délégation allemande du *Land Sachsen-Anhalt*

L'accueil d'une délégation allemande du *Land Sachsen-Anhalt*, le 9 octobre, est intervenu en lien avec la célébration du 10ème anniversaire de l'accord de coopération entre ce *Land* et la Région Centre. Conduite par Rainer ROBRA (*Chef der Staatskanzlei und Europaminister des Landes Sachsen-Anhalt, Mitglied des Bundesrates*), la délégation a été accueillie par Jean-Pierre LE SCORNET, Président de l'Etablissement.

A l'issue d'une présentation de l'Etablissement et de ses principaux domaines d'intervention, ainsi que des « centres d'intérêts » des visiteurs allemands, un échange de vues sur des pistes de coopération qu'il pourrait être envisagé d'explorer a débouché sur l'identification de plusieurs voies d'action, telles que :

- un travail interservices entre le *Land* et l'Etablissement sur la gestion des risques d'inondation (ouvrages de protection, infrastructures de type digues et zones d'expansion des crues) ;
- un échange d'informations sur les relations chercheurs-gestionnaires ciblé sur la question de l'adaptation aux impacts du changement climatique ;
- un transfert de savoir-faire sur de nouveaux moyens de communication « de crise » expérimentés par le *Land Sachsen-Anhalt*.

La visite de la délégation s'est achevée par une promenade en bord de Loire.

SACHSEN-ANHALT

Workshop „Hochwasserrisikomanagement-Richtlinie – Erfahrungen aus der bisherigen Umsetzung vor dem Hintergrund der jüngsten Hochwasserereignisse“ am 29. September 2014 in Brüssel

C’est également dans ce contexte que l’Etablissement est intervenu le 29 septembre, à Bruxelles, à la représentation du *Land* auprès de l’Union Européenne. La présentation effectuée par le directeur général des services, sur le thème de la prévention des inondations, est produite en annexe.

On notera enfin que le *Land Sachsen-Anhalt* a répondu favorablement à l’invitation à intervenir lors du Forum *Loire & affluents : au cœur de l’Europe des fleuves* du 10 décembre prochain, organisé à l’initiative de l’Etablissement, dans les locaux du Conseil régional du Centre.

Jean-Claude EUDE, Director General of the Loire River Basin Authority

Ladies and gentlemen,
Dear colleagues,

It's a real pleasure for the Loire River Basin Authority to participate in this expert meeting on the implementation of the 2007 Directive on the assessment and management of flood risks. We do appreciate the opportunity offered by *la Région Centre*, in the framework of its interregional partnership with *Sachsen-Anhalt*, to contribute on this issue, both crucial and sensitive as far as the competitiveness of European territories is concerned.

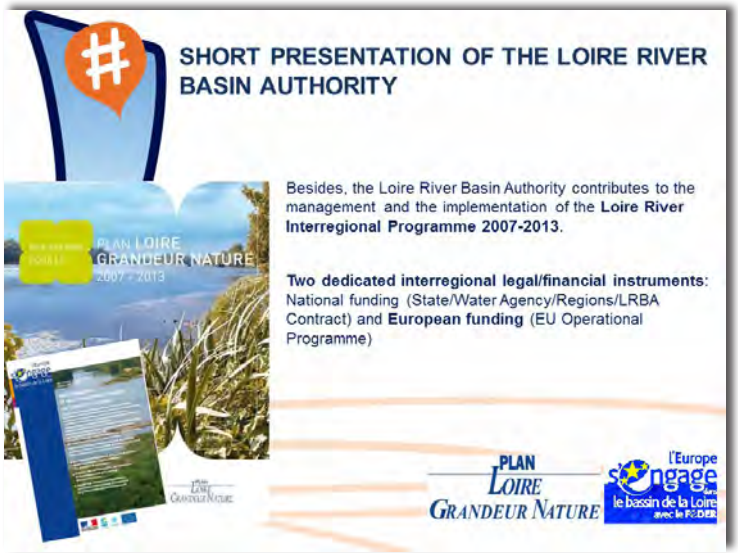
As you may know, the **Loire River** is the longest river in mainland France. As a matter of fact, its river basin area drains a 5th of the country.

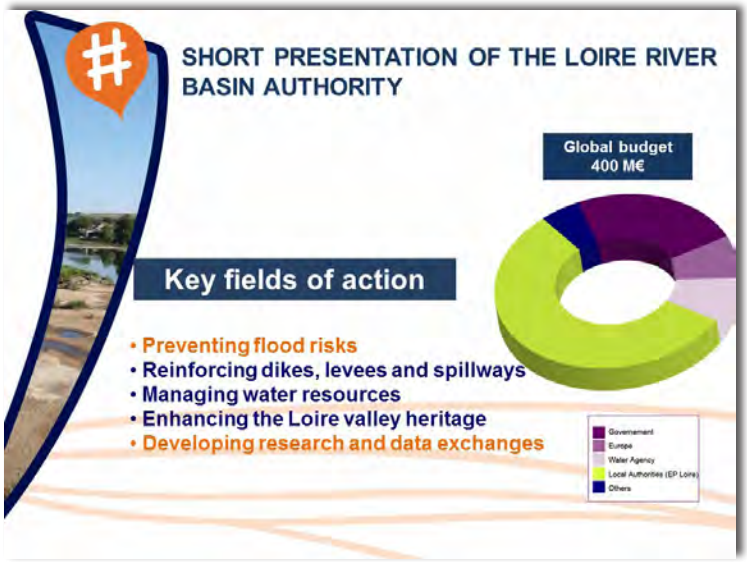
Concerning the **Loire River Basin Authority** (www.eptb-loire.fr), it's a 30 years old public institution, gathering 50 regional and local authorities, among which 7 Regions, *la Région Centre* being one of them. It is usually described as a tool for solidarity and subsidiarity at river basin level, with a focus on economies of scale. Its interventions range from hydraulic matters (flood prevention, water resource management) to territorial development. Not to mention the support granted to research, development and innovation projects, as we'll see later on.

Besides, the Loire River Basin Authority owns and operates 2 large dams: Naussac in *la Région Languedoc-Roussillon*, and Villerest in *la Région Rhône-Alpes*.

In more strategic terms, the Loire River Basin Authority contributes to the Loire River interregional programme, known as *le plan Loire grandeur nature*. To make it short, this plan was decided by the French government in 1994, after fierce ecological conflicts concerning the construction of dams. Initially a top-down approach, this Plan has become, 20 years later, an interesting example of stakeholders' involvement, opening the way to a "peaceful" (not to say "smooth") integrated management of the Loire river basin.

Since 2007, this Plan can rely on two interregional legal and financial instruments: As regards the national framework, a State/Water Agency/Regions/Loire River Basin Authority contract; As regards the European framework, an EU Operational Programme with ERDF funding.





The global budget for the 2007-2013 period amounts to 400 M€.

In the framework of this Plan (www.plan-loire.fr), the key fields of action are the following: Prevention and management of flood risks / Reinforcement of dikes and maintenance of the river bed / Management of water resources / Enhancement of the Loire Valley natural and cultural heritage / Development of research and data exchange.

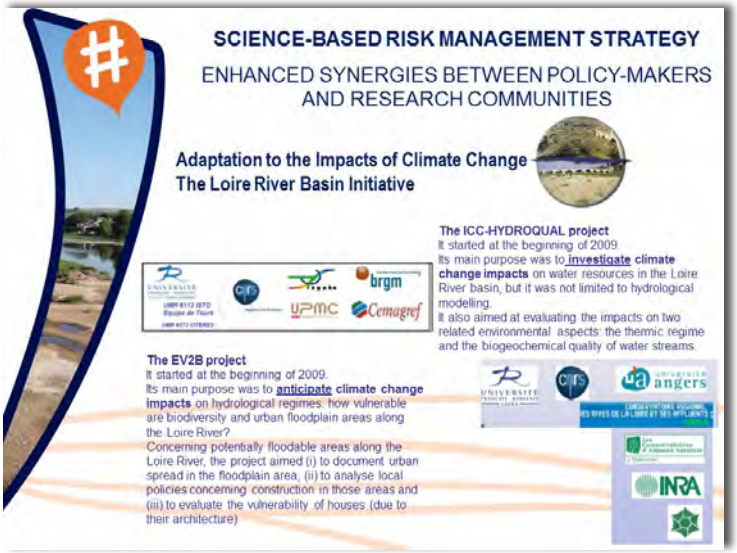
i) In this respect, the **stress** is **put on the strengthening of already strong links between the scientific community, policy makers, practitioners and other stakeholders** confronted to the current challenges related to climate change and the implementation of the EU flood risks directive. Needless to say that all the work already carried out has opened the way to a more **science-based risk management strategy**.

In order to improve the running of a multidisciplinary interregional network, we benefit from the advices of the Loire River Scientific Council, set up in 2007. It advises the monitoring and management committees on the implementation of actions decided, in particular under the Research/Data/Information section.

At the same time, we ensure the pooling of the partners' specific skills, through the development of an integrated interregional Research/Data and Information platform. This means regular meetings – Participation being open to all potentially-interested organisations and work carried out in full transparency. In this context, we also welcome foreign delegations.

In addition, we organize an annual meeting of the Loire scientific community and river managers. The purpose of this meeting is to share results, experiences and best practices, also to make the Loire a European benchmark for river basin management. The 2014 meeting will take place in *la Région Centre*, in *Orléans*, on December the 10th (http://www.plan-loire.fr/fr/les-plates-formes/recherche-donnees-information/rdi-vie-des-projets/forum-loire-affluents/index.html). You are all most welcome (FR/EN translation will be ensured).

The promotion of success-stories in the field of research and development also plays a crucial role. This explains why financial support is granted to outstanding research projects. Relevant detailed information being available on line on our collaborative exchange platform, I will simply indicate: First, that research teams come from all over the river basin and other places in France or even Europe; Second, that we support different types of research projects: Visiting professors, Doctoral and post-doctoral works, R&D projects...



At this point, allow me to draw your attention to the Loire river basin initiative as regards adaptation to the impacts of climate change, the central concern being the reduction of vulnerability to floods and drought.

Starting in 2007, 3 actions have been undertaken: An inventory of the knowledge of the climate change impacts, and adaptation measures already taken at the river basin level ; A prospective hearing on what is at stake for the years to come ; A technical meeting dedicated to the definition of scenarios with climate and modelling specialists.

Building upon the results of these preliminary actions, a call for research projects was launched in June 2008, concentrating on the understanding of human and environmental vulnerabilities in light of the effects of climate change. Selected projects have been carried out since 2009. One could say that through this process, our objective was to pave the way to "no regret" adaptation strategies aiming at increasing the resilience of the Loire river basin.

Both the ICC-HYDROQUAL project and the EV2B project constitute important contributions in this respect. The main purpose of the ICC-HYDROQUAL project is to "investigate" climate change impacts on water resources in the Loire river basin, but it is not limited to hydrological modelling. It also aims at evaluating the impacts on two related environmental aspects: The thermic regime and the biogeochemical quality of water streams. The purpose of the EV2B project is to "anticipate" impacts of climate change on hydrological regimes: how vulnerable are biodiversity and urban floodplain areas along the Loire River?

Of course, other research projects have also been conducted, with more specific focus on the issue of flood assessment and management. Three examples, among many others: The METHODOLOIRE project aims at developing a methodology facilitating the evaluation of the economic damages linked to flood. The MADIS project promotes a methodology for cross-sectoral analysis and decision making, with particular attention to flood risk management plans on one hand, land use and urban planning on the other hand. The ACCELL project deals with spatial and temporal assessment of accessibility to localized stakes in a flooding situation.

At this point, I would like to stress the fact that stakeholders' involvement developed for years in the Loire river basin is probably an advantage to tackle climate change problems. Besides, the already existing structured dialogue between the science community and river managers play a decisive role: It deeply contributes to the integration of scientific findings in the Loire river basin interregional policies.

ii) Raising the question *How resilient is your country?*, in an article published in NATURE following the 2012 Superstorm Sandy, the Director of the Wharton Risk Center of the University of Pennsylvania indicated that we should be able "*to answer, comprehensively and quantitatively, five questions [...] What risks do we face and where? What assets and populations are exposed and to what degree? How vulnerable are they? What financial burden do these risks place on individuals, businesses and the government budget? How best can we invest to reduce risks and strengthen economic and social resilience?*" He added: "*Many governments do not know the answers.*"

As regards **integrated flood risk management**, a crucial issue for the Loire river basin, one could reply that we have proceeded further and deeper with **multilevel implementation of flood risk management plan(s)**.

Since 2007, we have already noticed major changes in the scope of intervention: Growing attention paid to long-term drivers such as climate change, revealing the river basin vulnerability to flood risks; Increased importance attached to the prevention of flood risks, with more and more people looking further than just flood protection; Transition from a purely hydraulic focus (hydraulic engineering works) to reducing vulnerability to flooding, in particular for businesses and housing.

This doesn't mean that we have suddenly forgotten the important role played by large dams. As a matter of fact, the Villerest dam we own and operate has significantly contributed to flood protection, at river basin level, both in December 2003 and November 2008. Just to provide you with a few figures: Without the dam, water would have been higher up to almost two meters in the City of *Roanne*, in the upper part of the river basin, and half a meter in the City of *Tours*, in the lower part of the river basin. One can easily estimate the security gain for the whole defence system along the Loire river and the amount of damages avoided.

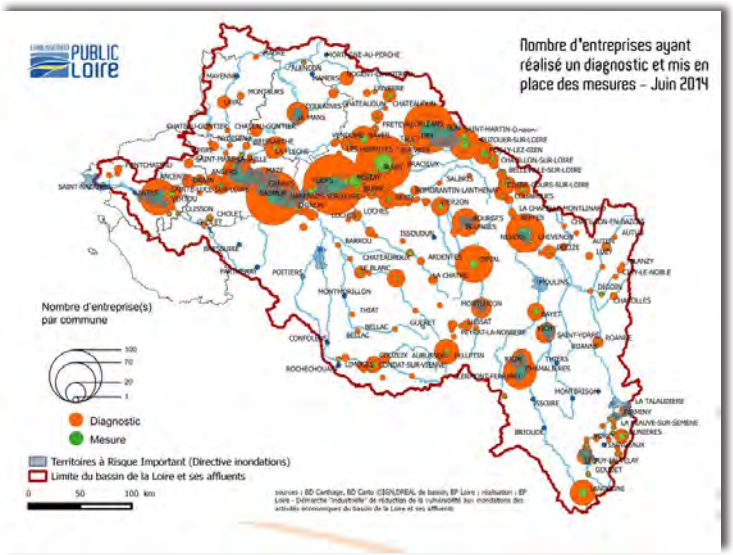
To come back to integrated flood risk management, it is a well known fact that a major flooding of the Loire River and its tributaries constitutes a great risk which would cause considerable disturbance and damage. In very practical terms, one of the main issues at stake is our collective capacity to safeguard more or less 20 000 businesses' vital interests against flooding.

In this respect, it has appeared advisable to raise the economic players' awareness of the risk and their interest in taking action, and then to propose technical solutions, while pooling the support efforts.

In order to do so, we have designed and are currently implementing a "comprehensive" river basin action plan for reducing businesses' vulnerability to flooding. To make it simple, we have: First, created a favourable environment for deploying the initiative (surveys, information campaigns, awareness-raising, training schemes, involvement of elected persons, networking, etc.); Second, fostered the establishment of a significant number of individual vulnerability diagnostics; Third, made it easier for companies to take actions to reduce their vulnerability, on a voluntary basis.

The figures clearly indicate the real progress made in a few years: Not only have 20 000 businesses been regularly informed about flood risk, but close to 2 500 among them have moved into the process of a vulnerability assessment and more than 400 have even gone further, completing measures to reduce their vulnerability. At a time when the economic crisis prevailing in Europe didn't' make it obvious for them to depart from their strictly financial priorities.

Should you wonder about the economic interest of prevention measures of this kind, it appears so far that the average amount of damages per business assessed is 1,2 M€, out of which 1/3rd could be avoided with relevant measures, most of them of an organizational rather than structural nature, that is not costly.



Needless to say that all this has remained possible because of the coincidence between: A focussed strategy (in line with the EU orientations); A relevant territory (the river basin); An efficient support secured for 7 years (national contract and European programme).

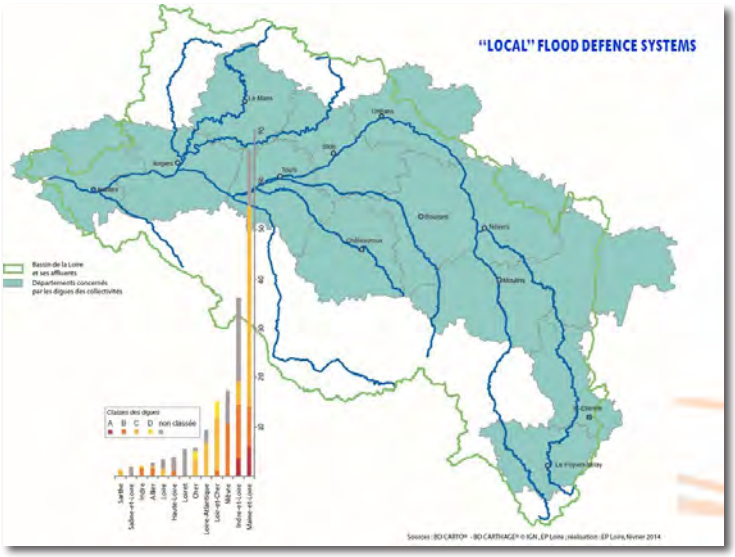
Besides the attention paid to reducing businesses' vulnerability to flooding, multilevel implementation of flood risk management also relies on a **river basin "portfolio" of support actions designed for local authorities to foster territorial resilience**.

In this respect, let me refer to what I call the "3D" Principle: Denial, on the one hand, Despair, on the other hand, and Do-ability somewhere in-between. This is precisely where we stand when it comes to the "portfolio" of support action: Make it easy for local authorities to do it!

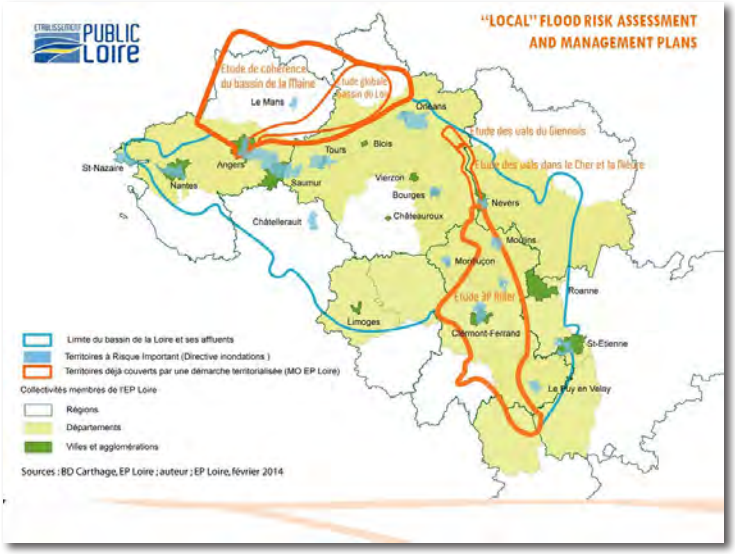
Among many examples, belongs to this "portfolio" our experimental support action aiming at facilitating the design of activity continuation plans (http://www.plan-loire.fr/fr/les-plates-formes/prevention-des-inondations/initiative-pca/accompagnement/index.html) by local, provincial and regional authorities, concentrating on crucial public services for which they are responsible: transport, water supply, waste management, just to mention a few.

In addition, since 2007 more than 400 local authorities have also benefited from our support action for the design of emergency management plans (http://www.plan-loire.fr/fileadmin/pce/PF_PreventionDesInondations/Demarche_appui_PCS/Rapport/Exercice/ACTU-PCS2__bd.pdf - http://www.plan-loire.fr/fr/les-plates-formes/prevention-des-inondations/reperes-de-crues/index.html), with a focus this time on the development of a risk culture, reliable forecasts, warning systems and evacuation plans.

In this respect, we have taken full advantage of the advice given by Professor Leonard, from the Harvard Kennedy School of Government, "*to expand our attention in emergency management from the "core" activities of preparation of response and response itself to include the full range of risk management strategies, from prevention through response to recovery*". The lecture was given in *la Région Pays de la Loire*, in 2010. At that time already, he indicated also that « *response to and recovery from very large scale events [...] will of necessity be carried out on a decentralized basis* ».



More recently, we have developed a support action dedicated to "local" flood defence systems (http://www.plan-loire.fr/fileadmin/pce/PF_PreventionDesInondations/DiguesCollectivites/Images/ACTU_DIGUES_Web.pdf). Sound management being taken for granted by the population, particular attention is paid by local authorities to their ability to foresee, to handle and to communicate possible failure... As an indication of what is at stake, the current inventory we have made shows that not less than 120 km of dikes managed by local authorities are classified for security reasons and thus deserve a special treatment!



Last but not least, the Loire River Basin Authority has been involved for years in the design of "local" flood risk assessment and management plans (http://www.plan-loire.fr/fr/les-plates-formes/ouvrages-domaniaux-de-le-tat-et-securite/les-etudes-de-vals/index.html). To make it short, the aim is always to reduce the adverse consequences of floods, building on strong participatory processes and addressing all aspects from risk prevention to flood recovery. As you can see from the map, the only thing that differs is the space scale of intervention, from very local to more global, namely sub-basins (http://www.plan-loire.fr/fr/les-plates-formes/prevention-des-inondations/etude-3p-allier/index.html - http://www.plan-loire.fr/fr/les-plates-formes/prevention-des-inondations/etude-globale-bassin-du-loir/index.html) and river basin.

At this point, it appears clearly that both the science-based risk management strategy and the integrated flood risk management implemented on the Loire river basin, on the one hand, anticipated the requirements of the 2007 Directive on the assessment and management of flood risks, on the other hand, fits with the French national strategy adopted in 2014.

To conclude this brief presentation, allow me to recall the results of the 2009 OECD case study, dedicated to the Loire river basin flood vulnerability reduction strategy.

As you may have noticed, we clearly stick to the main recommendations.

Thank you for your attention and see you soon in France, along the Loire River!