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RAINMAN finally started!

The heavy rain season is nearly over for 2017 and again, as in the previous years, heavy rain events have caused major flooding, damages and even deaths in Central Europe. RAINMAN supports municipalities and regions in coping with the hazards of heavy rain and mitigating heavy rain risks as far as possible.

In July 2017 - after 2 years of intensive preparation - the project RAINMAN finally started implementing its goals: 10 partners from 6 countries will jointly develop innovative methods and new tools for the reduction of damages of heavy rain. The developed tools will be compiled in the RAINMAN Toolbox.

<table>
<thead>
<tr>
<th>Impressions of heavy rain events in the project area in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Southern Croatia, September 2017</strong></td>
</tr>
<tr>
<td>Several heavy rain events hit the southern part of Croatia and caused enormous flooding, amongst others in tourist locations Dubrovnik and Zadar.</td>
</tr>
<tr>
<td><strong>Austria, August 2017</strong></td>
</tr>
<tr>
<td>Heavy rains caused flooding, mudslides and major damages in several regions. The Großarl valley was cut off from all traffic.</td>
</tr>
<tr>
<td><strong>Berlin, Germany, June 2017</strong></td>
</tr>
<tr>
<td>A few hours of heavy rain summed up to double of the monthly average and caused a state of emergency for the city of Berlin.</td>
</tr>
<tr>
<td><strong>Poland, July 2017</strong></td>
</tr>
<tr>
<td>Heavy rainfall and thunderstorms have caused severe damages and even deaths in central Poland. 30,000 households were without electricity.</td>
</tr>
<tr>
<td><strong>Czech Republic, June 2017</strong></td>
</tr>
<tr>
<td>Several heavy rain events with hailstorms brought flooding, damaged streets and railways and caused even several deaths.</td>
</tr>
<tr>
<td><strong>Hungary, July 2017</strong></td>
</tr>
<tr>
<td>Heavy thunderstorms with heavy rainfall caused flooding and damages after heat wave in Hungary.</td>
</tr>
</tbody>
</table>
What do we plan to do?

The aim of RAINMAN is to develop and test innovative methods and tools to improve the management capacities of public authorities in Central Europe and to support local and regional administrations by providing guidance and best practice examples.

RAINMAN-Toolbox

The main outcome will be the RAINMAN-Toolbox, a set of five transferable tools and methods for municipalities and regional stakeholders to

- assess and map heavy rain hazards and risks
- find, select and implement suitable risk reduction measures as well as warning and emergency response systems
- raise awareness and involve stakeholders
- integrate heavy rain hazards and risks into flood risk management plans.

Furthermore, a catalogue of good-practise examples from all partner countries for the integrated reduction of heavy rain risks will be set-up.

Mapping risks

In a first step, the partnership will develop methods to assess heavy rain risks under different categorized physical conditions and land uses of areas in Central Europe. Thus, e.g. adapted methods for urban and rural land uses in mountainous and low land will be specified.

Reduce risks

The partners will jointly create a tool and a strategy to reduce the risks of heavy rain events. The tool will include a catalogue of risk reduction measures for different risk situations, guidance for the selection of best options for measures and guidance for the application and implementation of these measures. In addition, a joint risk management strategy for heavy rain risks in urban and rural areas will improve local and regional as well as Europe-wide flood policies.
Pilot activities

In all participating partner regions the developed joint methods and tools will be tested to prove their feasibility and applicability. There are 7 pilot actions, with different characteristics to cover a wide range of application conditions.

In addition, the activities deliver show cases for implementations.

- **Lower Silesia**
  - Location: Region Lower Silesia (rural features)
  - Pilot type: Ass./map., prevent, spatial plan.

- **Saxony**
  - Location: Oderwitz, Meißen, Görlitz (urban & rural features)
  - Pilot type: Ass./map., warning, spatial plan.

- **South Bohemia**
  - Location: Region of South Bohemia (urban & rural features)
  - Pilot type: Ass./map., prevent, spatial plan.

- **Upper Austria**
  - Location: Region Upper Austria (rural features)
  - Pilot type: Ass./map.

- **Styria**
  - Location: City of Graz (urban features)
  - Pilot type: Ass./map., warning, prevent

- **Zagreb / Istra**
  - Location: Istra coast area, City of Zagreb (rural & urban features)
  - Pilot type: Ass./map., warning, prevent, spatial plan.

- **Jasz-Nagykun Szolnok**
  - Location: Jasz, Tiszakecske, Kunhegyes (urban features)
  - Pilot type: Ass./map., prevent

**Ass./map.**
- Assessment and mapping of heavy rain risks and hazards

**Warning**
- Activities to improve early warning and emergency response

**Prevent**
- Implementation of prevention measures to reduce and prevent heavy rain risks and damages of heavy rain

**Spatial plan.**
- Implementation of spatial planning measures to reduce and prevent heavy rain risks and damages of heavy rain
Kick-off Meeting in Vienna

The RAINMAN partnership used the summer months to kick-off the project! First information was shared, staff hired and first tenders concluded. Hence, when the RAINMAN kick-off meeting took place in Vienna on October, 5th 2017, already some first drafts for joint products were presented, e.g. regarding the scoping study on tools and methods for risk assessment and mapping, see also page 6.

Dr.-Ing. habil. Uwe Müller from the Lead Partner LfULG welcomed all project partners and committed the partnership to the challenges of this project. Lubor Jusko, project manager from the CENTRAL EUROPE Joint Secretariat, provided valuable information and tips about a successful project implementation.

After the official part, the meeting was organised in five sessions, each for one work package. The respective work package leaders were guiding through the sessions, presenting their ideas for the joint products and prepared a list of next steps and major tasks for the partnership. All partners jointly agreed on a time schedule regarding each work package.

As an example, a general concept for the RAINMAN Toolbox was presented. It was emphasised that — already now — when designing the planned online platform, the partnership needs to prepare for the end of the project and the end of funding. Therefore, a concept for the hosting and maintenance of the online platform is needed.

Additionally, the first draft of the RAINMAN online survey was presented and discussed within the partnership. The remarks and suggestion for changes were noted and taken into account for the final draft - which is currently being translated into all partner languages, see also page 7.

Thanks to the host — PP3, Umweltbundesamt in Austria — the meeting was a full success and the already good cooperation between the partners intensified further.
Scoping Workshop on Risk Assessment and Mapping

The kick-off meeting was combined with a scoping workshop with external experts on risk assessment and mapping. It took place on October, 4th. The workshop results together with a literature review will be integrated into a scoping study on available methods and approaches regarding risk assessment and mapping.

Presentation of good practise examples by experts

The workshop focused on good practise examples on heavy rain risk assessment and mapping as well as on discussions of several pilot approaches with the participating experts. The RAINMAN consortium would like to thank Rudolf Hornich (Office of the Styrian Government, AT), Drago Pleschko (Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, BMLFUW, AT), Stefan Haider (Büro Pieler ZT GmbH, AT), Selena Peters (Environment Agency, UK) and Markus Moser (Regional Council Stuttgart, DE) for their contributions and support.

Important aspects to consider in the RAINMAN-Toolbox

The presented approaches and the discussion gave valuable input for the RAINMAN-Toolbox.

What’s good enough? One of the fundamental aspects the RAINMAN consortium needs to consider is the level of detail for the mapping. As simulations and models will never provide a 100 % correct map, the project partners need to agree on reasonable scale and level of detail.

How to communicate uncertainties? From the beginning on, communication activities have to be considered when developing project outputs. With regards to risk assessment and mapping uncertainties will be a challenge that needs to be addressed in the toolbox.

Which approach and scenario to take? The experts presented various approaches and scenarios for heavy rain risk mapping from different countries within the EU. Approaches differ in type of maps, data, effort and target. RAINMAN will analyse strength and weaknesses of the approaches. Interesting ideas were generated on how to deal with the variety of approaches that will be further developed during the project. Scenarios selected for the RAINMAN-Toolbox and the pilot activities need to be comparable to similar regions / municipalities.

The scoping study is currently being compiled and discussed within the partnership. When it is finalized, it will be available on the RAINMAN website for download.
2nd Working Group Meeting and Scoping Workshop

The next working group meeting will take place in Prague, 21st and 22nd February 2018.

It will be held in combination with the second scoping workshop of the project on the collection and development of risk reduction measures. The Workshop is part of the development of a scoping study on existing tools and measures to mitigate risks of heavy rain, including existing forecast and warning systems, prevention and protection measures and experiences gathered with the existing tools. This study provides the basis for the continuing work on the risk reduction tool to select and implement heavy rain risk mitigation measures, which in turn will be integrated into the RAINMAN-Toolbox. On the Workshop, selected external experts will present their experiences with risk reduction measures and discuss with the partnership about the RAINMAN ideas and tasks.

For the working group meeting it is planned to develop and agree upon a paper on requirements for the RAINMAN-Toolbox, including target group specifications, data-framework, general set-up, layout and functionality. Furthermore, the partners update the partnership about the progress of their activities and decisions about next steps are jointly made.

Online survey on heavy rain risk management in pilot / partner regions

The RAINMAN-Toolbox is the central output of the project. In order to ensure the long-term usage of the toolbox, the partnership planned an ex-ante online survey to deliver demand, expectations and requirements for methods and tools from the view of potential users. In all pilot actions the survey aims also on the ex-ante evaluation of the status of heavy rain risk management. The results will then be a basis for the development of the methods and tools for an effective heavy rain risk management will be put together in the toolbox.

The online survey is developed and organised jointly within the partnership and will be made available in all national languages and with regional specifications. The survey is planned to be open from February until April 2018.

If you are interested in taking part in the survey, please send an e-mail with your preferred survey language (Czech, Croatian, English, Hungarian, German, Polish) and your contact data to

RAINMAN@iu-info.de

Alternatively, you could also keep an eye on the RAINMAN website: the link to the online survey will be published there as soon as the survey starts!
NEWSFLASH

22/09/2017

RAINMAN AT CENTRAL EUROPE 20-Year Anniversary Conference in Berlin

The RAINMAN project was presented during the Session “Environment & Culture PitchIt!”

The project had to be presented within two minutes followed by a feedback and discussion round. The participants of the session voted for the best performance: RAINMAN and Forget Heritage won the session.

20/09/2017

RAINMAN at EUROPE-INBO 2017

Partner PP9 (Mariusz Adynkiewicz-Piragas and Iwona Zdralewicz) took part in 15th “EUROPE-INBO 2017” International Conference for the Implementation of the European Water Directives. During Table ronde n° 2: Adaptation to Climate Change in Basins the RAINMAN project was presented as a good example of adaptation to climate change.

During the events, information about RAINMAN was disseminated. It was met with great interest!

30/11/2017

RAINMAN leaflet

The first RAINMAN leaflet is finished and printed! The leaflet is available in different languages and distributed at events, workshops and seminars. In the leaflet you get to know about the project content, the project partners and the planned outputs of the project. Check the RAINMAN website for download.

15/07/2017

RAINMAN in social media and RAINMAN website

We are present on social media — so get in touch with us and follow us on Facebook! We will provide you with news on heavy rain events and interesting facts or articles from other projects and institutions.

Or have a look at our website: www.interreg-central.eu/rainman

We inform about project’s news and regularly publish updates so that you can follow the project’s implementation.
RAINMAN Key Facts

Project duration: 07.2017 – 06.2020
Project budget: 3,045,287 €
ERDF funding: 2,488,510 €
RAINMAN website & newsletter registration: www.interreg-central.eu/rainman

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Institute of Meteorology and Water Management National Research Institute

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Croatian Waters

Office of the Styrian Government T. G. Masaryk Water Research Institute, p.r.i