



# INTEGRATED HEAVY RAIN RISK MANAGEMENT

Newsletter #7  
September 2019 – December 2019



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Dear readers,

if you would not like to receive the newsletter any longer you can unsubscribe at any time: in that case, please send an e-mail to [rainman@iu-info.de](mailto:rainman@iu-info.de). If you are still happy to hear from us, we are looking forward to providing you with news of our project!

Your RAINMAN Team

## NEWSFLASH

03/03 -  
04/03/2020

### 10<sup>th</sup> transnational partner meeting in Görlitz

The next RAINMAN partner meeting will take place in Görlitz on 3<sup>rd</sup> and 4<sup>th</sup> March 2020.

Within the meeting we will focus on the work for the completion of the RAINMAN-Toolbox and further project results. RAINMAN partners will use the exchange during the meeting to check the user-friendly presentation of the contents in the RAINMAN-Toolbox, to agree on necessary adjustments and to schedule the next steps on the way to RAINMAN's final products. Another key issue will be the preparation of the final conference taking place in May 2020 (for further information see page 4).



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02/12/2019

### Practitioner Workshop in Graz

In the course of an interactive workshop, the pros and cons of different map designs and a wish list for the optimal map were worked out using examples. It is our aim in RAINMAN to develop "good" maps, which are tailored according to your needs and demands and help you best.

Maps are a central tool for preventing heavy rain risks and dealing with them in the case of an event. These maps answer questions such as: Where will the water flow (and pool) based on an event of certain intensity? How fast will the water flow? How deep will the water be? When or in what time will a certain water level be reached? The answers to these questions could be given with the help of various cartographic design options, e.g. as a classical printed map or as an interactive online map. Together with stakeholders, from Graz and Austria we developed good and bad aspects on the way to an optimal map that could best support your work.



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November  
2019

## Survey of participants in pilot actions planned

The RAINMAN-Toolbox is the central output of the project. In order to ensure the long-term usage of the toolbox, the RAINMAN partners conducted an online survey to deliver demand, expectations and requirements for methods and tools from the view of potential users in spring 2018.

Coming soon, the partnership develops another survey that aims at evaluating the pilot activities, the involvement of the stakeholders as well as the contribution of the RAINMAN-Toolbox to better manage heavy rain risks in the regions. In the last months the concept of the survey was specified along the feedback of the RAINMAN partners and is soon ready for implementation. The survey will be distributed to people that have been involved in the pilot actions of the project. We will report on the results of the survey.



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18/10/2019

## RAINMAN @ WGF

Two representatives of the RAINMAN project had the privilege to give a presentation on “Heavy Rain Risk Management in Central Europe” at the 26<sup>th</sup> Meeting of the CIS Working Group on Floods (WGF) in Helsinki on October 18<sup>th</sup>. Peter Heiland (INFRASTRUKTUR & UMWELT, on behalf of LfULG) and Cornelia Jöbstl (Office of the Styrian Government) presented the project and an outlook on the project results. They explained the activities carried out within the framework of the project and in the pilot activities using the example of the Graz pilot action.

One focus of the presentation was on the integration of pluvial flood risk management into flood risk management plans according the EU Floods Directive. Policy oriented recommendations and conclusions were presented, which the RAINMAN consortium developed based on the findings on heavy rain risk management collected within the framework of the project.

The presented contents were discussed with the CIS Working Group on Floods and will be further developed by the RAINMAN partnership considering the results of this discussion.



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October  
2019

## New information in RAINMAN website

We have posted new content on the RAINMAN website and thus improved the access to our project results.

- In the “Work Packages” section, project-specific publications of the RAINMAN project partners are listed for each work package.
- We have added the section “Main Project Outputs”. There you will find the available project results for each work package.
- “Communication materials” of various kinds are published in the corresponding section.

The website is available in English, some downloads are published in the national language of individual project partners. The link to the website is: <https://www.interreg-central.eu/RAINMAN>



RAINMAN website



## RAINMAN Final Conference on 6<sup>th</sup> of May in Dresden

Since heavy rain events can usually occur suddenly and have devastating consequences, everyone is required to deal with this topic at an early stage in order to be prepared for the “unexpected case”. The RAINMAN project has dealt with exactly this issue in a three-year process. In cooperation with practical partners, methods and instruments for dealing with heavy rain risks were developed and tested. The methods and findings will be compiled in the RAINMAN-Toolbox and will be available online for everyone.

These results now need to be shared and translated into policy and practice. In order to keep damage as low as possible, awareness of the hazards and risks of heavy rain events must increase and knowledge must be transferred with a view to finding suitable solutions. We believe that we can only succeed in this process together! With this in mind, we would like to invite you to join us on board and invite you to the final conference of the RAINMAN project.

<p>Final conference: RAINMAN Integrated Heavy Rain Risk Management</p>	
 <p><a href="http://www.interreg-central.eu/rainman">www.interreg-central.eu/rainman</a></p>	<p>Save the date May 6<sup>th</sup> 2020 Dresden (Germany)</p>

Get to know the RAINMAN-Toolbox, meet representatives of municipalities, science and policy experts to highlight and discuss:

- Challenges and opportunities of heavy rain risk management,
- Available instruments and measures for heavy rain risk reduction and awareness raising.

Share your experiences in interactive sessions, get to know our best-practice cases and take home new ideas and skills to reduce risks!

The project’s final conference will take place on 6<sup>th</sup> May 2020 in Dresden, Germany. The conference is organised by all RAINMAN partners under the coordination of the Saxony Ministry of the Interior. Shortly, invitation and registration forms as well as the agenda will be available at the RAINMAN website. The event will be held in English and German.

The RAINMAN partnership would be pleased to welcome you at this event. Please make a note of the date now and feel free to spread the event to potentially interested persons! We look forward to discussing the implementation of heavy rain risk management with you and to presenting the main results of the project, in particular the RAINMAN-Toolbox!

<p><b>More information:</b></p>	<p>Saxon State Ministry of the Interior Division for European spatial planning, regional development  Dirk Dreßler, Dr. Ludwig Scharmann, Peter Just  RAINMAN-PP2@smi.sachsen.de</p>
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## Tooltraining “Improvement of emergency response planning in Saxony”

Since July 2019 the public authorities of the municipalities Leutersdorf and Oderwitz in Saxony have been testing the beta version of the toolkit “EMERGENCY RESPONSE PLANNING FOR HEAVY RAIN RISKS” of the Viennese company “RIOCOM – Environmental Engineering and Water Management”. On 7 November 2019, a so called tool training took place in Oderwitz as part of these tests. On this occasion, test users and developers exchanged their experiences in order to find the best possible solutions for the two municipalities. On the other hand, the training and the tests serve to improve the toolkit, which is to be further developed as an element of the RAINMAN-Toolbox and will be online available to all municipalities when the RAINMAN project is completed.

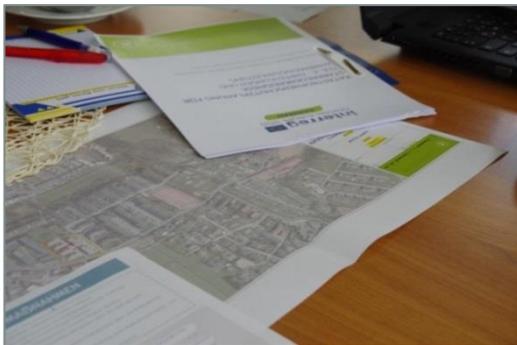
RIOCOM develops the toolkit on behalf of the RAINMAN project partner Office of the Styrian Government. In Styria, the toolkit is currently used to improve heavy rain risk prevention in the city of Graz (pilot action Graz – see RAINMAN newsletter #3). The web application that is created in parallel should be compact, simple and clear and should meet the following additional requirements:

- Usable for different geographical situations (urban/rural - mountainous/flat),
- usable for very different hazard and risk maps,
- usable without special software.



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In close consultation with the toolkit developers, the toolkit is currently also being tested in the pilot action of the State Office for Environment, Agriculture and Geology (see RAINMAN newsletter #2 for a description of the pilot actions in Saxony). This has been taken over by the two Upper Lusatian municipalities mentioned above, which have been affected several times in the past by floods caused by heavy rains and which have suffered heavy damage. The general conditions for carrying out the planning task are completely different in the municipalities than in the city of Graz. This includes the initial geographical and meteorological conditions, the organisation of disaster control structures and the available resources for the organisational improvement of emergency response in preparation for events and during or after an event.



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Both in Austria and in Saxony, the task of preparing the local emergency response system for a heavy rain event can be based on existing structures and planning documents. These are available in the municipalities for various types of catastrophes and updated on an ongoing basis. However, the case “heavy rain event” poses specific challenges for municipalities:

- Meteorological knowledge must be available in order to be able to combine and evaluate weather information from different sources. The aim is to be aware of an upcoming event as early as possible. This valuable time can be used to gather available resources, warn potential affected people and get prepared.
- Decisions (e.g. on alerting) must be made by the weir leaders on site on the basis of probabilistic forecasts, warnings and observations. Heavy rains, however, are hardly predictable or even localizable. As a result, false alarms cannot be avoided.
- Existing disaster control documents take into account “normal” floods caused by rising water levels in rivers. However, the risks that - depending on the terrain - are caused by surface water run-off in a torrential uncontrolled manner or spreading over a large area and in completely unexpected locations resulting in the sewage system reaching its limits are largely unconsidered.
- Potentially affected citizens and downstream residents should be alerted as effectively as possible. They should be aware that flooding caused by heavy rainfall is a danger to their lives.
- The responsible authorities must communicate the hazard and the risks accordingly. Their task is to point out also the limits of emergency response and to encourage individual prevention of potentially affected persons. In principle, however, almost everyone can be affected, depending on where they are in the event of a sudden thunderstorm.

In Oderwitz and Leutersdorf, multiple exposures to heavy rain and floods in the past have provided very good conditions for the tests: On the one hand, there is a high local risk awareness and numerous coping and prevention measures have already been implemented in the past. On the other hand, there is uncertainty in the communities and there is a need for orientation on how local emergency response can be further improved and which means and methods are most suitable.

RAINMAN hopes to provide local support in this respect. The project thanks all participants of the tool training for their constructive and serious examination of the planning documents as well as for the clear formulation and addressing of needs for improvement to higher authorities and politicians.

<b>More information:</b>	Saxon State Office for Environment, Agriculture and Geology, Germany Dr. Sabine Scharfe, Anika Albrecht rainman.lfulg@smul.sachsen.de
	Office of the Styrian Government Department Water Management, Resources and Sustainability Rudolf Hornich, Cornelia Jöbstl, Brigitte Skorianz rudolf.hornich@stmk.gv.at

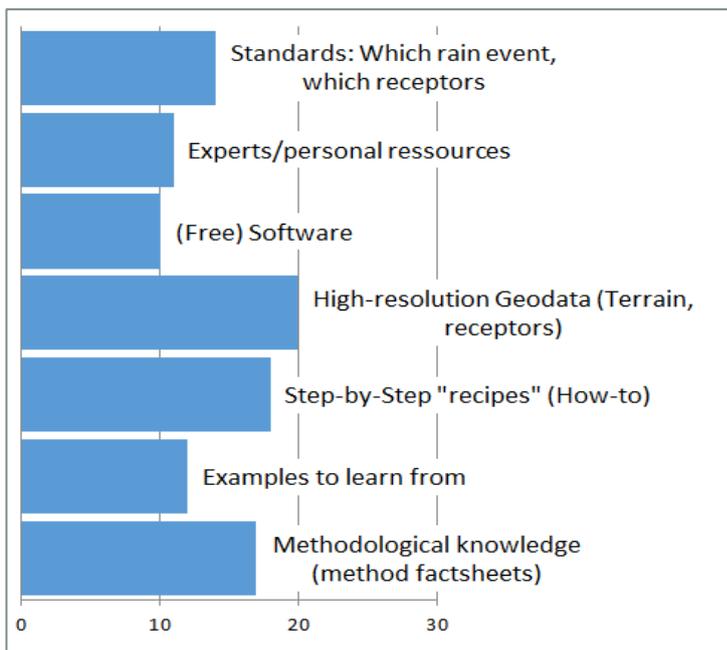


## Analysis of 2<sup>nd</sup> Practitioner Workshop in Tiszakécske, Hungary

The second user workshop took place during the RAINMAN half-time conference in spring. The workshop dealt with methods for analysing heavy rain hazards and risks as well as cartographic visualisation. During the workshop, the participants were invited to answer various questions interactively.

In the following, three central results of this survey are presented on the basis of the answers given on the topics “support needs”, “uncertainties” and “presentation of results”.

### Need for support: What will you need to prepare hazard and risk analysis?

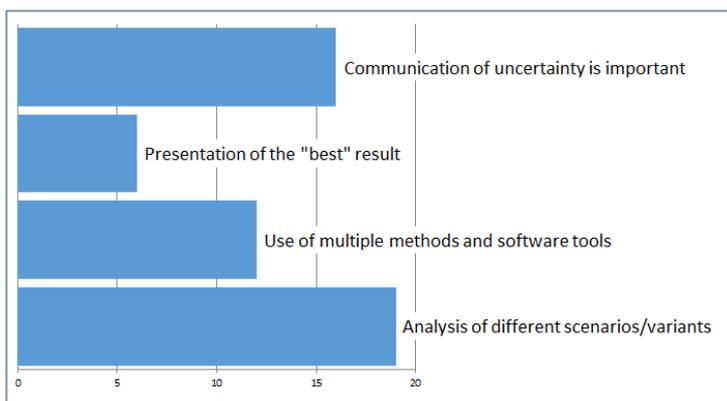


When it comes to the type of offers or support for the preparation of hazard and risk maps, the need for adequate data ranks first. It is particularly important to collect and provide suitable data by the surveying authorities of the individual countries.

The RAINMAN-Toolbox will provide support for the points “methodological knowledge”, “best practice examples” and “step-by-step instructions” that are in great demand according to the survey results. This content will be developed and made available in the toolbox.

Another frequently expressed need for support concerns the definition of standards.

### Addressing uncertainties: How would you deal with data and process uncertainties?

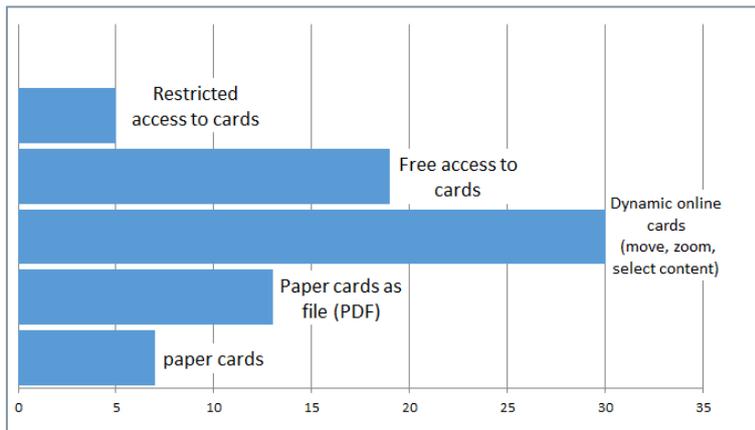


With regard to dealing with uncertainties in data and processes, a large proportion of respondents are in favor of an offensive approach to the topic, i.e. a clear presentation of uncertainties. The calculation and representation of different variants (e.g. precipitation intensities, surface conditions) as well as the use of different models and methods are supported as possibilities for dealing with uncertainties. Only a few

participants consider the selection of a single result as presumably “best” to be a good solution.



**Presentation of results: How should the results of hazard and risk analysis be provided (to the public)?**



When it comes to the provision of the results of hazard and risk analyses, there is strong agreement that these maps and information should be freely accessible. There is a clear demand for interactive dynamic maps (web maps) in terms of the type of maps used or provided, followed by “printed” map layouts offered online, such as in PDF format. User wishes and opinions on map designs will be discussed

in detail at the 3<sup>rd</sup> practitioner workshop in Graz (see “newsflash”).

**Consideration of the results in the RAINMAN-Toolbox**

The results will be incorporated into further project work and will be taken into account in the RAINMAN-Toolbox. The RAINMAN-Toolbox integrates contents for the topics “uncertainties” and “visualization and mapping”, in which important aspects are explained. In addition, it is planned to formulate recommendations on “standards” (see “need for support”) on the basis of the experience gained in the project.

We thank all participants of the workshop for their active participation.

<b>More information:</b>	Leibniz Institute of Ecological Urban and Regional Development, Germany Axel Sauer, Dr. Regine Ortlepp <a href="mailto:rainman@ioer.de">rainman@ioer.de</a>
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## RAINMAN partner meetings: documentation of tools, lessons learnt & capacity building for the toolbox

The RAINMAN partnership met for two partner meetings in the second half of 2019. Both meetings focused on the further development of the RAINMAN-Toolbox, which will contain methods, guidance and practical experience on the management of heavy rain risks. The aim was also to ensure a user-friendly presentation of the project results in order to ensure long-term use of the toolbox.

### Working group meeting in České Budějovice, Czech Republic

The 7<sup>th</sup> partner meeting took place in České Budějovice, the capital of the South Bohemian Region in the south of the Czech Republic, in September 2019.

The RAINMAN partners shared experiences made in the project and discussed newly developed results. An in-depth discussion regarding the RAINMAN-Toolbox concentrated mainly on the development of tools and sub-tools. The responsible RAINMAN partners presented ideas on how to structure the respective tool and presented test implementations in the toolbox. Especially the question which depth of information shall and can be provided was discussed. Also the linking of the individual tools with each other and with the experience made in the pilot actions was discussed.

During the partner meeting the partners also focused on a discussion paper on policy oriented conclusions of the RAINMAN project and discussed which RAINMAN messages shall be documented. The paper was presented at the 26<sup>th</sup> Meeting of the CIS Working Group on Floods (WGF) in Helsinki in October 2019 (see “newsflash”).

The partner meeting was complemented by an on-site session. In this session the RAINMAN partners had the opportunity to visit flood protection measures along the Vltava River. The excursion was organised by VUV (T. G. Masaryk Water Research Institute, p.r.i.). In an introductory presentation, Martin Caletka (VUV) gave an overview of the affected places by past flood events in České Budějovice.



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## Advisory board workshop and 8<sup>th</sup> partner meeting in Graz, Austria

On 3<sup>rd</sup> and 4<sup>th</sup> December, RAINMAN partner “Department of the Styrian Government” welcomed more than 50 participants in the beautiful city of Graz. This time not only the partnership but also advisory board members and external guest from Austria came together to discuss a draft RAINMAN-Toolbox. It was the first time parts of the toolbox were presented to potential users and the RAINMAN partners were looking forward receiving feedback.

The meeting was opened by welcoming words of DI Johann Wiedner, Head of the Department 14 Water Management, Resources and Sustainability of the Styrian Government, as well as by representatives of the City of Graz and the Styrian Government.

In the following RAINMAN partners presented drafts of four parts of the toolbox: the three tools “assessment and mapping”, “risk reduction measures” and “risk communication” as well as a section in which the pilot examples with the responding activities are displayed. Especially the advisory board but also all other external guests were asked to critically review and comment the draft toolbox regarding the design, layout and the contents included. It was especially intensively discussed which results are useful for toolbox users and have to be a central part of the tools. The feedback was further discussed in smaller working groups at “test stations” of the aforementioned parts of the toolbox to find solutions for the given comments. The fruitful discussions and advices provided very valuable support for the whole project and will help the partnership to further improve the toolbox.

More contents of the toolbox and activities of the partnership were part of the following internal partnership meeting. The partners reported on the progress of the different work packages and agreed on the next steps and deadlines for finalising the toolbox inputs. These will be implemented in the toolbox until the next working group meeting.



### More information:

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## 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](http://www.interreg-central.eu/rainman)



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Közép-Tisza-vidéki Vízügyi Igazgatóság



Jihočeský kraj



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UMWELT & GESELLSCHAFT **umweltbundesamt**

Instytut Meteorologii i Gospodarki Wodnej -  
Państwowy Instytut Badawczy



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