



Danube Floodrisk Project

A Success Story

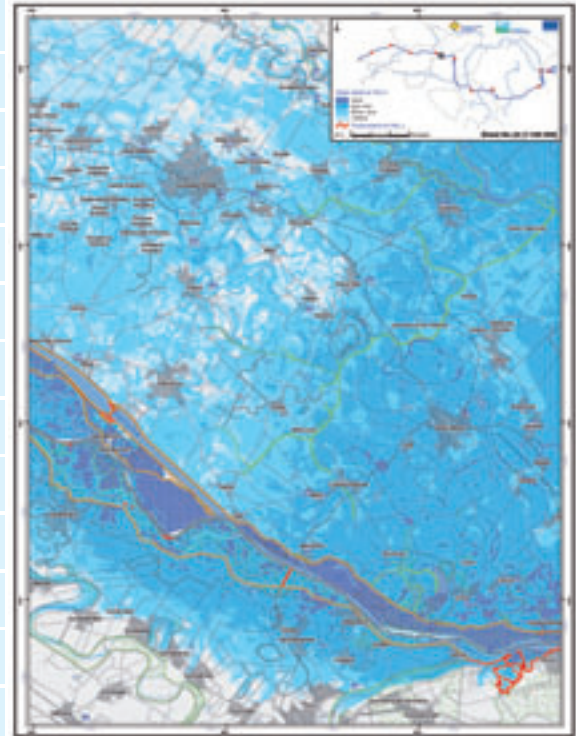
Jointly for our common future



FROM HARMONIZATION TO A JOINT FLOOD RISK ATLAS 3 YEARS OF SUCCESSFUL TRANSNATIONAL COOPERATION

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I. The Project Danube Flood Risk is about people

The overall objective of the FLOODRISK project is to develop and produce high quality, stakeholder oriented flood risk maps for the transnational Danube river floodplains to provide adequate risk information for spatial planning and economic requests. Risk information is the basis for



sustainable development along the Danube River. The key objective will only be reached by intensive transnational cooperation and stakeholder integration. The goal is to link scientific progress in harmonization of approaches and data with practically oriented stakeholder and end user involvement. Vertical and horizontal cooperation are the two pillars of the project.

The project's objectives are:

- Development of a joint mapping method for flood risk and harmonization of data sources.
- Production and provision of risk maps and risk information.
- Integration of relevant stakeholders and users on different levels into the definition and realization processes.
- Involvement of different economic aspects of land use in the river basin like spatial planning, recreation and agriculture as well as energy supply or health services.
- Linkage of flood risk mapping and provision of maps as basis for planning, e.g. within the EU Floods Directive.
- Development and distribution of exemplary procedures within the Danube countries and beyond.
- Reflection of the EU Directives, e.g. WFD, Floods Directive, providing feedback based on the experiences of the project cooperation by using the platform of the



Danube FLOODRISK project
cooperating institutions

ICPDR Flood Protection Expert Group.

The project contributes with these objectives to the improvement of the institutional cooperation of the ICPDR and further towards the realization of measures within the existing international cooperation structure. It supports decisions for investments on political and administrative levels by allowing the assessment of investments and land use decisions taking into account the Joint Program of Measures, based on the risk reduction aspects.

Within the frame of this project, 24 institutions from 8 Danube coun-

tries (Romania, Bulgaria, Hungary, Italy, Austria, Slovakia, Serbia, Croatia) have been cooperating.

The Context and the Problems of the Danube

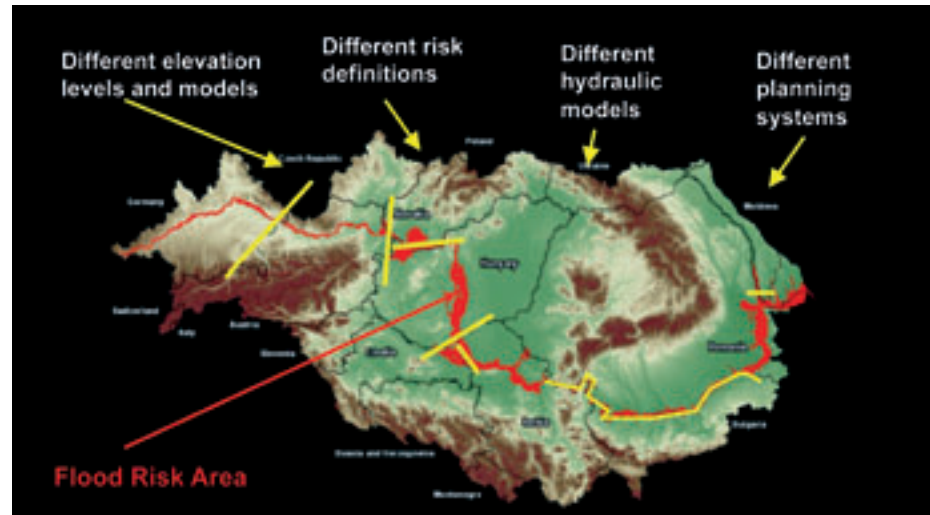
The International Commission for the Protection of the Danube River (ICPDR) created the basis for this cooperation. It is not in charge for spatial planning or for flood risk management planning, but for the coordination of actions at the basin level. This situation generates the necessity for a transnational cooperation project which builds up on experiences from successful projects at the Rhine, Elbe and Oder Rivers. The project development was initiated under the Presidency of Romania of the ICPDR in 2007, supported by the ICPDR Flood Protection Expert Group. The EU Flood Directive additionally forced the need for the approach. Several consultations and transnational project workshops took place as in 07/11 in Timisoara, 03/08 in Budapest, 10/08 in Bucharest. Both steps of the application were jointly discussed and developed. On the regular meetings of the Flood Protection Expert Group of the ICPDR the project objectives and activities were discussed and jointly agreed.

Flood endangers economic develop-

ment all along the Danube. The floodplains of the Danube River are located on the territory of the involved PP: RO: 32,5%, HU: 20,2%, Serbia: 14,4%, SV: 8%, HR: 5,8%, BG: 3,8%, AT 3,4% and DE (observer P): 5,7%. This is a total of ca. 27.300 km² with the highest flood risk! Regional technical protection does not help sufficiently. To reduce flood risk, upstream and downstream regions have to cooperate closely. All countries in the Danube river basin have separate mod-

els, own approaches for flood prevention and different priorities for mitigation measures. Many regions suffer from lack of risk information for planners, population and decision makers. Without a transnational project this situation will not be changed. Cooperation in mapping, information and mitigation of flood risk is the most cost-effective approach. All physical measures for flood risk reduction are comparatively ineffective, if not integrated into a transnational risk management strategy.

Flood risk area under consideration



2. How was the project organized?

The project DANUBE FLOODRISK is organized along 7 work packages, one of them dedicated to the “Transnational Project Management and Coordination” (WP1) and one to the “Communication and dissemination” (WP2). The work plan consists in 5 scientific work packages. WP3, WP5, WP6 are the more “technical” part of the project: harmonization of requirements, data and methods, acquisition of necessary data and map production. This workload was realised by the partners in close cooperation, but with individual tasks.

Based on the common data base and joint methodologies, the mapping was provided (WP6). Here flood hazard and flood risk maps were the project’s key product. The project working group 1 (WG HARM) was coordinated WP3, WP5, WP6.

To ensure user orientation of the products and to fulfil the requirements of both the EU directive and the stakeholders itself in WP4 and WP 7 the project partners involved all relevant stakeholders and end users. A communication strategy was jointly developed to evaluate the needs of integration and to plan the implementation. In several pilot activities the PPs test-

ed the strategic approach to convert flood risk information into preventive and sustainable planning most effectively. These WPs were coordinated by the working group 2 (WG STAKE). The pilot and test cases also functioned to validate the results and to monitor the project work flow.

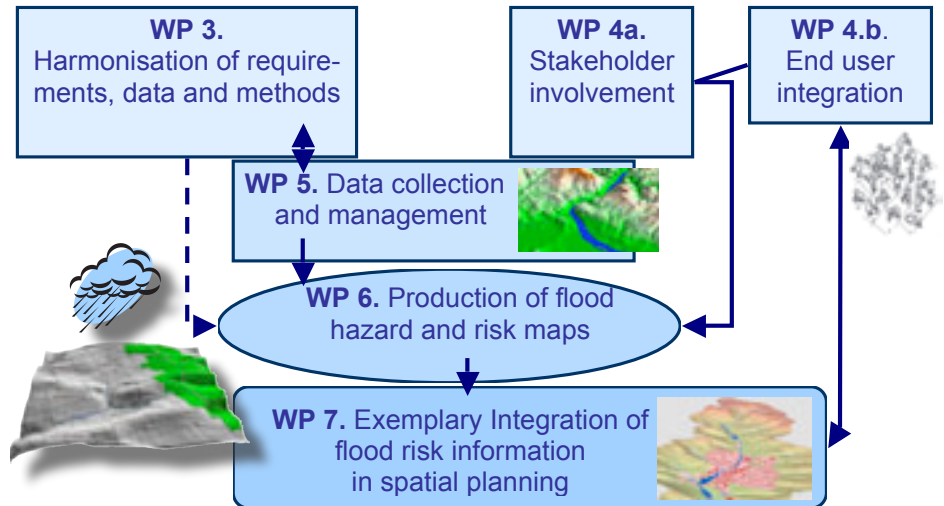
The main steps were:

- definition of requirements on data, methods, databases etc.
- dialog with users and stakeholders

about demands on risk information, based on a joint communication strategy

- harmonisation of data and methods
- data acquisition, processing, data base
- risk map production
- test cases for the use of risk maps in spatial planning and precautionary measures
- communication strategy, including publicity, dissemination and discussion of results to raise awareness and to ensure the transfer of the experience

Project technical working plan



3. What makes the project successful?

The Danube FLOODRISK project successfully reached its objectives managing to achieve remarkable outcomes:

Harmonization of requirements on the flood mapping procedures for the Danube River

A Harmonization Manual has been developed which covers the hazard and risk mapping part and some examples of flood risk management plans in certain pilots. The harmonisation process covers the specification of the goals and tackles technical questions such as the scenario definitions, the methods used or the threshold, and considers the different institutional and legal arrangements, as well economic situation in the Danube countries. The basis for the Harmonisation Manual has been the national laws of the project partners, the European Floods Directive, the good practice results from different flood risk mapping projects as well as existing maps or atlases.

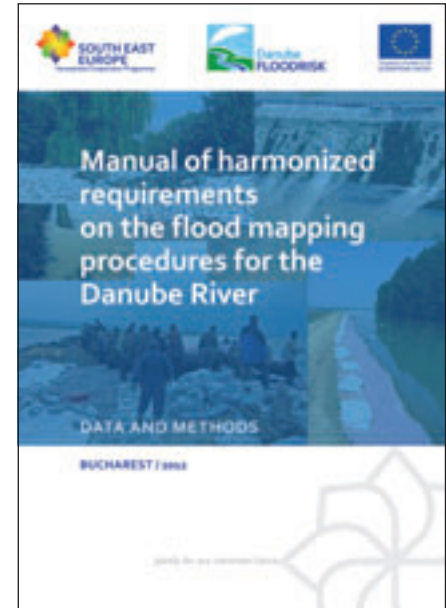
Hydrological and hydraulic modeling

The hydrological processing was performed at different degrees of complex-

ity, depending on the future utilization of the results. Synthetical hydrographs were generated, under the volume conservation hypothesis. For hydraulic simulations in steady state either a unique value of the maximum discharge corresponding to a probability of exceedance $P\%$ or an uncertainty interval of the maximum discharges was obtained, and as well a strip of inundation for each probability of exceedance $P\%$.

Vulnerability mapping

The methodology for vulnerability index/ indicators determination was considered that vulnerability indicators must be developed based on some well defined criteria; this methodology has been provided by the FP7-project SAFER and was adequately transferred for the Danube Floodrisk Project (BEAM Methodology). As the damage functions were not part of the BEAM product, it was taken in an adjusted version from another large scale risk projects i.e. Rhine and JRC database. Further, the basis for the background land use information was the CORINE land cover information, enhanced by additional data sources (NAVTEQ). To cover the social-economic data needs, data from the EUROSTAT data base were processed and analyzed. Additional val-



ues have being gathered from the national statistical institutes as well as from other sources, as presented in the Harmonization Manual.

Common geodatabase

A complex set of data was collected as a central database. The main data sources for flood risk maps are digital terrain data, land use information, hydraulic

data and for the damage assessment also statistics. Especially linear structures were considered as they have high impacts for Q30 and Q100. After the first simulation results were sought experts input and guidance on a number of technical and scientific issues related to validate them by earth observation and ground information as water level, discharge, soil maps.

The Danube Floodrisk project developed a web global system for topographical, hydrological and socio-economic data, with main objectives: (i) support Floods Directive, WFD, Natura 2000 reporting and map making, (ii) integration of existing and future information data sources to increase usage effectiveness, (iii) optimization of costs, and (iv) anticipate analysis and modeling functionality.

Availability check and first quality check (Act. 5.1)

The availability check included an assessment of data quality compared with the defined requirements, accessible data that fulfill the requirements and also the gaps (both spatial and temporal) –for test, data sets to perform quality test as defined in Harmonization Manual. An inventory of available networks and datasets was a critical part of this process.

Acquisition of additional and missing data (Act. 5.2)

For areas where no data was available, data was acquired including supporting actions and checks of results. Special focus has been on data for inundation calculation (terrain data, bathymetry information) and damage calculation (land use, statistics, and damage functions). Costs for data collection depended on the dimension of

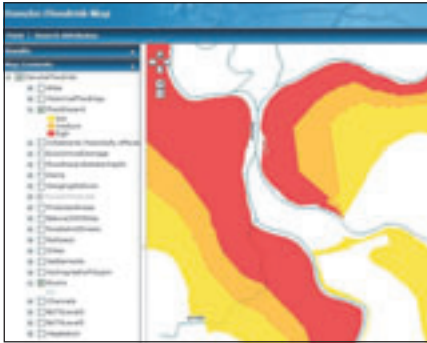
flooded areas, of the length of the river sector. Cross-sections were monitored by each partner, and the hydraulic works and solutions adopted by partners.

Set up of a common data base (Act. 5.3)

Sufficient resources were dedicated to reach the objective of meeting the needs of the international science community for

Table preview

OBJECT	Shape	Shear Length	Shear Area
3 Polygon	3	249572,37152944	218722854,8319149
10 Polygon	10	249572,371529712	218833884,8314337
11 Polygon	11	249572,373041587	218954228,4832443
12 Polygon	12	249572,373007444	218972614,36048
13 Polygon	13	249572,369881100	218722958,83181
14 Polygon	14	249572,371598441	218958112,839293
15 Polygon	15	249572,3681141713	218880928,83153
16 Polygon	16	249572,367192341	218733818,83273
17 Polygon	17	249572,365420710	220011811,839828
18 Polygon	18	249572,371746811	218764448,483537
19 Polygon	19	249572,3657001181	218473849,8394218
2 Polygon	2	249572,3693282412	218804007,832488
20 Polygon	20	249572,361110714	218747186,378588
21 Polygon	21	249572,362409950	218731805,721188
22 Polygon	22	249572,3618012049	218728789,482804
23 Polygon	23	249572,369588234	218802178,831181
24 Polygon	24	249572,3691558213	218734885,4849112
25 Polygon	25	249572,368888925	218736837,528184
26 Polygon	26	249572,362841289	218801086,307528
27 Polygon	27	249572,3691527223	218830153,36888
28 Polygon	28	249572,3686505286	21883214,87836
29 Polygon	29	249572,379622957	218874389,12895
3 Polygon	3	249572,361388814	218858828,360032
30 Polygon	30	249572,367180385	218899553,133754
31 Polygon	31	249572,3699999264	218718888,828684
32 Polygon	32	249572,361150742	218717812,123488
33 Polygon	33	249572,369193889	218736280,388332
4 Polygon	4	249572,364713445	218728868,478435
5 Polygon	5	249572,367119812	218728827,478718
6 Polygon	6	249572,379872344	218802811,800028
7 Polygon	7	249572,369895329	218744877,478740
8 Polygon	8	249572,361363810	218858888,839488
9 Polygon	9	249572,3698113018	218898174,300038



Example: FloodHazard

floods risk management data and information to address spatial planning, and to have a web database systems that can meet these requirements, and also the gaps (both spatial and temporal). The main results for data collection include the reports on data availability, area covered by each data set, accessibility conditions and quality check results, homogeneous terrain data set, cross section set, and land use datasets that have been quality checked and adjusted to neighbor data sets, harmonized information and data compiled by the partners, processed as far as necessary and ready to be used for the mapping actions, and a common data base, used for common data handling and distribution of data between project partners within and after the project completion.

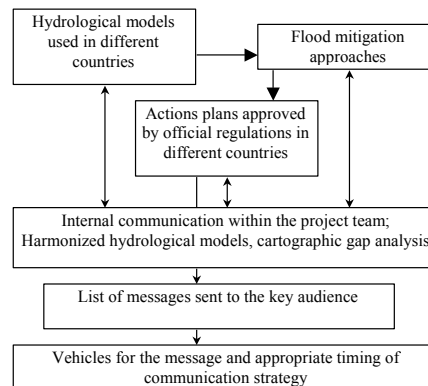
4. Stakeholder involvement is vital!

Communication and dissemination

The effectiveness of the outcomes of the Danube FLOODRISK was largely influenced by the level of agreement between the stakeholders concerned, which made the project partners cooperation a necessary condition for success.

Part of the Danube FLOODRISK project was the formulation of a Stakeholder strategy and action plan, which was produced under the participation of stakeholders. The information collected

Flowchart of the communication strategy



Consultative meeting

through interviews and questionnaires show the stakeholder's perception and information on flood risk methodologies, the user's preferences on the different mapping formats, each designed for various end uses, and to inform the development of flood risk management options. In addition, information regarding the use of flood risk maps for adopting the most appropriate preventive measures, in line with the EU Floods Directive, was collected.

Within the internal communications tools, a website has been created to ensure large dissemination of project activities and outcomes, a documents management system, an Address Book with photo for project contacts, and other specific communication mechanisms.

The communications have been established through external tools as well:



more than 60 meetings (transnational, regional and national events, trainings) have been successfully organized, publications (2 flyers, 5 posters, web banner, DVDs, 5 roll-up, 7 newsletters, 2 electronic publication, reports, 2 guidelines, 6 Brochures), media (3 press conference, 5 press releases, 60 articles).

Communicating and assessing the outcomes

The whole complex project participatory approach through detailed and permanent

information, active consultation and efficient participation included as well a large thematic event. The EC Working Group F organized a three days thematic workshop in Bucharest, Romania during 17 - 18 April on the subject of “Stakeholders involvement in the flood risk management”, in connection with the implementation of the Floods Directive 2007/60/EC on the assessment and management of flood risks. The event was hosted by the Romanian Government with support from the ICPDR and Danube Floodrisk Project Manage-

ment Team and its Steering Committee.

Almost 170 delegates from Member States (MS) and invited speakers across Europe attended the workshop.

The workshop included six thematic sessions exploring the following topics:

- Flood mapping - input from and dissemination to the public and stakeholders;

WGF thematic workshop, Bucharest, April 2012



- Preparation and implementing FRMP – involvement of the public and local stakeholders;

- Working with institutional stakeholders and other sectors, in particular on land use

- Awareness - the role of public and stakeholder involvement for preparedness and emergency response;

- Transboundary aspects of stakeholder involvement

The sessions ended with parallel discussion groups, and their outcomes were resumed in the Session 7.

The report collates the many observations made during the event and presents recommendations under these six thematic sessions.

The compilation of the discussion papers, the best practices and recommendation received from the stakeholders at the event have been all integrated as a joint study about end user integration and stakeholder involvement, which is the workshop final report.

All the presentations are available on the CIRCA web site and the Danube Floodrisk site at the address: <http://www.danube-floodrisk.eu/2012/02/conference-documents/>.

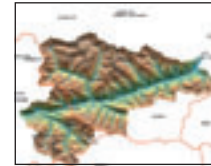
5. The story continued...

Scoping study

One important preparatory step to the implementation of pilot projects addressing Floods Directive issues in selected EU Member States (Austria, Bulgaria, Italy, and Romania) was the preparation of the “Scoping study” (Act. 7.1). The first chapter is dedicated to the presentation of the relevant existing legislative frame-

works on European level – the Water Framework Directive and the Floods Directive, and the status of the Floods Directive implementation, including the existing national approaches and/or the envisaged strategies to flood protection with respect to spatial planning, environmental and emergency management aspects. Another chapter examines previous Member State experience regarding implementation of interdisciplinary flood protection projects in order to give evidence for the Member State competence for pilot applications, which is followed by a chapter describing the common strengths or weaknesses among the four Member States in their existing national frameworks, approaches and past experience. Common and individual issues identified as suitable at the pilot level are recommended to be addressed in the pilot projects, generating an added value. The scope of the seven pilot projects and the Italian pilot study has been outlined, together with the expected added value of the pilot projects.

Therefore, the aim of this scoping study is to find topics which are suitable and relevant for being addressed in pilot projects, contributing to different issues of the Floods Directive, and designed for delivering transferable lessons.



Drava River, Italy



Kreams, Austria



Cernavoda, Romania



Lom, Bulgaria

Pilot projects

Overall, it was expected that the DANUBE FLOODRISK pilot projects across EU countries and addressing different issues covered by the Floods Directive would deliver more experience in this field and therefore will bring a good added value for discussions on EU level, but also during the national implementation process.

Following the scoping study, eight pilot projects (including the Italian pilot study) (Act. 7.2) have been implemented in four countries (Romania Pilot Projects: Galati, Cernavoda, and Giurgiu; Austrian Pilot Projects: City of Kreams: Harbor and Settlement Area; Italian Pilot Projects: Drava river; and Bulgaria: Lom, Nicopole, and Ruse).

Through the pilot projects, the flood hazard maps and flood risk maps have been elaborated and adapted to local levels with local stakeholder involvement for testing both the suitability of the methods developed in the Danube FLOODRISK project and as well the uptake and use of the maps in further planning processes of local decision makers regarding flood risk management plans. All the stakeholders were involved to determine an optimal format for maps, valuable information being collected for the future designs and approaches.

In a third and final step, the lessons learned from the eight pilot projects have been elaborated individually, also with regards to common issues and transferability of lessons. These findings were compiled in a follow-up paper (Act. 7.3)

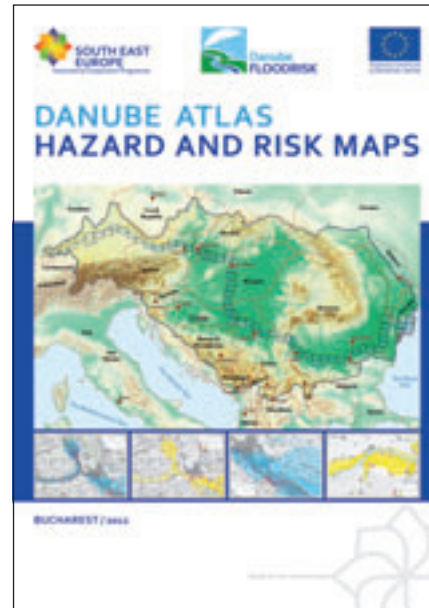
With the Floods Directive currently being implemented in national legislations, and with ongoing discussions on EC level (Working Group F) and in International River Commissions (e.g. Flood Protection Expert Group of ICPDR), it is evident that many details of the Floods Directive are still open and need further specification, especially interdisciplinary issues addressing risk maps and flood risk management plans.

Reflections of the WFD and of the FD together with Member State implementations and past experience delivered some

findings applicable to pilot scale, which contributed to the success of the pilot projects for DANUBE FLOODRISK.

6. A successful happy end

The DanubeFLOODRISK – Atlas 2012



Purpose of the Atlas

The main goal of the DanubeFLOODRISK - Atlas 2012 (printed 1:100,000) is to raise the citizens' awareness along the Danube river with respect to their exposure to floods and the inherent flood risk. The Danube Atlas is part of the Danube Action Plan of the ICPDR and, therefore a significant contribution to the Danube Strategy implementation. The objective of the Danube Action Plan on Floods is to improve the flood protection of people and assets and to concurrently improve the environmental state along the Danube and its floodplains. A first report on the implementation of the action plan on floods by 2011 is available on www.icpdr.org.

The Danube Atlas represents areas exposed to flood hazard and the associated damage potentials and flood risk. The Atlas, therefore, supports the prioritisation of measures to be taken within the Danube Action Plan on Floods advancing the target of reducing the residual risk. Maps representing the flood hazard (left side pages) illustrate the anticipated inundation depth in graded blue colours. Quantifying the flood risk for people and assets, the maps on the right side pages outline possible damages in case of extreme floods. Distinction has to be made between two cases:

- areas with protection measures against 100 years floods and higher (some high density areas are protected beyond the overall target of a 100-years flood protection standard)
- areas with lower protection measures and unprotected areas

Areas with a high level of protection

In such areas floods usually remain within the flood protection structures, e.g. dykes, and no flooding outside these structures occurs as long as the structures sustain. Failure of protective structures might occur e.g. when flood pressure lasts over longer periods on the dyke and its stability decreases. Therefore, for some of those stretches with high protection level, local failure of protective measures was considered and displayed in the Atlas, representing a worst case or residual risk scenario.

Unprotected areas or areas with a low level of protection

In those areas medium and extreme floods overtop existing flood protection structures, and if no protection is present, also the frequent flood events inundate the low lying areas along the river, e.g. the floodplains in Hungary and in the Danube Delta. Here, no consideration of residual risk was necessary.



Area of consideration

The maps included in the Atlas represent a synthesis of many possible extreme events, the most unfavourable flood situation for any given point and thus the threat posed to any individual.

Particular attention has been paid to the representation of the consequences of potential extreme floods by indicating inundated areas and associated inundation depths. Comparably frequent events, such as floods with recurrence intervals of 30 and 100 years are indicated by their inundation boundaries.

The Atlas covers upper, middle and lower Danube and the Delta area.

Flood hazard maps

Flood hazard maps are produced for 3 flood scenarios: a frequent event of 30 years flood (HQ_{30}), a medium event of a 100 years flood (HQ_{100}), and an extreme event of a 1000 years flood (HQ_{1000}). Due to the varying hydrological and topographic situation, the assumptions for hazard computation for the different sections of the Danube had to be adjusted to the local situation. The present land use conditions were considered.

Flood risk maps

The maps of potential damage contain values in Euro/m² for different land use types. The underlying information is a harmonized data set on assets and population density (BEAM, Basic European Assets Map, www.floodrisk.eu).

Additionally, some information on elements at risk is provided and a number of assumptions have been jointly agreed. In consequence of the generalized delineation and the 1:100,000 representation, a reduced number of objects and categories is displayed. Relevant objects outside the potentially inundated areas are displayed as well, as they might be affected indirectly (for example by accessibility). The information is based on NAVTEQ points of interest as well as from the EU-database on IPPC sites.

Data used for asset and damage calculation

Damage in terms of monetary losses is one part of the overall picture. The applied methodology for assessing direct tangible damages has to be considered as reliable as the impact of indirect damages is much more complex and also depends on additional factors. Some assets (cultural inheritance, ecological assets) which only can be qualitatively assessed are of high importance and in many cases non-replaceable, and their evaluation has been also considered.

Together with the affected population the displayed assets at risk may help to allocate the hot spots and enable decision makers to compare different types of risk and to optimize measures for risk management.

Damage assessment calculation



7. Lessons learned

The DanubeFLOODRISK project is an important contribution to the implementation of the European Spatial Development Perspective (ESDP), the Danube Strategy and the EU flood policy, and contains a large number, and a wide range, of findings.

The project offers a large number of best practices and an extended list of lessons learned from the pilot actions, from working together to develop recommendations and conclusions, or from preparing the transnational guideline for the integration of flood risk information formulated as input for master plans of spatial planning, which have been highlighted during the Thematic Workshop in April 2012, such as:

The research used several means of engagement with the stakeholders identified such as the use and revision of existing data from secondary sources as census data and archives, interviews and focus groups with qualified professionals, standardized questionnaire surveys in six communities exposed to flood hazards and those recently flooded.

Public involvement allows the incorporation of a factor that is often forgotten: local knowledge.

The results of the surveys prove the transparency in the stakeholders' actions,

in communication between organizations and individuals involved. The interviewed stakeholders' responses are valuable outcomes enabling decision-makers to consider the wider implications of their activities in planning and adopting flood protection measures.

Flood risk communications should be two-way between the public and the responsible agencies. The role of feedback loops in the system will not only allow local knowledge of the risk to be considered a resource to be included in flood incident management plans but will also serve to increase trust levels between stakeholder.

In communicating criteria and results of economic assessments, the number of parameters should be minimized, e.g. to the 4 types of impact (economic, social, environmental, cultural). The use of the same criteria as the ones of the preliminary flood risk assessment (PFRA) and of the risk maps will make this process more consistent and will avoid double work.

It would be a good practice to use a few criteria weight profiles in the MCA evaluation of alternatives based on stakeholders' opinions. The MCA tool could be used to propose different scenarios based on different weights of the criteria and propose them in this way to the politicians, in order to make the impact of these changes

transparent. It is important to present the uncertainty related to these evaluations. A MCA should be adaptable, by changing the parameters that could be changed within the next years.

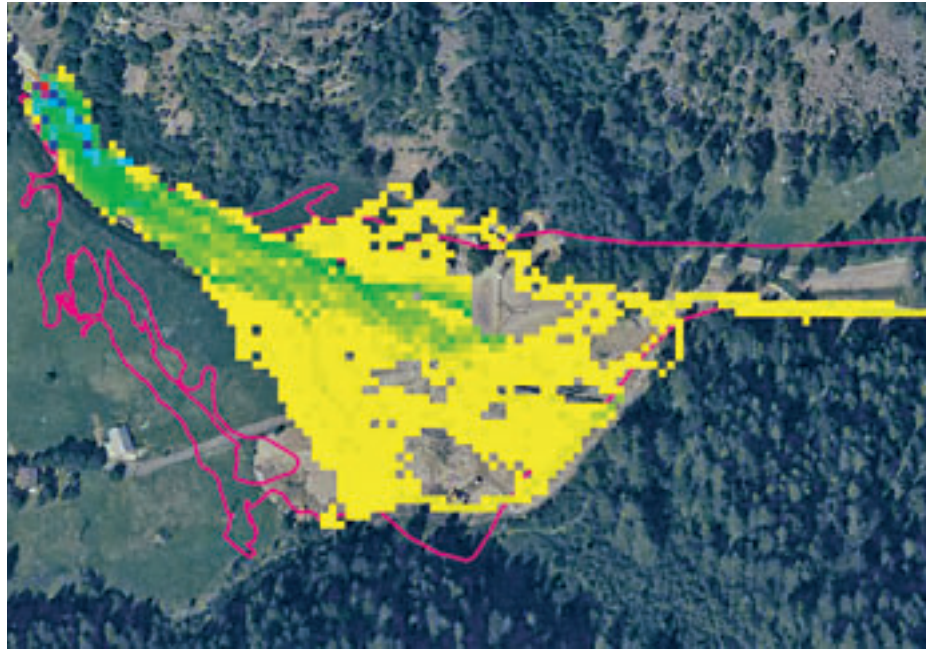
Through the choice of Danube FLOODRISK pilot applications across EU countries addressing different issues covered by the Floods Directive, an enhanced experience in this field was delivered and therefore a good added value for discussions on EU level, but also for discussions and implementation works at the Member State levels.

Several lessons and options for transferable results have been introduced by the Italian Drava pilot study. The main transferable issues are related to generic preparedness measures, recommendations and best practice for future spatial planning measures, and input for risk management planning in case of small transnational catchments. Additionally, some lessons regarding stakeholder involvement are considered to be transferable, especially when considering other areas with similar characteristics like basin size and land use, human works and morphological and topographical situation.

The production of the Guidelines on “The triggering of landslides and debris flow and their mapping” developed within

the Danube FLOODRISK Project is one of the main results of the project. The work represents one of the activities on the study-pilot area of the Drava basin in South Tyrol (Italy), which was chosen as test area for studying in deep the main problems and issues of small mountainous catchments. The Guidelines prepared by a complex team of experts under the

coordination of ISPRA, aim to be a useful tool for the professional community preparing Hazard Maps for specific territorial environments. The Guidelines propose a method of hazard assessment that is based on a methodology that is consistent with the most up-to-date knowledge in the field of river and torrent associated hazards.





8. Awards recognition

A Diploma of Excellence was awarded in May 2011, for the Danube FLOODRISK Project, coordinated by the Romanian Ministry of Environment and Forests, within the frame of a competition organized under the High Patronage of the



Chairmanship of the Organization of the Black Sea Economic Cooperation and the aegis of DG MARE – European Commission. With the same occasion, the Danube FLOODRISK project received the Social & Economic Innovator Trophy in the Danube Black Sea region.

The advantage of the transnational co-operation is given through the possibility of raising the willingness to participate in the transnational approach for all single actors, the common harmonization of data and methods and the joint exemplary implementation in the different regions.

Key innovations

- Transnational cooperation in the most international river basin in the world
- Joint flood risk assessment
- Joint harmonization of requirements, data and methods
- Stakeholder and end user involvement
- Joint preparation and completion of common data base (incl. data acquisition)
- Joint production of hazard and risk maps
- Exemplary Integration into spatial planning

The project had a significant positive impact both on experts in the field of the Danube countries, as well as on the Inter-

national Commission for the Protection of the Danube River (ICPDR) and the European Commission, the beneficiaries on the long term of the project results. This will ensure the *long-term sustainability* of the project results!

9. Stay tuned to our website

Within the frame of the awareness campaign a webpage has been launched and kept operational along the project implementation (<http://www.danube-floodrisk.eu>).

The actual structure of the site is the following:

- About FLOODRISK
- Project Team
- Work Packages
- Timetable
- Publications
- FAQ
- Related Documents

The project website was designed to provide usability and a great user experience. The website has two distinct areas: one open to the visitors and one restricted for project partners and accessible through authentication.

In the public areas all the publishable materials were made available for the website visitors including all publications like posters, flyers, brochures, guides and manuals, newsletters. Also in the public area is the on line questionnaire module used as an additional tool to distribute and gather data from project stakeholders.

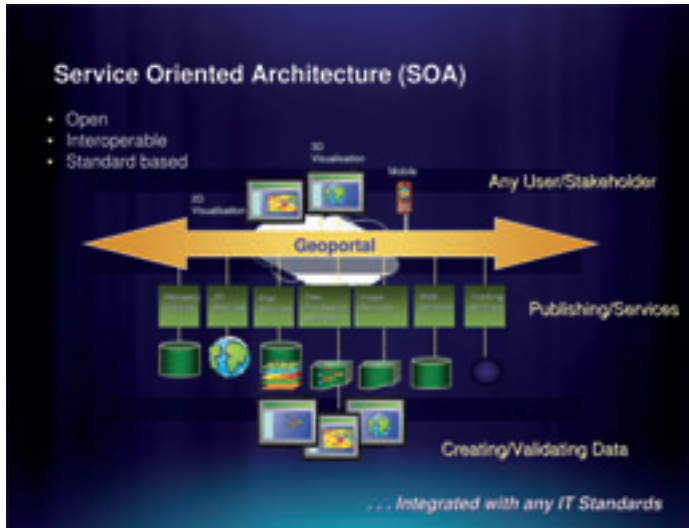
The website structure is based on a 3 columns layout which was developed for a content management platform.

The presentation part is accessible in all languages of the project and it has been permanently updated. The visitors have the possibility to subscribe for the newsletter directly on the site.

The restricted area is an application developed for the internal communication used by project partners to share and discuss versions of documents, to plan meetings and to store project related documents (financial and communication products).

The website also provide access to an area where through an interactive interface users may chose to display different data sets on the danube floodrisk map (a web service showing the hazard and risk maps and additional flood related information including additional functions like search). The link to the map geoportal is: <http://maps.danube-floodrisk.eu/>

It is expected that the website will be active after the project time life expires at least 5 more years!



How to contact Project Danube Floodrisk?

Lead Partner

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Stakeholder oriented flood risk assessment for the Danube floodplains

Project partners

MEF – Ministry of Environment and Forests (RO)
UBA-A – Federal Environment Agency Austria Ltd. (AT)
VD – via donau, Austrian Waterway Company (AT)
MOEW – Ministry of Environment and Water (BG)
VKKI – Central Directorate for Water & Environment (HU)
VITUKI – Environmental Protection and Water Management Research Institute (HU)
DEF – Danube Environmental Forum (HU)
ISPRA – Higher Institute for Environmental Protection and Research (IT)
TUCEB – Technical University of Civil Engineering of Bucharest (RO)
RWNA – “Romanian Water” National Administration (RO)
DDNI – “Danube Delta” National Institute for Research and Development (RO)
CESEP – Centre for Environmentally Sustainable Economic Policy (RO)
SWME – Slovak Water Management Enterprise, state enterprise (SK)
CroWa – Croatian Waters, Legal entity for water management (HR)
IJC – “Jaroslav Cerni” Institute for the Development of Water Resources (RS)
JVP SV – Public Water Company „Srbijavode“ (RS)
JVP VV – Public Water Management Company “Vode Vojvodine” (RS)



MAFWM – Ministry of Agriculture, Forestry and Water Management (RS)
RHMSS – Republic Hydrometeorological Service of Serbia (RS)

Observers:

ICPDR – International Commission for the Protection of the Danube River (AT)
JRC – European Commission - DG Joint Research Center (IT)
BfG – Bundesanstalt für Gewässerkunde (DE)
LfU – Bavarian Environmental Agency (DE)
RPT BWL – Regional Council Tübingen (DE)