Workshop 3 : Taming the Meuse ?

Moderated by : Max LINSEN

Introduction :

- *François HISSEL, CETMEF, crisis management in France*

The French Institute for inland and maritime waterways (CETMEF) is a central technical department which comes under the Minister for Sustainable Development and acts in the fields of the harbors, coastal and rivers engineering, safety of maritime transports and communication systems through research and development activities. The presentation by François Hissel was the opportunity to address the functioning of the French crisis management and the interest of a integrated vision (spatial, sectoral , stakeholders…) in order to improve the management of the flood risk on a territory.

The flood risk in France is a reality for 16,134 municipalities concerned (out of 36,000), with 5.1 million inhabitants potentially affected. It represents an annual cost of 500 million euros and 80% of the total costs of natural disasters. Adaptation to floods and flood risk management involves a number of actions, ranging from the knowledge of hazard to the crisis management to monitoring and forecast, information of citizens, spatial planning, the reduction of vulnerability and protection of structures.

The aspect of knowledge about flood risk and flood hazards has been given a boost by the Floods Directive 2007/60/CE./ This Directive obligates Member States to mapping of flood risks and drafting action plans to manage these risks. Monitoring means both forecast and information and aims to anticipate events and alert authorities and population. The software platform applied in France is called “Vigicrues”.

Teaching and informing of the citizens is based on the postulate that the citizen is the first actor of risk prevention. According to this hypothesis, the French Law of preventive information (22/07/1987) allowed for every citizen to have access to a full information about the current state of the crisis.

In order to have a risk-aware spatial planning and decrease the exposition to the risk and the vulnerability of people and goods, the 02/02/1995 Law introduced a requirement for communities to have a *flood risk prevention plan*. Moreover, in exposed areas, building is forbidden or submitted to prescriptions. Local measures on the urban level protect local stakes and economic activities. They are furthermore part of an integrated vision on scales, stakeholders and usages of water.

Concerning crisis management, the French law on civil protection has been modernized in 2004 to insure the cooperation from the European level (Monitoring and Information Center) to the community level through the national, the regional and county levels. The organization of response of civil protection-ORSEC is coordinated by the Prefect of the department but all the private or public institutions are involved with their own action plans), which must be updated and validated by regular exercises. Each crisis event is subject to a return of experience which allows for improvement of knowledge of hazards (as a full circle!), getting data about damages, efficiency of protection measures and crisis management and finally, to save the experience of the event and raise awareness among the population.

Aim of the Workshop:

The aim of the workshop 3 “taming the Meuse” was to formulate recommendations for transnational Meuse management, addressing both existing gaps and problems addressed in the AMICE project.

Organization of the Workshop:

- The participants were divided into smaller groups. They discussed about propositions such as “If the Meuse would be located in one country only, this wouldn’t make a difference in upstream-downstream dependencies” and “Increase in the use of services of a river is contradictory to the attempt to make it more natural.”
- Next the participants made an inventory of the problems they addressed during the discussions. The arguments they mentioned were also noted.
- In conclusion, participants were invited to write down some recommendations for Meuse management, based on the discussions they had.

Background:

Results demonstrated by the AMICE project (in relation with this topic):

- *Cf the WP3 written contribution*
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- Project on the Lock of Ham (Belgium) in order to reduce damages from low-flows on the Meuse river.

- Study of Rur reservoirs (Germany): modification of the management rules of the large dam system to adapt to new climate conditions.
- Project HOWABO (Netherlands) to build a multi-functional area that can be temporarily flooded.
- Climate change adaptation is welcome when there are positive 'spill-over effects' on other sectors or other regions.
- In each of the riparian countries of the Meuse, independent procedures, methods and tools for the preparation and management of flood crisis have been developed and implemented. We compared and described them in the report: 'Flood crisis management in the Meuse basin'.
- Part of climate change adaptation is to react better in case an extreme flood event would occur. France, Belgium, and the Netherlands have organised a transnational exercise, based on a flood scenario that reflects a severe increase of winter precipitations of 25% by the year 2050. It involved more than 330 participants. The exercise was a good opportunity to test internal procedures and information sharing. The flood maps and risk maps were also improved. Such a large scale test had never been organised on the Meuse basin.

Lessons learnt by the AMICE Partners :

- Flexibility in planning and design of infrastructure is needed to adapt to changing climate conditions.
- Water works and infrastructures last many decades: they should be designed based on climate projections, not past water measurements.
- The changes in present water management could contribute to the reduction of impacts of high and low flows in the future. But a long-term view is needed for the Meuse basin and its sub-catchments.
- Anticipation of the increase / decrease of river discharges will limit costly damage in the future.
- Measures for flood protection take space. Do the spatial reservation now. Build later.
- Robust and flexible solutions addressing more than one issue tend to be successful.
- Water retention has to be combined with recreation purposes and with development of nature.
- Use adaptation as an incentive to trigger coordination across sectors.
- Solidarity is the key! We need to solve water problems on a transnational scale. A good understanding of the neighbors' situation and challenges helps in building a long-lasting solidarity.
- Involvement of stakeholders (water users, political representatives as well as water managers) *when shaping* the project.
- More transnational exercises would better cooperation between countries in case a real flood occurs.
- Getting the full picture of a situation (ex flood crisis) helps take the right decision at the right moment.
- Learning how to live with, react to and recover from floods can be more beneficial that protecting the populations against a risk they tend to forget.

Gaps not covered by AMICE, potential subjects for new cooperation:

- A common data platform which combines several (national) data bases would help the knowledge exchange. But the language barriers are limitating.
- A better warning and information system for all (both for floods and droughts).
- How to actually achieve cross-sectoral and cross-boundary land-use planning?
- Less effort into climate projection studies and more effort into design practices? Impact studies show at best a snapshot of a possible future and its effect on water management with unknown certainty. More impact studies don't create more knowledge. The future is unknown and will remain so, but we should have tools to deal with its evolution.
- Should climate change adaptation (and available climate change projections) be integrated in the laws and regulations for infrastructures designing, building and land-use management?
- Drought crisis management: forecast, prevention, cooperation, reaction and recovery.

Conclusions of the workshop 3 "taming the Meuse":

The first recommendation addressed future problems with low flows. Low flows can lead to tensions between water uses such as drinking water, agriculture, navigation, ecology, energy etc.
The participants drafted the recommendation for stakeholders and decision makers to adopt a systems approach, giving credit to every aspect related to water management, involving stakeholders, countries, definition of sustainability, and to gain support in the whole river basin.

The second identified problem relates to the extent to which a river can be preserved to its natural state. This should be based on a reasonable international planning.
The recommendation that followed, had three elements:

- Whatever might be done, the river has to be used in a well-reasoned and concerted way from upstream to downstream

- Every actor should act within the scope of their own responsibility
- If a new project is built, authorities must be approached by the responsible party. This relates to a ***WATER PROOF*** **in the river basin management plans.**

A third discussion was based on the hypothetical assumption that the Meuse be located within the borders of one country only. This led to some interesting discussions about responsibility, subsidiarity, and the question whether Meuse management would be more efficient.