



# *Flood risk and Shared Vision Planning (SVP) method in stakeholder involvement*

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- Lead author            **Ľubomír Martinovič**, Slovak Water Management Enterprise, Slovakia  
**Attila Lovas**, Middle-Tisza district Water Directorate, Hungary  
**Sorin Rindasu**, National Administration Romanian Waters  
**Andreea Cristina Gălie**, National Institute of Hydrology and Water Management, Romania
- Contributing authors   **Zuzana Hiklová**, Slovak Water Management Enterprise, state enterprise, Slovakia  
**Ján Wagner**, Slovak Water Management Enterprise, Slovakia  
**Daniel Kindernay**, Slovak Water Management Enterprise, Slovakia  
**Katarína Farbiaková**, Slovak Water Management Enterprise, Slovakia  
**Tamás Belovai**, General Directorate of Water Management, Hungary  
**Tamás Právetz**, Middle-Tisza district Water Directorate, Hungary  
**Melinda Váci**, Middle-Tisza district Water Directorate, Hungary  
**György Rátfai**, Middle-Tisza district Water Directorate, Hungary  
**Razvan Bogzianu**, National Administration Romanian Waters  
**Alexandru Gheorghe**, National Administration Romanian Waters  
**Ramona Dumitrache**, National Institute of Hydrology and Water Management  
**Bogdan Ion**, National Institute of Hydrology and Water Management  
**Elena Godeanu**, National Institute of Hydrology and Water Management  
**Ionela Florescu**, National Institute of Hydrology and Water Management

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## Abbreviations

EC	European Commission
FP EG	The Flood Protection Expert Group
ICPDR	International Commission for the Protection of the Danube River
SVP	Shared Vision Planning
SWME	SLOVAK WATER MANAGEMENT ENTERPRISE, state enterprise
WFD	Water Framework Directive
WWF	World Wildlife Fund
ZMOS	Association of Towns and Municipalities of Slovakia
ZZVH	Association of Employers in Water Management sector in Slovakia
OVF	General Directorate of Water management
PFRA	Preliminary Flood Risk Assessment
FHRM	Flood Risk and Hazard Maps
FRMP	Flood Risk Management Plans
FHM	Flood Hazard Maps
FRM	Flood Risk Maps
FRMP	Flood Risk Management Plan
MEWF	Ministry of Environment, Waters and Forests
RWNA	Romanian Waters National Administration
WBA	Water Basin Administration
WMS	Water Management Systems
NIHWM	National Institute of Hydrology and Water Management
GIES	General Inspectorate of Emergency Situations
MRDPA	Ministry of Regional Development and Public Administration
MARD	Ministry of Agriculture and Rural Development
MH	Ministry of Health
MT	Ministry of Transportation
MEF	Ministry of European Funds
LRNA	Land Reclamation National Agency

## Ukraine approaches regarding Flood risk and Shared Vision Planning (SVP) method in stakeholder involvement

Ukraine is no EU member and the flood risk management plans are foreseen to be done in November 2022.

## Slovakia approaches regarding Flood risk and Shared Vision Planning (SVP) method in stakeholder involvement

### 1. Preparation of the draft for Flood Risk Management Plans

The water policy applied in the Slovak Republic is based on Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (Water Framework Directive – WFD). The WFD was transposed into Slovak legislation into the Act No. 364/2004 Coll. on waters, amending Act No. 372/1990 Coll. of the Slovak National Council on offences, as amended by later regulations (Water Act) and into force Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (Directive 2007/60/EC). Directive 2007/60/EC was transposed into the legal order of the Slovak Republic into the Act No. 7/2010 on the flood protection (Act No. 7/2010,) which is in the force in the Slovak republic since February 1st 2010.

The basic strategic planning document in the Slovak Republic for the achievement of the objectives of WFD is the Water Plan of Slovakia, consisting of water management plans, which are:

- a) Danube River Basin Management Plan (The Danube River Basin District Management Plan), which contains the River Sub-basins Management Plans of Morava, Danube, Váh, Hron, Ipeľ, Slaná, Bodva, Hornád and Bodrog River.
- b) Vistula River Basin Management Plan (The Vistula River Basin District Management Plan), which contains the River Sub-basins Management Plans of Dunajec and Poprad River.

Implementation of the WFD and Directive 2007/60/EC is provided by the Ministry of the Environment of the Slovak Republic. The draft of the River Basin Management Plan is prepared by the Ministry of the Environment of the Slovak Republic through the Water Research Institute and administrator of the water management significant watercourses - the SLOVAK WATER MANAGEMENT ENTERPRISE, state enterprise Banská Štiavnica (hereinafter SWME) in cooperation with state water administration authorities, self-governing regions, other affected state administration bodies and other stakeholders, in particular representatives of municipalities, the industrial sphere, the agricultural sector, water companies, fishery protection and other organizations whose activities are to protect waters and water ecosystems.

The draft of the River Basin Management Plan, which containing the Program of Measures is approved by the Ministry of the Environment of the Slovak Republic. Approved River Basin Management Plans are the background for development of the Water Plan of the Slovak Republic and its Program of Measures. The Water Plan of the Slovak Republic is the background for the elaboration of the International Danube River Basin Management Plan and the International Vistula River Basin Management Plan. The Water Plan of the Slovak Republic is approved by the Government of the Slovak Republic.

The purpose of the Directive 2007/60/EC is to establish a common framework for flood risk assessment and management, which aims to reduce the adverse consequences of floods for human health, environment, cultural heritage and economic activity. Act No. 7/2010 Coll. establishes the obligation to elaborate and regularly update Flood Risk Management Plans, including Preliminary Flood Risk Assessment and elaboration of Flood Hazard Maps and Flood Risk Maps.

In practice, the whole implementation process of Directive 2007/60/EC is structured into three mutually related steps:

1. Preliminary Flood Risk Assessment, under which there are in the whole territory of Slovakia identified areas, in which there is a potentially significant flood risk or where it is probable to occur.
2. For all areas that were identified in the Preliminary Flood Risk Assessment as areas where there is a potentially significant flood risk or where it is probable to occur were subsequently elaborated:
  - a. Flood Hazard Maps, which show the possibilities of the floods of territory with different probability of occurrence,
  - b. Flood Risk Maps that contain information on potentially adverse consequences of floods caused by high water in the same areas, which are displayed on the flood hazard maps.
3. For areas where an existing or potentially significant flood risk was identified, on the basis of the information from Preliminary Flood Risk Assessment, Flood Hazard Maps and Flood Risk Maps has been established appropriate objectives for the management of flood risks and developed Flood Risks Management Plans, which are regularly reviewed and updated.

Flood Risk Management Plans identify appropriate flood risk management objectives and concrete measures to achieve these objectives for geographic areas in sub-basins, in the river basin district in the territory of Slovak Republic, where a potentially significant flood risk exists or where it is probable to occur.

According to § 8 of Act no. 7/2010 Coll. the Flood Risk Management Plans are developed in sub-basins, which according to § 11 of Act No. 364/2004 Coll. on waters define the administrative territory of the Danube River Basin and administrative territory of the Vistula River Basin. In the Slovak Republic, based on the results of the Preliminary Flood Risk Assessment, 9 drafts of the first Flood Risk Management Plans were drafted (no Flood Risk Management Plan was developed for the Danube sub-basin).

The Ministry of Environment of the Slovak Republic coordinates the preparation and realization of Flood Risk Management Plans with the preparation and realization of River Basins Management Plans in order to increase efficiency, ensure exchange of information and achieve

cooperation and benefit with respect to environmental objectives (§ 9 Act No. 7/2010 Coll.). The Ministry of Environment of the Slovak Republic ensures that

- Flood Hazard Maps and Flood Risk Maps and their subsequent revaluation and updates shall be developed in such a way that the information, they contain, is in accordance with the relevant information obtained in the preparation and realization of the River Basins Management Plans. At the same time, they should be coordinated with the analysis of the characteristics of the river sub-basin by assessing the impacts of human activity to the state of surface water and groundwater and the economic analysis of water management and they should be integrated into them (§ 13 of Act No. 364/2004 Coll.),
- Flood Risk Management Plans and their subsequent revaluation shall be developed in a coordinated manner with the development and revaluation of the River Basin Management Plans and should be integrated into them,
- active participation of the public, state administration bodies, local authorities and water users in the preparation and realization of flood risk management plans will be coordinated, as appropriate, with their active participation in the preparation and realization of River Basins Management Plans.

The draft of the first Flood Risk Management Plans was in accordance with Act no. 7/2010 Coll., developed in coordination with the revaluation of the River Basins Management Plans under the WFD and, after approval by the Ministry of the Environment of the Slovak Republic, became part of the revised management plan of the relevant administrative territory and of the revised management plan of the relevant river sub-basin.

Flood Risk Management Plans are coordinated with the neighbouring states in international river basins in such a way that the proposed measures do not increase the flood risk in their territory. In the International Danube River Basin, the International Commission for the Protection of the Danube River (ICPDR), through The Flood Protection Expert Group (FP EG), coordinates the implementation of the Directive, while at the same time the Slovak Republic proceeds in accordance with the Bilateral Border Waters Conventions, which has been concluded with all the neighbouring states. The first Flood Risk Management Plan in the Dunajec and Poprad river sub-basins in the International Vistula river basin was transferred to the Republic of Poland through the Commission for Border Waters.

## **2. Working with the public**

The Ministry of the Environment of the Slovak Republic is the competent authority for the implementation of Directive 2007/60/EC on Flood Risk Assessment and Management. The active cooperation of all stakeholders, the coordination of Flood Risk Management Plans with River Basin Management Plans as well as informing the public is a part of Act no. 7/2010 Coll.

All information processed in accordance with the requirements of Directive 2007/60/EC were in accordance with the requirements of Art. 10 of the Directive, i.e. Preliminary Flood Risk Assessment, Objectives and Time schedule of the first draft for Flood Risk Management Plans, Flood Hazard Maps and Flood Risk Maps, published for the general public at the website of the Ministry of the Environment of the Slovak Republic (<http://www.minzp.sk/sekcie/temy-oblasti/voda/ochrana-pred-povodnami/manazment-povodnovych-rizik/>).



The preparation of the Preliminary Flood Risk Assessment for sub-basins which define the Danube River Basin administrative territory and the administrative territory of the Vistula River Basin was provided by the Ministry of the Environment of the Slovak Republic through SWME and other legal entities to which it is the founder.

The Ministry of the Environment of the Slovak Republic has published at the web site from December 2013 until June 2014 the Objectives and Time Schedule for the preparation of the first draft for Flood Risk Management Plans for public commenting. Flood Hazard Maps and Flood Risk Maps according to § 6 of Act no. 7/2010 Coll, which has been ensured by the administrator of the water management significant watercourses (SWME), the Ministry of the Environment of the Slovak Republic has made available to the public at website.

At the preparation of the first Flood Risk Management Plans were involved several institutions, companies and the academic sector. Ministry of the Environment of the Slovak Republic appointed Water Research Institute to finalize final draft of flood risk management plans. Another interested institution was SWME, which is the elaborator of the Flood Hazard Maps and the Flood Risk Maps, the proposed flood protection measures and the prioritization of the proposed measures. On the measures proposal for flood protection in the forests participated Forests of the Slovak Republic and on the proposal and evaluation of the proposed measures the ESPRIT Company, Faculty of Forestry of the Technical University in Zvolen and the Slovak University of Agriculture in Nitra.

In May 2006 Flood Working Group was established as one of the working groups of the Ministry of the Environment of the Slovak Republic, which is involved in the implementation of Directive 2007/60/EC. The Flood Working Group provided expert support and consultation facilities during the Objectives and Time schedule process for the preparation of the first draft for Flood Risk Management Plans, the Preliminary Flood Risk Assessment, the Flood Hazard Maps and the Flood Risk Management Plans. The members of the working group are representatives of the Ministry of the Environment of the Slovak Republic, SWME, Water Research Institute, Slovak Hydrometeorological Institute, District Authorities, State Nature Conservancy of the Slovak Republic, Slovak Environmental Agency and other relevant external scientific research organizations and universities.

Drafts of Flood Risk Management Plans were submitted for assessment according to Act. No. 24/2006 Coll. on Environmental Impact Assessment and for public consultations for the purpose of submitting written comments and suggestions on 22 December 2014. The notice on a strategic document with a national impact – Flood Risk Management Plans according to § 5 of the Act. No. 24/2006 Coll. on Environmental Impact Assessment was published in a mass-media with a national reach, through the periodical journal „Hospodárske noviny“ on 18 December 2014 and at the same time was published at the website of the Ministry of the Environment of the Slovak Republic [www.enviroportal.sk](http://www.enviroportal.sk). It was also published information about the possibility to consult the document in accordance with § 63 of the Act. Consultations according to § 63 of the Act were held on 30 December 2014 at the request of the civil association Slatinka.

The Ministry of the Environment of the Slovak Republic ensured the publication of the scope of the evaluation in mass-media with a national impact, through the journal „Hospodárske noviny“ on 14 January 2015, at the same time sent it electronically to the relevant authorities. The scope of the evaluation was also published on the website of the Ministry of the Environment of the Slovak Republic [www.enviroportal.sk](http://www.enviroportal.sk).

The notice of publication of the strategic document assessment report was published in a mass-media with a national impact, published by „Hospodárske noviny“ on 8 April 2015 and at the same time the report on assessment and draft of the strategic document was published at the website of the Ministry of the Environment of the Slovak Republic [www.enviroportal.sk](http://www.enviroportal.sk). It was also published information about the possibility to consult in accordance with § 63 of the Act.

Public discussion of the report on the evaluation of the strategic document and the draft of the strategic document according to § 17 of the Environmental Impact Assessment Act took place on 21 April 2015 in Bratislava. The date and place of the public consultation were published on the website of the Ministry of the Environment of the Slovak Republic and in a daily newspaper - Hospodárske noviny.

Public consultation on draft of Flood Risk Management Plans took place in Bratislava (6 May 2015), in Prešov (12 May 2015) and in Zvolen (13 May 2015). Representatives of public administrations, representatives of local authorities, entrepreneurs, relevant experts, scientific and research organizations and universities, non-governmental organizations and active citizens participated. Organizers of public consultations were the Association of Towns and Municipalities of Slovakia (ZMOS), the Green Coalition, the World Wildlife Fund (WWF), the Ecoforum and the Association of Slatina. After approval by the Ministry of the Environment of the Slovak Republic, the flood risk management plans were published on 22 December 2015 at the website of the Ministry of the Environment of the Slovak Republic.

### **3. Activities aimed at increasing public awareness of floods**

Many information activities and cooperation activities have been initiated by the competent authority with the entry into force of Directive 2007/60/EC. During the Preliminary Flood Risk Assessment, the Ministry of the Environment of the Slovak Republic organized seminars to inform the general public about its results and the further implementation of Directive 2007/60/EC, Flood Hazard Maps and Flood Risk Maps, Flood Risk Management Plans and Flood Protection Measures. Expert seminars were held in each region and the organization was provided by the Regional Environmental Authorities (District Offices) in cooperation with the relevant Branch Offices of the SWME.

During the 6-month period (22 December 2014 - 22 June 2015) the drafts of the first Flood Risk Management Plans were made available to the public and were organized expert seminars by the Ministry of the Environment of the Slovak Republic in cooperation with the Department of Environmental Care of District Authorities throughout the territory of Slovakia. Seminars were focused on public information on the content and preparation of Flood Risk Management Plans, proposed flood protection and proposed flood protection measures with scope for discussion. The seminars were attended by representatives of the municipalities, representatives of municipalities associated in microregions, employees of self-governing regions dealing with property protection against floods, employees of crisis management departments of district offices, employees of district offices working in the field of environmental protection and flood protection and other public.

### **4. Actions to increase public awareness of flood risks**

Information on floods and their consequences has been published and updated for the general public also at the website of the Ministry of the Environment SR -

<http://www.minzp.sk/sekcie/temy-oblasti/voda/ochrana-pred-povodnami/informacie-priebehu-nasledkoch-povodni-od-roku-2001/>.

For information to the general as well as the professional public, and to disseminate awareness of flood risk, possible flood protection measures etc., and also to open professional dialogue of different stakeholders served international scientific conferences “River Basin Management and Flood Risk Management”, held in December 2011 [http://www.vuvh.sk/index.php/sk\\_SK/rozne/manazmentPovodi](http://www.vuvh.sk/index.php/sk_SK/rozne/manazmentPovodi) and in December 2013- [http://www.vuvh.sk/index.php/sk\\_SK/konferencie/zbornik-manazment-povodi-a-povodnovych-rizik-2013](http://www.vuvh.sk/index.php/sk_SK/konferencie/zbornik-manazment-povodi-a-povodnovych-rizik-2013).

The professional public has presented its practices, opinions and experience in the periodical "Vodohospodársky spravodajca", which is published through the information on the website of the Association of Employers in Water Management sector in Slovakia (ZZVH) <http://www.zzv.sk/index.php?ID=24> also available to the general public.

To increase public awareness of water including flood hazard and possible flood protection measures were in cooperation with SWME and other organizations with public media created the documentary series “Slovenská voda”.

## **Hungary approaches regarding Flood risk and Shared Vision Planning (SVP) method in stakeholder involvement**

### **1. Preparation of the draft for Flood Risk Management Plans**

The Floods Directive (2007/60/EC) requires each Member State (MS) to assess its territory for significant risk from flooding, to map the flood extent, identify the potential adverse consequences of future floods for human health, the environment, cultural heritage and economic activity in these areas, and to take adequate and coordinated measures to reduce this flood risk. The Directive also says that Member States shall encourage active involvement of interested parties in the production, review and updating of the flood risk management plans. The Directive has been implemented to the national law in the 178/2010 (V.13.) governmental decree.

In Hungary the basic units of the flood risk management plans are the embanked floodplains, which are disconnected from the flood dynamic by dyke construction and delineate an area that has a certain statistical probability of flooding. Floodplains are separated from each other by natural terrain or artificial infrastructures as a border, so that the flood cannot get through from one of the basin to the other basin. The numbers of the modelled flood basins are 120. These coverages overlap with municipality and county borders, institutional operational borders, furthermore in some cases the national border.

In the Hungarian assessment three flood groups were created for an examination of flood hazards:

- Floods of river sections protected by dykes (riverine floods);
- Floods of river and stream sections not protected by dykes (flash floods);
- Inland inundations (excess water).

The flood inundation analyses were based on a GIS platform-based fully integrated water management tool, where the digital terrain model has a 10x10 m resolution as a raster, but the specific objects (e.g. Rivers, dikes, localization roads etc.) are presented as vectors. The probable failure points of the dikes were investigated and the specific flood curves were calculated from the available 80-120 years long data sets to the certain sections of the water outtake. Climate change effects were interpreted in the low probability events. The transport on the field was calculated with 2D numerical models for each floodplain. The hazard maps were exported to 50x50 meter raster layers for visualization, the boundaries were transformed to shape files. The mapping results were constructed in an aggregated form for the (national) Danube, Tisza, Balaton and Dráva sub-basins in line with the river basin management plans. The reporting format is a 1:2.000.000 scale map, but the appropriate view is 1:100.000. The scenarios for fluvial flooding were likely 30/100/1000 year return probability. The inundation contours represent the three events' maximum extents, the water depth categories are 0-0.5 m, 0.5-1 m, 1-2 m, 2-3 m, 3-5 m, >5 m. The velocities were quite low and considered not important in regard with the inundation hazard, so they were not indicated. The risk analysis is based on the water depth. The effects of the groundwater floods (inland excess water) are represented by the low probability events that have been extracted from the real observed inundations in the last decades. The recent flood events and especially the Danube flood in June 2013 pointed out the necessity of a new statistical calculation of the design flood events. Furthermore new terrain data is being incorporated into the existing surface models. The hazard and risk maps will be fine-tuned based on the new data sets during the flood risk management planning in 2014-2015. Based on the different scenarios' extents the necessary risk evaluation was carried out in separate maps for proper visualization.

- Population affected: estimated number of inhabitants who live in settlements that are spatially overlapping with the inundation (2001 data). The indication of the value is the size of the dot mark.
- Economic activity: the classification is based on the CORINE land cover data set. The important roads and railways, SEVESO objects, power plants, sewage treatment plants, harbours, airports and other industrial facilities were added from the river basin management plans.
- IED installations: the E-PRTR facilities were taken in account on the maps with harmonized classification.
- WFD protected areas: updated data from the river basin management plans were used, such as freshwater sources, recreational areas and protected landscapes. The surface water affected groundwater is also presented.

The locations of the proposed interventions were linked to the sub-units defined by the river basin management plans. The flood hazard and risk maps and flood risk management plans have been made into 8 design area units. Total area of Hungary covered by the 8 units.

The preliminary flood risk assessment, the flood hazard maps, the flood risk maps and the flood risk management plans. In Hungary the links are the following:

- PFRA: <http://www.vizugy.hu/index.php?module=content&programelemid=1&id=826>
- FHRM: <http://www.vizugy.hu/index.php?module=content&programelemid=62>
- FRMP: <http://www.vizugy.hu/index.php?module=vizstrat&programelemid=145>

## 2. Working with the public

The EU Flood Directive in Article 10 declares that Member States shall make available to the public the preliminary flood risk assessment, the flood hazard maps, the flood risk maps and the flood risk management plans. The Directive also says that Member States shall encourage active involvement of interested parties in the production, review and updating of the flood risk management plans. The Directive have been implemented to the national law in the 178/2010 (V.13.) governmental decree. In the 10§ (2) section the legislation obligate the involvement of the Regional and National Water Management Committees for the development process. The 13. § (2) section instructs the designer to organize information exchange platforms and discussion forums for the affected population. It also emphasizes the need for the strong connection to the institutes that are dealing with the accomplishment of the Water Framework Directive. From the beginning of 2014 these task are also the responsibility of the Water Directorates, so the cooperation is fundamental

The national flood risk management plan was approved by the Government. In the regional planning phase the Regional Water Management Committee had to be involved, where the maximum 25 members with voting rights were (1382/2013. (VI. 27.) gov.dec.) the delegated representative of the:

- Ministries responsible for water protection and water management
- Responsible water directorate and water authority
- Competent environmental protection, natural protection and water authority
- National park directorates or the notary of the municipality (if locally protected)
- Competent institute for public health and agriculture
- Municipalities in the area of interest
- County municipalities in the area of interest
- Regional tourism board
- Chamber of agriculture, industry and engineers
- Water management associations and companies for public works
- NGOs and scientific organizations in the area of interest with focus on specific topics
- Additionally the national world heritage committee with commenting rights

The same legislative document described the National Water Management Committee as well, that has even longer list of involved high level stakeholders. At the national level strategic questions are addressed. The practical discussion takes place at the regional level.

Public consultation on draft of Flood Risk Management Plans took place in the following places in Hungary:

Place of the public consultation	Date	Participants
Kisar	2015.07.28	47
Miskolc	2015.08.10	49
Debrecen	2015.07.27	27
Szolnok	2015.08.03	53
Budapest	2015.08.11	57
Gyula	2015.08.04	38

Place of the public consultation	Date	Participants
Szeged	2015.08.05	39
Sárvár	2015.07.20	34
Pécs	2015.07.21	39
Szekszárd	2015.08.12	36
Győr	2015.08.26	30
Baja	2015.07.30	47

### 3. Activities aimed at increasing public awareness of floods

The National information forums (for all types of stakeholders) were held in 12 locations in July-August 2015 with information sessions, enabling the participants to express their opinions and draft proposals. Additionally, two other events were held primarily for informing the civil population. The public and stakeholders could also comment on the FRMP in a written form, and these comments were taken into account for the finalisation of measures.

The table below shows how the public and interested parties were informed of the FRMP, concerning the draft FRMPs. Information on how the consultation was actually carried out and which stakeholders participated is presented in the rest of the section

**Table 1 Methods used to inform the public and interested parties of the FRMP**

	HU1000
Media (papers, TV, radio)	✓
Internet	✓
Digital social networking	✓
Printed material	✓
Direct mailing	
Invitations to stakeholders	✓
Local Authorities	✓
Meetings	✓

Source: FRMP

According to the regulations, the public consultation process started already in the working phase between the preparation of the hazard and risk maps and risk management plans.

Information to the public on internet ([www.vizugy.hu](http://www.vizugy.hu)) was made available in July 2015. On this site, before the national information forums started, the hazard and risk maps and recommendations on risk management measures, grouped by type of measures, were released.

The table below shows how the actual consultation was carried out:

**Table 1 Methods used for the actual consultation**

	HU1000
Via Internet	✓
Digital social networking	
Direct invitation	✓
Exhibitions	
Workshops, seminars or conferences	✓
Telephone surveys	



Direct involvement in drafting FRMP	
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Source: FRMP

The draft version of the FRMP was made available via internet in a downloadable form for written comments. In addition, the consultation forums mentioned above provided a mechanism for input.

The table below shows how the documents for the consultation were provided:

**Table 2 Methods used to provide the documents for the consultation**

	HU1000
Downloadable	✓
Direct mailing (e-mail)	
Direct mailing (post)	
Paper copies distributed at exhibitions	
Paper copies available in municipal buildings (town hall, library etc.)	

Source: FRMP

As noted above, Hungary organised 12 consultation forums in July and August 2015 with on average 40 stakeholder representatives at each meeting. The public and stakeholders could also comment on the FRMP in a written form, and these comments were taken into account for the finalisation of measures.

The table below shows the mechanisms used to ensure the active involvement of stakeholders:

**Table 1 Mechanisms used to ensure the active involvement of stakeholders**

	HU1000
Regular exhibitions	
Establishment of advisory groups	
Involvement in drafting	
Workshops and technical meetings	✓
Formation of alliances	
Information days	

Source: FRMP

The consultation forums, described above, provided the main mechanism for active involvement of stakeholders.

## 4. Actions to increase public awareness of flood risks

It is the personal responsibility of anyone who lives and works in the area of potential significant flood risk, to adapt all his activities to flood risks. This requires communication to citizens in an appropriate and understandable way on flood risks and on opportunities how they can adapt to the natural circumstances. The awareness raising measures include presentation of flood hazard and flood risk maps, flood risk management plans (including natural water retention measures and associated consequences to adaptive land use) and of emergency plans to public, organizing training campaigns and other educational activities focussing on flood preparedness among municipalities, introduction of water management issues into schools (from the elementary school to the university level) and increase of participation of population in the flood management and emergency response works.

In 2014 the General Directorate of Water Management (OVF) launched a series of conferences for regional and local stakeholders to draw attention to the characteristics of risks that are related to water like fluvial and pluvial floods, excess water and drought. The meetings take place in different regions quarterly and hosted by the responsible local Water Directorate.

Usually the patron of the event is a high level regional representative. The professional presentations cover the main directions of the national flood/water risk management planning and highlighting the territorial problems. The invited guests are regional and local stakeholders, politicians, mayors and representatives of local NGOs.

## Romania approaches regarding Flood risk and Shared Vision Planning (SVP) method in stakeholder involvement

### 1. Preparation of the draft for Flood Risk Management Plans

#### SUMMARY OF PUBLIC INFORMATION PURSUANT TO THE FIRST TWO STAGES OF IMPLEMENTING THE DIRECTIVE 2007/60/EC

Although in Romania there has not been a proper public information or consultation campaign on the preliminary flood risk assessment and on the implementation of hazard and flood risk maps in the spirit of Art. 9 and 10, Annex - Part A.II.2 of Directive 2007/60 / EC, in the following, a series of information/communication activities carried out at national/central and basin level, as follows:

#### The steps taken to inform the public at central level (RWNA/HHWM):

- Publication on the Romanian Waters National Administration's website, including Water Basin Administrations of the Reports on the Preliminary Flood Risk Assessment, Flood Risk and Hazard Maps, and related methodologies (March 2012);
- Organizing the press conference entitled "Hazard Maps and Risks to Floods" (with the participation of the Deputy Minister for Water, Forests and Fisheries of the Ministry of Environment and Climate Change - MECC), the management of RWNA and HHWM in April 2014), resulting in prime-time TV news, radio news and press articles in the central and local press; the coverage of the information transmitted was an exclusively positive one;
- Press articles in central and local media on how to produce hazard maps and flood risk maps, the usefulness of these maps to the public and authorities throughout 2014;
- Participation in radio-TV programmes, which involved the existence of public debate throughout 2014;
- Radio-TV interventions that involved the existence of public debate throughout 2014;
- Interviews in the central press;
- Publishing on the website of the Romanian Waters National Administration website link - <http://gis2.rowater.ro:8989/flood/> of hazard and flood risk maps for all WBAs (April 2014), the name of the portal and the way it could be accessed was publicly announced and generated a series of public reactions;



- Meetings organized by RWNA and NIHWM at the national level with the representatives of the county councils in order to disseminate the results obtained within the PFRA and the development of hazard and flood risk maps (October 28 and October 30, 2014 respectively);
- Elaboration of brochures on PFRA and the development of hazard and flood risk maps and dissemination of stakeholder information at both national and basin and local levels;
- Support for specialized presentations at workshops (e.g. National Scientific/International Scientific Conferences - World Water Day - RWNA) (August 2008 -June 2013, April - July 2014).

### **The steps taken to inform the public at the WBA level - especially in the framework of the Plan for Prevention, Protection and Mitigation of Flood Effects at River Basin level (PPPMFE)**

- project related to the flood hazard maps:
- Publishing the PPPMFE project on the Water Basin Administration websites;
- Articles and press releases in local media on flood hazard maps;
- Interventions and participation in radio-TV broadcasts on flood hazard maps;
- Informative materials on PPPMFE (e.g. information boards);
- Presentations within the Basin Committee on the state of play of the flood hazard maps;
- Organization of meetings at the county councils level, prefectures, mayors and county water administrations, at the Local Committees for Emergency Situations level.

### **Flood Risk Management Plans**

According with the requirements of the Flood Directive (Articles 9 and 10, Annex - Part A.II.2), a number of steps have been taken to inform and consult the public, as well as to encourage active involvement of stakeholders in the development of FRMPs in coordination with WD.

- at national level (national coverage, including central level),
- at basin level (at the level of river basins and Basin Committees),
- as well as local and county level (at the level of counties, communes, villages that may be at risk and may be affected by the negative effects of floods).

## **2. Working with the public**

The need to develop a Communication Plan on the Flood Risk Management Plan is foreseen on the one hand by Directive 2007/60/EC on Flood Risk Assessment and Management, Article 9, paragraph 3 and Article 10, paragraph 1-2, which refers to two aspects:

- Providing to the public in chronological order with the results of the preliminary flood risk assessment (EPRI), of the hazard and flood risk maps;
- Active stakeholders involvement in the development of the Flood Risk Management Plan.

The planning, implementation and evaluation of the communication process on flood risk management is a component of the Flood Risk Management Plan (FRMP), as defined in the chapter. IV of the same Directive. This aspect is also regulated by Government Decision no. 846

of August 11, 2010 (Chapter 2: "The Purpose of the Strategy", section a), in which the public information activity (point 3, chapter 2), the communication, and the education of the population regarding the flood risk (point 9, chapter 3) are defined as of the main flood risk management activities, namely preventive actions (Chapter 3, point a).

In line with the Water Framework Directive 2000/60/EC, the Communication Plan for the Flood Risk Management Plan (FRMP) should include information and consultation actions, including the formal, legalized, communication process, but also about public participation activities that are not enacted, but which should be encouraged by the authorities implementing the FRMP, with stakeholders involvement.

### **THE RESPONSIBLE AUTHORITIES**

The authorities responsible for the implementation of the Communication Plan on the elaboration of FRMP are:

1. At central level:

- National Administration "Romanian Waters" (NARW);
- National Institute of Hydrology and Water Management (NIHWM);

2. Basin:

- Water Basin Administrations (WBA);

3. At local/county level:

- Water Management Systems (WMS)

At the level of the responsible authorities, working groups were set up, by designating the persons involved in the implementation of FRMP.

At the level of the responsible authorities (NARW, NIHWM, WBA), a contact database is being set up, both in working groups, in the implementation of FRMP, with their contact details, as well as stakeholders, from all of the categories below.

### **THE STAKEHOLDERS**

Defined in the literature as any group of audiences, more or less organized in groups, which may be affected/interested in the issues discussed, within this communication plan, the concept of "stakeholders" is detailed of the three reference levels already chosen, i.e. at national, basin and local levels.

**I. At national level:**

- Riverside population;
- Central public authorities: Government institutions/authorities (ministries, authorities, agencies, etc.), as defined by GD no. 846/2010;
- University environment (scientists, teachers, etc);
- Private environment (economic agents, potential investors, insurers);
- The large public.

**II. At basin level**

- Basin Committees.

**III. At the local/county level:**

- Local authorities (mayoralties, local councils);
- Local Committees for Emergency Situations (LCES);
- County Committees for Emergency Situations;
- County authorities (county councils, prefects);

- General Inspectorate for Emergency Situations (GIES).

## COMMUNICATION OBJECTIVES

The overall objectives of this communication guide are to plan all information, consultation and public participation activities on the one hand and to implement these types of communication activities at the population exposed to the negative effects of floods on the other hand.

Communication objectives are designed, both in relation to the general context of Directive 2007/60/EC, and in terms of the basic principles and concepts as transposed in GD no. 846/2010, ch. 3, sections 1 and 2.

These objectives are integrated into three levels:

- national (with national coverage, including at central level);
- basin (at river basin and basin committees);
- local and county (at the level of counties, communes and villages that may be at risk and who may be affected by the negative effects of floods).

The way of defining the communication objectives implicitly refers to the three categories of activities as defined by the European and national legislation, namely: the activities of information, consultation and public participation, activities on which the entire Communication Plan on FRMP are based on. The achievement of the communication goals is as following:

- At large public level and stakeholders
  - Organize public awareness activities so that it acquires a number of basic notions about the Flood Risk Management Plan;
  - Organization of public consultation activities by implementing specific activities on FRMP, in order to be able to evaluate the public response;
  - Organization of public participation activities through the implementation of specific activities on FRMP, in order to be able to evaluate the public contribution in decision-making.
- At the level of the players involved in the flood risk management
  - Involvement of responsible authorities (NARW, NIHWM, WBA) in the process of planning and organizing communication activities on FRMP;
  - Strengthening the role of the Basin Committees by assigning clear responsibilities for the organization of communication activities on FRMP;
  - Training of responsible personnel in flood risk management field at the level of authorities responsible for implementing the communication plan (NARW, NIHWM, WBA).

The level of achievement of the communication objectives on FRMP is reflected in the overall social benefits in the form of results that any flood risk information and awareness campaign can offer. They are also those that derive from the European and national legislative provisions, namely:

1. the public (interested and/or potentially affected) to be informed so as to be able to accept the flood risk to which it may be exposed;

2. the audience (interested and/or potentially affected) to gain and acquire those forms of behaviour and appropriate skills to help them live together with floods and, if there is a risk of flooding, to either able to make its own rational decisions/measures, thus reducing the consequences of flood exposure by saving his own life, his family and his goods.

### **3. Actions and activities aimed at increasing public awareness of floods**

The actions with national coverage, including at the central level, consisted of:

- Precursory activities leading to public information and consultation
- Developing the Communication Plan on the Flood Risk Management Plan;
- Establishing the list of stakeholders (central and local public authorities, county authorities, collaborative institutions, academia, NGOs, water operators), including identifying contact persons invited to debates and receiving periodic information/methodologies etc. and from which feedback is expected;
- Conceiving the first questionnaire (disseminated on 30 June 2015) on the elaboration of flood risk management plans on hydrographic basins and the first Newsletter with information purpose on the stage of the elaboration of the Flood Risk Management Plans.
- Conceiving leaflets containing information about FRMP;
- Conceiving the second questionnaire on the draft of FRMPS for each WBA.

Information and consultation activities of the public with reference to the elaboration process of FRMP:

- Organizing a meeting with representatives of the academic environment in which a technical, information presentation dedicated to FRMPs - at Politehnic University of Bucharest, Faculty of Power Engineering (June 3, 2015);
- Participations in radio broadcasts (Radio Village Antena - April 7 and June 16, 2015);
- Organizing the first central-level debate (June 30, 2015, at the Ministry of Environment, Waters and Forests headquarters) where the flood risk management objectives and the National Catalogue of Potential Measures were subject to public consultation; the central public institutions with responsibilities in the field of flood risk management (Ministry of Environment, Waters and Forests, Ministry of Regional Development and Public Administration, Ministry of Agriculture and Rural Development, Ministry of Health and General Inspectorate of Emergency Situations), Romanian Waters National Administration, National Institute of Hydrology and Water Management, research institutes and representatives of the academic environment as well as the Ministry of European Funds participated;
- Dissemination of the questionnaires to the stakeholder list, questionnaire containing questions for verification of the way of informing and consulting the public;
- Dissemination of the Newsletter to the stakeholder list in order to inform them about the status of the Flood Risk Management Plans and to obtain from stakeholders a point of view on (1) flood risk management objectives and the associated indicators, and (2)

the potential measures catalogue (a total of 6,000 copies were produced (500 x 11 - 500 copies/WBA and 500 copies/Bucharest, disseminated at the stakeholder level);

- Organizing a technical debate - at the Technical University of Civil Engineering Bucharest headquarters, Faculty of Hydrotechnics (July 15, 2015) - with the participation of the university staff, regarding FRMP and the proposed catalogue for potential measures;
- Organizing a debate and working meetings (September 18, 2015, headquarters of the Ministry of Environment, Waters and Forests-MEWF) for the purpose of drawing-up a Plan of flood risk management measures and establishing concrete measures for other responsible authorities. This meeting was attended by representatives of Ministry of Transportation-MT, Ministry of Agriculture and Rural Development-MARD, Ministry of Regional Development and Public Administration-MRDPA, Ministry of European Funds-MEF, Land Reclamation National Agency-LRNA and representatives of the Forest Policies, Strategies and Projects (within the Ministry of Environment, Waters and Forests-MEWF). Representatives of NIHWM have presented the state of implementation of the Flood Directive and the main reporting requirements for authorities involved in flood risk management (participating at the meeting) according to their specific area of competence;
- Development of presentations and scientific articles on FRMP theme;
- Presentations and debates at the Annual Scientific Conference of the NIHWM on flood risk (methods and indicators for ranking of PFRAs in Romania from the point of view of the severity of risk, indicators for assessing the risk exposure of the different types of receptors in the country, difficulty approaching the specific risk on small rivers etc) and the Flood Risk Management Plan (stage, approach, measures, examples, application of Article 4.7 of the Water Framework Directive etc);
- Participation in a TV show - Documentary named Water and Technology in the Service of the People (4 episodes), dedicated to the Flood Risk Management, Hazard and Flood Risk Maps, Potential Measures Catalogue, Flood Risk Management Plan, NARW projects etc; the film was on public 1st TV station aiming both to promote the water management policies of the two institutions and to raise awareness of the flood risk (distributed in November 2015);
- Dissemination of leaflets containing information about FRMP and the roles of the responsible authorities; posting it electronically on the NIHWM website;
- Organizing a new debates and working meetings on 17/18 March 2016 at the MEWF headquarters to finalize the Flood Risk Management Plan, approve the indicators to monitor the progress of the implementation of the measures, the authorities responsible for monitoring, in accordance with their specific area of competence and the 2021 targets. Representatives of MT, MARD, MRDPA, MEF, LRNA and representatives of the Forest Policy Policies, Strategies and Projects (within the MEWF);
- Organization on 21 March 2016 of the meeting of the Inter-ministerial Water Council for the approval of the Flood Risk Management Plan, in accordance with the provisions of Government Decision no. 1095/2013 for the modification and completion of the Regulation on the organization and functioning of the Interministerial Council of Waters, approved by the Government Decision no. 316/2007, participating the representatives of the Ministry of Environment, Waters and Forests, the Ministry of

European Funds, the Ministry of Economy, Trade and Business Environment, the Ministry of Agriculture and Rural Development, the Ministry of Transportation, the Ministry of Health, the Ministry of Internal Affairs, the Ministry of National Education and Research, the Ministry of Regional Development and Public Administration, the Department for Infrastructure and Foreign Investment Projects, the Romanian Waters National Administration, the National Environmental Protection Agency, the Environmental Fund Administration, the National Environment Guard, the National Forest Administration - ROMSILVA, the Land Reclamation National Agency and Hidroelectrica SA;

- Celebrating the World Water Day on March 22, 2016, when the Minister of Environment, Water and Forests made the announcement on the completion of the first flood risk management plan (FRMP) for the reporting cycle 2016-2021, based on the principles of sustainable development and climate change adaptation impacts and its reporting to the European Commission's in WISE system. It should be noted that the implementation of this Plan was a priority of the Ministry of Environment, Waters and Forests and is in line with the Sectoral Action Plan of the Romanian Government for the Water Sector.
- Creating an email address [comunicare.inundatii@rowater.ro](mailto:comunicare.inundatii@rowater.ro), where any stakeholder opinions can be collected;
- Posting on the RWNA ([www.rowater.ro](http://www.rowater.ro)) and NIHWM ([www.inhga.ro](http://www.inhga.ro)) websites of FRMP, as well as other informative materials related to the flood risk management, namely: General information regarding Flood Risk Management Plan; Content of the Flood Risk Management Plan).

#### **4. Actions to increase public awareness of flood risks**

Information and consultation activities of the public with reference to the elaboration process of FRMP

##### **Someş-Tisa**

- On June 29, 2015, the Someş-Tisa Basin Committee on the occasion of the Danube Day took place, during which the Someş-Tisa Flood Risk Management Plan was presented and endorsed (Chapter 1-3);
- Informing stakeholders on the state of the Flood Risk Management Plans attached by submitting the Flood Risk Management Plan Newsletter with Flood Risk Management Objectives and the Catalogue of Potential Measures at National Level;
- Dissemination of the first questionnaire on the elaboration of the Flood Risk Management Plan of the Someş-Tisa hydrographic area. The questionnaire was sent to members of the Someş-Tisa Basin Committee, other local public authorities, educational units etc.
- Information points have been organized within the local public authorities and in educational establishments;
- Presentation and approval of FRMP Someş-Tisa took place during the Basin Committee meeting held on 10 December 2015;



- Request from Someș-Tisa WBA on the transmission of specific flood risk mitigation measures (measures in the field of flood risk management at local level - Forest Directorates, LRNA, County Councils, Agricultural Directions, GIES etc, progress or proposed, within implementation period 2015-2021).
- Presentation at the Basin Committee meeting on 16 March 2016 of the final version of the Flood Risk Management Plan and its endorsement, including the proposals for integrated projects;
- Distribution of the 2nd questionnaire to the members of the Someș-Tisa Basin Committee, as well as other involved parties (LRNA, Counties Environmental Protection Agency, County Directorates of Road and Bridge Administration);
- Posting on the Someș–Tisa WBA website of the Flood Risk Management Plan as well as other informative materials related to the flood risk management,
- Sending press releases to the local media regarding the activities performed at the level of Someș - Tisa WBA within FRMP.

### **Crișuri**

- FRMP was presented to the Crișuri Basin Committee at the public meeting on 25 June 2015;
- transmitting Newsletter no. 1 to the stakeholders;
- on June 25, 2015, a press release was sent to the local media announcing the Flood Risk Management Plan presented at the Crișuri basin committee meeting;
- Dissemination of the first questionnaire on the elaboration of the Flood Risk Management Plan of the Crișuri River Basin. Between September and October 2015, the Questionnaire was offered to fill out the parties involved either by e-mail, post or individual;
- a press release for local media was sent in September 2015, referring to the stage of the activities within FRMP;
- the Information Point was organized at the headquarters of Crișuri WBA within the Dispatch Center;
- 17. Dissemination of the second questionnaire on the elaboration of the Flood Risk Management Plan of the Crișuri River Basin. Between November and December 2015, the Questionnaire was offered to fill out the parties involved either by email, mail or individual;
- 18. on 7 December 2015, the members of the Crișuri Basin Committee were informed and consulted on the measures proposed to be reported to the European Commission for the implementation of the Flood Risk Management Plan;
- 19. Presentation at the Basin Committee meeting on 17 March 2016 of the final draft of the Flood Risk Management Plan and its endorsement, including the proposals for integrated projects; Posting on the Crișuri WBA website ([www.rowater.ro/dacrisuri](http://www.rowater.ro/dacrisuri)) of the Flood Risk Management Plan, as well as other informative materials within FRMP.

### **Mures**

- The presentation of the Flood Risk Management Plan, the Newsletter and the questionnaire on the elaboration of the flood risk management plan for the Mureş River Basin were sent to the involved parties in the public sessions organized by:
  - Institution of the Prefect of Harghita County (September 1, 2015),
  - Institution of the Prefect of Alba County (November 16, 2015),
  - Institution of the County Prefect of Sibiu (September 24, 2015),
  - The Mures Basin Committee on June 29, 2015,
- and by mail for dissemination by the Prefect Institutions to the Mayoralties of the Mures River basin in order to support the presentation of FRMP with the following points of debate:
- Description of the FRMP and the significance of the proposed measures to reduce the risk of flooding.
- The importance of involving all institutions with responsibilities in flood risk management for the development of this plan and, in particular, the identification of its own measures to reduce the flood risk;
- The request from WBA on the transmission of specific flood risk mitigation measures (measures in progress by local authorities (Forest Directorates, LRNA, County Councils, Agricultural Directions, GIES etc.) by all flood risk management institutions achieved or proposed, with implementation period 2016-2021);
- Posting on the Mureş WBA website of the Flood Risk Management Plan as well as other informative materials within FRMP, <http://www.rowater.ro/damures/EPRI/Planul%20de%20Management%20al%20riscului%20la%20Inundatii.aspx>;
- Dissemination of the questionnaire no. 2 regarding the draft of FRMP for Mures basin. The questionnaires were provided to fill in by the stakeholders within the Basin Committee.

### **Banat**

- Workshop on Flood Risk Management in 30 July 2015. The members of the working group for the development of FRMP participated. The topics discussed were:
  - Flood Risk Management Plan;
  - Flood risk management objectives;
  - Catalogue of potential measures at regional level;
- Dissemination of the first questionnaire on the elaboration of the Banat River Basin FRMP and the dissemination of the Newsletter no. 1 to the entire working group established at the level of Banat area. The questionnaire and the newsletter were offered to the stakeholders on 31 July 2015 by email. For members who did not participate in the workshop, a list of measures to be taken in case of floods was also sent, with the request for consultation and, if necessary, other proposals.
- Presentation at the Basin Committee meeting held on 3 July 2015 of the Flood Risk Management Plan.



- A special section was made on the Banat WBA website where useful information about FRMP draft was posted: <http://www.rowater.ro/dabanat/EPRI/Planul%20de%20Management%20al%20riscului%20la%20Inundatii.aspx> and other informative materials within FRMP;
- on October 3, 2015, Banat WBA participated in the exhibition "Public Services Day", organized by Timisoara City Hall. Banat WBA personalized the pavilion with informative and promotional materials of the institution's specific activities, including the "Involve! To reduce the negative consequences of floods".
- on October 13, 2015, the press release "Developing the Flood Risk Management Plan for all identified areas with significant flood risk" was sent to the local media;
- presentation at the Basin Committee meeting on 16 March 2016 of the final version of the Flood Risk Management Plan

**Actions at local and county level (at the level of counties, communes, villages that may be at risk and may be affected by the negative effects of floods):**

- In the framework of the Action for verifying the technical and functional state of the hydraulic structures with flood defence role, on the inland and Danube river, regardless of the owner (1 September-27 November 2015), they were randomly verified at the level of County Councils, Prefectures and Town Halls to know their responsibilities in the field of flood risk management. At the same time the stage of the integration of flood risk maps into urban and spatial planning of county and local interest was checked.
- In the period March-April 2016, the annual Program for the verification of the way the water courses were sanitized and the ditches and gutters in the localities were established, for the securing of the sewage sections, checks at all flood risk municipalities/localities;
- an exercise was organized to verify the functioning of the meteorological and hydrological information flow, alarming the population, how to cooperate with all the structures involved in the management of the flood emergency situations, how the local public administration knows the procedures developed for flood risk management, by simulating a flood on the Barcău River in Sălaj and Bihor counties, in June 17-18, 2015, in June 22-26, 2015 in Alba County - localities: Cîmpeni, Bistra and Lupșa and in Arad County in localities : Bârzava, Lipova and Păuliș and also by simulating a flood on the Bârzava river, in Timiș and Caraș-Severin counties, in 08-12 June 2015;
- On 30 October 2015 a number of 100 leaflets were disseminated at the Agricultural College no. 1 in Valea lui Mihai locality in Bihor county;
- On 10 November 2015, Crișuri WBA presented the leaflet also in Arad County on the occasion of the workshop related to the "Groseni Valley Improvement" project;
- Between November 25 and 26, Crișuri WBA presented the leaflet on the occasion of the workshops related to the "Cosmo Valley Fountain (Fâneța Mare)" and "Pasteur Valley Improvement" projects;
- During October-November 2015, flyers were disseminated within the public events to stakeholders as well as to the general public;

- On February 2, 2016, on the occasion of the Day of the Wetlands, 100 flyers were disseminated at Beiuș town Children's Club;

All the aforementioned activities were based on a series of working meetings devoted to the elaboration of the FRMP, with the participation of the National Working Group consisting of specialists: 11 WBA and RWNA (with the participation of the specialized departments Emergency Situations, Hydraulic Structures Operations, Investments-Developments) and NIHWM (having the role of methodological coordination).

The results of the dissemination of information on the implementation stage of FRMP, questionnaire analysis and newsletter, the responses received from the stakeholders/institutions involved can be found at the following addresses:

- <http://www.rowater.ro/dasomes/Plan%20de%20Management%20al%20Riscului%20la%20Inundatii/Plan%20de%20Management%20al%20Riscului%20la%20Inundatii.aspx>
- <http://www.rowater.ro/dacrisuri/EPRI/3.%20Planul%20de%20Management%20al%20Riscului%20la%20Inundatii.aspx>
- <http://www.rowater.ro/damures/EPRI/Planul%20de%20Management%20al%20Riscului%20la%20Inundatii.aspx>
- <http://www.rowater.ro/dabanat/EPRI/Planul%20de%20Management%20al%20Riscului%20la%20Inundatii.aspx>.

## **Serbia approaches regarding Flood risk and Shared Vision Planning (SVP) method in stakeholder involvement**

### **1. Preparation of the draft for Flood Risk Management Plans**

Serbia is no EU member state but in this regard a Draft of Flood Risk Management Plan for the territory Republic of Serbia (2017) has been done. The proposed measures from this Plan and their prioritization in Republic of Serbia is based on judgement of expert and institutions responsible for flood risk management. The coordinating in Serbia authorities are Ministry of Agriculture, Forestry and Water Management - Water Directorate and Public Water Management Companies (PWMC) “Srbijavode” and “Vode Vojvodine”, for Tisza River Basin: PWMC “Vode Vojvodine”

In Serbia the legislation in charge is the Water Law (Official Gazette of the Republic of Serbia, nos. 30/2010, 93/2012, 101/2016, 95/2018).

## **Shared Vision Planning (SVP) method in stakeholder involvement**

### **Generalities**

Shared Vision Planning developed by the United States Corps of Engineers in the early '90 is a disciplined planning approach that incorporates traditional water resources planning

methodologies, structured public participation using collaborative modeling in the creation of an integrated decision support tool.

## The concept of Shared Vision Planning

Shared Vision Planning (SVP) is designed to address complexity, manage conflict, promote learning and understanding, and build relationships between stakeholders.

These characteristics of SVP increase the chances for facilitating constructive dialogue among stakeholders and reaching agreements on workable solutions.

SVP combines collaboration and technical analysis with traditional planning principles. While each of these elements is broadly familiar to most Corps practitioners, what is unique about SVP is how technical expertise and analysis is integrated into a collaborative planning process. The traditional planning process is organized around an analytical (decision support) computer model of the water resource system constructed with the participation of stakeholders.

This collaboratively-built model is designed to support stakeholder dialogue with joint learning and discovery about both the water resource system and the perspectives and objectives of all stakeholders. This kind of dialogue increases the chance that mutually acceptable solutions will be developed.

### The pillars of Shared Vision Planning

There are three pillars that support Shared Vision Planning method: traditional water resources planning, structured public participation, and an integrated computer model.

Contrasting with Multi-Criteria Decision Analysis which focuses on the evaluation of alternatives, SVP places more emphasis on the process of generating mutually-agreed objectives and alternatives that reflect stakeholders interests and needs. As a result, alternatives may be formulated coming from outside, but that may meet the study objectives and needs. Public participation has become common in water management, but authority and contributions are typically limited to comments on plans developed by a limited number of experts from the water field. In contrast, SVP processes seek active participation by representative stakeholders who contribute throughout the entire process from developing objectives and gathering data to evaluating alternatives.

In Shared Vision Planning method, the model supports the whole collaborative planning process by incorporating the stakeholder perspectives, providing a common focus and language for discussion, revealing linkages and assumptions and encouraging cooperation to identify mutually-agreed solutions. These services, combined with the fact that the participants interact with the model directly throughout the process, require a model that is more integrated, transparent, user-friendly, and flexible than a conventional model.

#### Pillar I: Traditional Water Resources Planning

The planning steps for Shared Vision Planning are closely related to the steps in the traditional planning process. SVP introduces is the support on formal stakeholder involvement throughout the planning process.

#### Pillar II: Structured Public Participation

SVP involves stakeholders from the beginning and often during both the planning and the technical analysis. Rather than involving the entire public through open forums, SVP uses so

called Circles of Influence to engage different stakeholders in varied formats and levels of intensity.

Because not everyone is equally motivated or available to participate, Circles of Influence helps to make the most efficient use of stakeholders' time. Four primary roles participants can play: model builders, model users and validators, all interested parties and decision makers. Members of model users and validators, all interested parties provide information to support development of the model (communicating to model builders). The model tracks and organizes this information, enabling all parties (particularly model users and validators and all interested parties) to understand the system more clearly. The Circle of Influence structure allows and encourages open communication throughout the engagement process. This openness helps to develop trust among the different parties and to foster respect for each other interests and values.

Stakeholders may participate in all stages of the study. In this respect, they may contribute by:

- identifying metrics and objectives that can be used to evaluate the state of the problem and measure responses to interventions;
- identifying data and developing methods (models) that predict the impacts of different alternatives;
- formulating and modifying alternatives;
- debating the relative merits of available alternatives and perhaps selecting between competing alternatives.

### **Pillar III: An Integrated Computer Model**

The central focus of a Shared Vision Planning process is on the development and use of a computer model of the study area's water resources system. The model describes basic cause and effect relationships between different elements in the system in order to provide a description of what the future might look like under different alternatives. A unique feature of the shared vision model is that it is collaboratively constructed by technical analysts and stakeholder groups. The computer model is designed to produce information on outcomes that are identified by stakeholders themselves. Stakeholders support development of the model by collecting data, formulating causal relationships, and reviewing and verifying the model. The computer model allows users to develop and explore alternatives. Throughout development, the model becomes a common way for stakeholders to develop a shared understanding of the water resource system and to debate alternatives.

In order to promote and support collaborative planning, a model used in Shared Vision Planning has four key issues.

1. **Integrated.** A Shared Vision Planning model will integrate all issues relevant to the decision and describes the relationships between water management decisions and environmental, economic and social impacts of stakeholders and decision-makers.
2. **Transparency.** A Shared Vision Planning model should be transparent respecting the input data, assumptions and the way outputs are produced. Transparency allows stakeholders to understand the causal relationships in the system. The SVP model allows stakeholders to understand, visualize, and verify information and relationships.

3. **Ease of use.** Shared Vision Planning highlights opportunities for stakeholders to engage in the technical analysis. This is made easier by designing models that can be used by people who are not professional modelers and should include interactive features so that stakeholders can play and test their own ideas.
4. **Flexibility.** Shared Vision Planning can be readily modified in order to address new questions and ideas emerging throughout the process.

## Lessons learned

As a general overview, the classic methods of informing and involving the public and stakeholders in the process of flood risk management plans in the countries of the Tisza River Basin have been used with more or less success.

Probably also due to the communist past, which has somehow modeled thinking and action, there is a tendency to involve the general public not from the beginning of the preparation of the plans, the setting of the objectives and even the prioritization of the measures.

The general steps have been pursued with regard to the type of communication activities and the tools through which communication is made during the public consultation.

These are: information points (organized at the premises of the responsible authorities disseminated in the framework of some punctual events such as: World Water Day, International Danube Day, on occasion of exhibition events or in meetings with stakeholders), scientific presentations at the level of the university environment as support in the interest of a significant part of the stakeholders, such as the technical ones, communication in the media in the form of information and public awareness campaigns or by articles published in the media and interviews, online communication in the form of questionnaires and newsletters, workshops and/or roundtables organized in the form of expert meetings and brainstorming where there is the possibility of collecting opinions and centralizing them and public debates.

In developing future flood risk management plans, greater and more substantial involvement of the public and stakeholders would be desirable by finding new methods of stakeholder involvement and motivation for participation even from the start of the process.

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