Best practices and case studies on climate risk reduction in river corridors, including innovative solutions of wide governance

Overall Report including all the relevant BPs selected (D.T1.2.1)

Responsible partner PP7

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INTRODUCTION

SMARTRIVER Interreg V-B ADRION 2014-2020 E.U. project aims to create flood response practices for the benefit of local areas and communities. The main objective is to insert the Flood Risk Reduction Plan within the common framework of the River Contracts, setting up shared methodologies, structured knowledge exchange and capacity building actions, thus promoting a transnational governance model for reduce the impact of climate change in the Adriatic-Ionian Macro region.

SMARTRIVER project involves six (6) watersheds affected by climate change (Creating smart governance for the management of Misa, Glafkos and Charadros, Neretva, Drava, Vjosa, Bosna) and is based on three major territorial challenges:

- increase climate adaptation capacity in riparian communities.

- creating an intelligent governance model, by strengthening the capacity of local authorities to tackle climate change effectively in river basins;

- strengthening the active involvement of local communities in the design of risk reduction strategies

The project is working within the following four work packages:

T1 - Designing a transnational commonapproach for flooding and risk reduction strategies

T2 - Implementing River Contracts throughout a community based approach

T3 - Adriatic Ionian SMARTRIVER Platform and Strategy

C - Communication

In each of these work packages all partner regions have gathered best practices (Evidence of success, Challenges encountered, Potential for learning or transfer) and described these in a common template. The intention is to make smart combinations of existing best practices in order to create new tools and methods, which will be tested in partner regions.

On behalf of the implementation of WP T1 “Designing a transnational common approach for flooding and risk reduction strategies” containing the Activity T1.2 “Collection and assessment of bestpractices and case studies” coordinated by PP7 (Municipality of Patras).

The activity aims at collecting best practices and case studies on climate risk reduction in river corridors, including innovative solutions of wide governance to be assessed and compared within the partnership. PPs analyzed and collect information from scientific and/or grey literature, pilot projects, technical and policy report, etc. The research focus on Adriatic and Mediterranean area (as first level of analysis) and on EU and International experiences (as second level). A Report on best practices and case studies is drafted and printed in EN. Best Practices collected are also uploaded in an online data base available for all users throughout the project web page and the DGT Platform, thus ensuring a double level of dissemination (on line and paper). The activity is coordinated by PP7 with the cooperation of all PPs by mean of the S&T Board. Each PP region contributes with at least n. 5 Best Practices and Case Studies to analyze and share, for a total of 30 experiences collected.

PPs, with the contribution of the SMARTRIVER Local LABs representatives collect and analyze information from scientific and/or grey literature, pilot projects, technical and policy report with the aim to select at least n. 5 best practices and case studies to analyze and share, for a total of n. 30 experiences to be shared within the partnership. All the selected best practices and case studies are included in a Best Practices and Case Studies Report. The report includes experiences developed within the Adriatic-Ionian and Mediterranean area (first level of analysis) and on EU and International experiences (as second level). Best practices regard pilot projects on climate risk reduction in river corridors, including innovative solutions of wide governance, soft adaptation measures, community based approaches, natural based solutions, examples of good practices of synergic and cross-sectoral solutions (water management, flood management, nature protection management, hydropower management, local development). The report is drafted by PP7 in English within M5.

Results from the implementation of Activity T1.2 will be included in a database that will be generated through Activity T1.2.2 “Online Data base on best practices and case studies selected”

The specific activity refers to the development of an online Data Base (EN language) including all the best practices and case studies selected bythe partnership. The DB should be available on SMARTRIVER web page and within the DGT Platform for further consultation at local, regional, national and EU level. In total 22 best practices have been described. According to Activity T1.2, Partners have collected best practices and case studies on climate risk reduction in river corridors, including innovative solutions of wide governance.

Selection criteria for Best Practices

1. Availability of results (meaning: initiatives already completed / at an advanced stage, which show concrete results – both qualitative and quantitative – on the level of skills and knowledge needed for implementation in any case.

2. Transferability (meaning: tools with potential to be replicated in another geographical area, available in English)

3. Level of Innovation (meaning: new in the context of methodological and technological elements).

4. Long-term durability (meaning : financial sustainability and repeatability).

DESCRIPTION OF GOOD PRACTICES

The description of good practices was made in a common collection template by all partners.

a) Author contact information
b) Organisation in charge of the good practice
c) Good practice general information
d) Good practice detailed information

Good Practice common template

1. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	
Email:	
Telephone:	
Your organisation	
Country:	
Region:	
City:	*City in English*
Organisation name:	

2. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes or no*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	
	Region	
	City	
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*Yes or no*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

3. Good practice general information		
Title of Best Practice :		
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	
	Region	
	City	
	River/Basin	

Practice image:	
Title of practice:	

4. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?*
Timescale (start/end date):	*e.g. June 2021 – May 2022/ongoing*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.*
Further information:	*Link to where further information on the good practice can be found*

CHALLENGES ENCOUNTERED

Raising public awareness of the importance and conservation of floodplains. Education and awareness raising in the agricultural sector is also required to adapt agricultural methods to flooded areas in order to reduce economic losses. They require significant coordination between all stakeholders in the area and users.

Total Best Practices submitted by the partners

Albania	One (1) best practice
Bosnia	Four (4) best practices
Croatia	Five (5) best practices
Greece	Five (5) best practices
Italy	Three (3) best practices
Slovenia	Four (4) best practices

Categorize good practices according to their purpose in four categories

Aim	Number of best practices	Countries (Partners)
Prevention	**Six (6)**	1 Bosnia 2 Italia
		2 Croatia
		1 Greece
		2 Italia
Infrastructure	**Eight (8)**	1 Bosnia
		1 Croatia
		2 Greece
		4 Slovenia
Digital Background - Data	**Five (5)**	2 Croatia
		2 Greece
		1 Italy
Flood Management	**Three (3)**	1 Albania
		2 Bosnia

Among the good practices is one that refers to a Natura 2000 site

Country	Title of Best Practice	River	Aim
Croatia	”DRAVA LIFE – Integrated River ManageMent”	Drava	Prevention

Annex : List of collected Best Practices

ALBANIA

5. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Robert Murataj***
Email:	*changealbania@gmail.com*
Telephone:	*+355 69277632*
Your organisation	
Country:	*Albania*
Region:	*Vlore*
City:	*Vlore*
Organisation name:	***Change – Regional Development Agency***

6. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	
	Region	
	City	
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

7. Good practice general information		
Title of Best Practice :	*Testing the community reaction in case of flooding caused by Vjosa River*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Albania*
	Region	*Vlore*
	City	*Vlore, Selenice, Orikum.*
	River/Basin	*Vjosa*

Practice image:	
Title of practice:	*Disaster Risk Reduction from natural and industrial catastrophes in Vlore Region*

8. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* *As some 11 villages laid at both sides of Vjosa rivers were flooded for three years in row (2014 – 2016), after the coordination with local authority, an evacuation plan and quick reaction was drawn once the level of water of Vjosa river begin to rise. The reaction of community in the practice simulation done in September 2017 with 3,000 inhabitants of the area resulted successful thanks to good coordination of all local stakeholders and government units.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* *During the realization of the project: "Disaster Risk Reduction from natural and industrial catastrophes in Vlore Region" implemented by Change – RDA, with the financial assistance of OSCE, there was organized a simulation of the efficiency of reaction from community living alongside the Vjosa River. There have been always problems in reaction of the community and the response of the local government units once the water level of Vjosa river rises, especially due to the heavy rain in winter time. Many resident living alongside Vjosa River, do underestimate the danger of flooding and wait until last minute to leave their houses. As a result the life of citizens is put on danger and it's very difficult for authorities to response to every persons' call during the rush hours.* - *How does the practice reach its objectives and how it is implemented?* *Our NGO did draw a detailed plan of reaction in cooperation with local authorities, starting with mapping of the zone affected by the floods, estimated the number of persons that are most in danger during floods, making a list of chairs of each villages, determine the high places in the area for gathering people during floods, make a list of all boast owners in the area, vehicles and large public building that can be used as shelter during the flooding times. After that a simulation was realized for the accuracy of reaction of community and the coordinating of the plan with local authority, that resulted very good.* - *Who are the main stakeholders and beneficiaries of the practice?* *The main stakeholders of the practice were; Vlora Prefecture, Vlora Region, Vlora Municipality, Selenice Municipality, Health Department, Fire department, Transport Department, Counsel of Vlora and Selenica, Administrative Unit personnel and chairs of the villages.* *The main beneficiaries were the residents of 11 villages from Vlora and Selenica Municipalities, living alongside the Vjosa River and affected by the floods.*
Timescale (start/end date):	*September 2017 – October 2017*

Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* • *This practice may be considered successful, because during the last two years 2020 and 2019, immediately after the simulation of the evacuation of community was made, the plan for evacuating the people from the danger zones that were in risk of flood was working very good. The evacuation was very successful, people reacted on time and there was no casualties in people or livestock.* • *Some 2,300 people were safely evacuated due to the well functioning of the plan under the lead of Vlore Prefecture, cooperating with our NGO for increasing the public awareness of community during autumn of 2019 and 2020.*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* • *One lesson learned it's that during the realization of every project, it's crucial to have cooperation with local authorities and implement in grassroots the public awareness, working with people that know the territory, have good reputation and are friendly with community.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* *This practice can be considered as good one, because it did have results in practice, did save human lives and livestock, such practice can be used in other areas for saving time and energy, as well as reducing damages from disasters.*
Further information:	*Link to where further information on the good practice can be found* *https://www.change-albania.org/sq/reduktimin-e-rreziqeve-nga-katastrofat-natyrore-dhe-industriale*

BOSNIA AND HERZEGOVINA

9. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Belma Pašić***
Email:	*belma@serda.ba*
Telephone:	*+387 33 652 935*
Your organisation	
Country:	*Bosnia and Herzegovina*
Region:	*Sarajevo Macro Region (SMR)*
City:	*Sarajevo*
Organisation name:	*Sarajevo Economic region Development Agency SERDA*

10. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	
	Region	
	City	
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*Yes*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*SEERISK*

11. Good practice general information		
Title of Best Practice :	*SEERISK 2014.Guideline on climate change adaptation and risk assessment in the Danube Macro-region*	
Geographical scope of the practice:	*Local*	
Location of the practice	Country	*Bosnia and Herzegovina*
	Region	*Canton of Sarajevo*
	City	*Sarajevo*
	River/Basin	*River Bosna and river Željeznica (tributary of River Bosna)*

Practice image:	
Title of practice:	*Assessing and mapping flood risk in Sarajevo – Ilidža, Bosnia and Herzegovina*

12. Good practice detailed information	
Short summary of the practice:	*The Guideline aims to enhance preparedness and disaster management response capability, as well as provide applicable mitigation climate change adaptation actions.*

Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* *The Guideline on Climate Change Adaptation and Risk Assessment are designed to assist disaster risk management practitioners and decision makers in taking appropriate risk assessment and climate change adaptation measures and actions.* *The overall objective of Guideline is to assess and reduce risks from climate change related natural hazards to human life, welfare and environment in the Danube macro – region.* *The specific objective is to develop and propose a unified approach to risk assessment, shared principles and strategies on climate change adaptation. This included: 1. Carrying out the process of risk assessment by developing a common risk assessment methodology; 2. Explaining how the common risk assessment methodology can be put into practice via the results in six case study areas; 3. Revealing gaps between the challenges imposed by the natural hazards related to climate change and the level of overall preparedness of the society; 4. Suggesting possible adaptation solutions to the challenges imposed by the changing climatic conditions; 5. Raising people's awareness of climate change and enhancing overall local-level disaster management preparedness.*
Timescale (start/end date):	*July 2012 – December 2014*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* *The project developed the concept of the local risk assessment which combines identification and analysis of risks posed by climate change related hazards with analysis of the perception the society and institutions have of these risks and their preparedness for them. In this way the natural/ climatic and social aspects of disaster risk assessment became part of the same platform. The Guideline provided execution of the risk assessment at pilot areas, in BiH, namely pilot area included Sarajevo – Ilidža. It included hazard type, risk matrix (intensity of floods and the vulnerability of the different building types), risk scenario and risk mapping.* *Achievements:* *• Common risk assessment methodology for the Danube Macro-region • Guideline for climate change adaptation and risk assessment in the Danube Macro-region • Hazard, impact and risk maps for drought and drought-related wildfire - Kanjiža (RS) • Hazard, impact and risk maps for extreme wind - Siófok (HU) • Hazard, impact and risk maps for flood - Senica (SK) • Hazard, impact and risk maps for floods - Sarajevo-Ilidža (BiH) • Hazard, impact and risk maps for heat wave - Arad (RO) • Hazard, impact and risk maps for wildfire - Velingrad (BG) • Template for developing risk matrices • Template for developing risk scenarios.*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* *The Guideline include Gap analysis: comparison between risk assessment and risk perception of local community for each pilot area, and it determined proper, sufficient, tolerable, insufficient and zero level of preparedness and identified the actions already taken and the efficiency of those actions amongst local inhabitants per age group. Based on that the identified gaps have been assigned the appropriate level of priority and the possible solutions proposed by each pilot area, based on a discussion with the local stakeholders. The various challenges revealed by the gap analysis have to be met with sensible responses that can later be translated into disaster prevention measures. Based on discussion with local stakeholders, data gathered and analysis Policy recommendation for effective adaptation for climate change were drafted for future use.*
Further information:	*Link to where further information on the good practice can be found* *https://keep.eu/projects/5945/Joint-Disaster-Management-ri-EN/*

13. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Belma Pašić***
Email:	*belma@serda.ba*
Telephone:	*+387 33 652 935*
Your organisation	
Country:	*Bosnia and Herzegovina*
Region:	*Sarajevo Macro Region (SMR)*
City:	*Sarajevo*
Organisation name:	*Sarajevo Economic region Development Agency SERDA*

14. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:		
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*Yes*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*RESCOMM*

15. Good practice general information		
Title of Best Practice :	*RESCOMM - RESilient COMMunities*	
Geographical scope of the practice:	*Local*	
Location of the practice	Country	*Bosnia and Herzegovina*

	Region	*Canton of Sarajevo*
	City	*Sarajevo*
	River/Basin	*River Bosna and river Željeznica (tributary of River Bosna)*

Practice image:	
Title of practice:	*Strengthen prevention, preparedness and response capacities of emergency services to deal with climate change disasters*

16. Good practice detailed information	
Short summary of the practice:	*The project aims for improving knowledge and skills of emergency service representatives, equipping less developed emergency services, creating joint documents and tools and raising public awareness, which will all have positive effects on improvement of risk prevention and management as well as climate change mitigation in the cross-border area BiH-Montenegro.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* *The level of knowledge and capacities of emergency services in both Montenegro and Bosnia and Herzegovina is still not on a sufficient level, which represents a big problem in the protection and rescue system, since their ability to act and respond appropriately in cases of an emergency is not at the optimal level. Continuous strengthening of these services through education in line with EU requirements and standards as well providing them with adequate equipment is necessary. Additionally, a lack of awareness, readiness and mechanisms for territorial cooperation and planning are still a common challenge in the cross-border region in both countries. Project partners are organizations in the protection and rescue system that carry out operational functions within their jurisdiction such as preparation, training and raising skills, as well management of protection and rescue operations. Cross-border territory is at extreme risk of fire, floods and earthquakes, as many of these hazards occur several times a year. It is in the interest of all partners to strengthen prevention and protection mechanisms and services, and to strengthen capacities in services directly related to prevention measures and activities. Project partners have recognized the need to strengthen their abilities and skills, enlarge existing rescue teams with capacitated members, increase visibility of their purpose and activities, as well as the need to improve communication between different institutional levels when acting in natural and other disasters.*
Timescale (start/end date):	*November 2021 – ongoing (November 2023)*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* *The Overall objective of the Project is: Contribution to improvement of risk prevention and management and climate changes mitigation and adaptation in cross border area of Montenegro and Bosnia and Herzegovina, and it will be achieved through achieving Specific objective which is to strengthen prevention, preparedness and response capacities of emergency services to deal with climate change disasters. Specific objective will be achieved through accomplishing 4 planned results: Result 1 Improved knowledge and skills of local and regional emergency and rescue services; Result 2 Local and regional emergency and rescue services technically capacitated; Result 3 Joint tools developed and Result 4 Public awareness raised.*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice)*

	as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided. *In the face of climate change and sudden unpredictable weather changes, the work on capacity building, higher preparedness and creating new teams needs to be even more intensified as BiH and Montenegro still lag behind EU countries. Cooperation between Montenegro and Bosnia and Herzegovina rescue services and relevant bodies and organizations regarding this issue should be more concrete, synchronized, with a common agenda and constant transfer of knowledge among them in order to improve the wellbeing of the population.*
Further information:	*Link to where further information on the good practice can be found* *n/a*

17. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Belma Pašić***
Email:	*belma@serda.ba*
Telephone:	*+387 33 652 935*
Your organisation	
Country:	*Bosnia and Herzegovina*
Region:	*Sarajevo Macro Region (SMR)*
City:	*Sarajevo*
Organisation name:	*Sarajevo Economic region Development Agency SERDA*

18. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:		
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*Yes*

If you are involved in more than one project, please choose the project for which you are submitting this good practice.

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*SOLICRIS*

19. Good practice general information		
Title of Best Practice:	*Solidarity and citizens involvement network for crisis prevention and management of municipalities and regions in a volatile and dynamic Europe - SOLICRIS*	
Geographical scope of the practice:	*Regional*	
Location of the practice	Country	*Bosnia and Herzegovina*
	Region	*Sarajevo Macro Region*
	City	*Sarajevo*
	River/Basin	-

Practice image:	
Title of practice:	*Strengthen prevention, preparedness and response capacities of emergency services to deal with climate change disasters*

20. Good practice detailed information	
Short summary of the practice:	*The SOLICRIS project was aiming at the development of a network between municipalities, regional authorities, civil society organisations and citizens for the development of solidarity in crisis times. Based on an in depth discussion and analysis of 7 identified crisis sectors (natural desasters, security / terrorism, political crisis, economic crisis, social crisis, health crisis, international crisis forms), the project partners deducted and developed actions and plans for solidarity and management of crisis situations.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* *The recent years have clearly shown that crisis situations are supposed to appear more frequently, more severly, more unexpectedly, abruptly on manifold levels. Crisis situations may occur on levels like nature, climate, health but also on economic, political, social and public security level. Overall our times and lifes of people in whole Europe are becoming more volatile, instable, dynamic, influencable which creates huge challenges for the political responsible organisations on local, regional but also European level. This also puts a totally new challenge and focus to the whole sector and subject of crisis prevention and also crisis management where solidarity is in fact the key word for tackling different crisis situations. This challenges can be answered and tackled on micro = local level through solidarity between the political level, citizens and civil society as a whole. It can, however, also be approached on a makro level where solidarity, support and action on European level is the*

	key issue. Beyond this one issue appears also crucially relevant for prevention and especially management of crisis: volunteering. Only with the support and volunteer involvement of citizens, crisis management is possible. All partner countries in this network project have of course at least rudimentary strategies for crisis situations, however, reality shows that this is not always enough to tackle abrupt crisis situations. *The project implemented 7 discussion workshops with transnational actors from public, civil society and citizens level using the scenario technique to elaborate concrete crisis scenarios and plan prevention and management with broad international solidarity. The topic of volunteering and volunteer involvement of citizens as crucial element of crisis management were centrally touched. Good practises for broad citizens involvement in crisis management, especially through volunteering were presented and discussed. In a final conference the findings and results from the workshops were discussed and presented. Also concrete solidarity agreements between municipality and regions, civil society was established to formalise this solidarity approach. The SOLICRIS network wa sbuilt on an open and permanent enlargement basis, so that the network of crisis solidarity can grow over time and also remain active after the project has ended.*
Timescale (start/end date):	*February 2018 – February 2020*
Evidence of success (results achieved):	*The achievement of a strong and measurable multiplier effect in the sense of widening the network as well as transferring the whole project and SOLICRIS approach to other regions and/or countries was an important task in the project implementation.* *a) open network structure and culture: although the SOLICRIS network was composed by the partnership who are all focusing on the same tasks and aims, the network itself remains open for any organisation wanting to join the discussion and development of a solidarity network in times of crisis.* *b) broaded possible invitation of decision makers and civil society to events organised to achieve a widest possible effect* *c) alliance with and involvement of similar networks in all partner countries (e.g. Alps-Adriatic-Alliance)* *d) identification of one core thematic multiplier (political decision maker) for each of the 7 crisis topics with the aim to carry the topic and issue forward and act as an ambassador for the network project on European level and towards other European countries and/or regions.*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* *The whole SOLICRIS network was supposed to achieve considerable mid- and long-term impact in the sense of a better functioning and adequate solidarity in times of crisis. In front of this, the following mid- and long-term effects can be expected: a) strong solidarity network; b) mutual bi- and multilateral solidarity agreements; c) awareness raising on authority and citizens level; d) increase of volunteer contributions.* *To achieve the impact goals in the SOLICRIS project a broad and intense involvement of single citizens in the project activities was crucial:* *a) the role of citizens (especially in volunteering) in tackling crisis situations and solidarity were a core focus in each workshop about the 7 crisis levels discussed. It was important to emphasis the role and importance of each single citizen and their volunteer involvement.* *b) the civil society organisations should be the mediator between public authority and single citizen, they were be closely involved in all discussions, their roles and contributions on 7 crisis levels were discussed and defined and via this, also the involvement of single citizens* *c) in all events and also the final conference a direct and broad participation of citizens interested in the topics was foreseen* *d) via the social media campaign launched also citizens were reached and involved who are not directly participating in the project events.*
Further information:	*Link to where further information on the good practice can be found* *https://www.enter-network.eu/project/solicris/*

21. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Zdravko Barić***
Email:	*zdravko.baric@ilijas.ba*
Telephone:	*+387 33*
Your organisation	
Country:	*Bosnia and Herzegovina*
Region:	*Canton Sarajevo*
City:	*Sarajevo*
Organisation name:	*Municipality of Ilijaš*

22. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:		
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

23. Good practice general information		
Title of Best Practice:	*Improvement of the basin of the river Bosna in Ilijaš*	
Geographical scope of the practice:	*Local*	
Location of the practice	Country	*Bosnia and Herzegovina*

	Region	*Canton Sarajevo*
	City	*Sarajevo*
	River/Basin	*Bosna*

Practice image:	
Title of practice:	*Improvement of the basin of the river Bosna in Ilijaš*

24. Good practice detailed information	
Short summary of the practice:	*The aim of the implementation of this project is to protect buildings from floods and obtain additional space for various purposes for the municipality of Ilijaš*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* *The project was implemented in three phases, it began in 2018. Latest, the third phase of the improvement of the Bosna river basin in Ilijaš covered part of the upstream Gnionice, which is in the central part of the municipality. The goal was to protect residential buildings and the Sarajevo-Visoko regional road from flooding when high waters occur.* *The project was supported by the Sava River Watershed Agency Sarajevo which has so far invested 2.3 million KM in the regulation of the Bosna River in Ilijaš.*
Timescale (start/end date):	*2018 –*
Evidence of success (results achieved):	*Better protection of the households, prevention of the devastation of the riverbeds*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* *Good cooperation of the local government and other relevant institutions in investing in flood prevention and to avoid damages to the inhabitants households, regional and local roads.*
Further information:	*Link to where further information on the good practice can be found*

CROATIA

25. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Srećko Kukić***
Email:	*Srecko.kukic@gmail.com*
Telephone:	*+385 99 6666 800*
Your organisation	
Country:	*Croatia*
Region:	*Slavonia*
City:	*City in English*
Organisation name:	*City of Osijek*

26. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Croatia*
	Region	*Slavonia*
	City	*Osijek*
Main institution in charge:	*City of Osijek*	

Are you involved in an Interreg or other Europe project?	*Yes*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*REGIAMOBIL CE1658 Interreg central Europe* *BeePathNet-Reloaded, Ref. Synergy N°8221, programm Urbact III*

27. Good practice general information

Title of Best Practice :	*"DRAVA LIFE – Integrated River Management"*	
Geographical scope of the practice:	*Select National*	
Location of the practice	Country	*Croatia*
	Region	
	City	
	River/Basin	*Drava*

Practice image:	
Title of practice:	*"DRAVA LIFE – Integrated River Management"*

28. Good practice detailed information	
Short summary of the practice:	*The DRAVA LIFE project area covers a length of 310 km, and includes 4 Natura 2000 sites in an area of 67.800 hectares from Dubrava Križovljanska (rkm 322,8) to Osijek (rkm 15). Except for the part from Osijek to the confluence with the Danube (Kopački Rit Nature Park), the whole length of the Croatian Drava is included in the project.*
Detailed information on the practice:	*DRAVA LIFE specifically aims to:* • *increase the number of natural and dynamic riverine habitats and to better connect interdependent parts of the Drava's ecosystem. This will be done through river restoration measures such as re-connection and creation of new side-arms, removal of bank revetments/groins and preservation of dynamic steep river banks. The latter are extremely rare along the Drava, but they are essential for many species protected under Natura 2000;* • *preserve existing, and create new, water bodies and flooding areas within already existing floodplains. These actions will reconnect the river with its floodplains and improve the dynamics between groundwater and surface waters, as well as improve sediment dynamics and minimize the risk of floods in inhabited areas along the river;* • *reduce human disturbance of river birds, especially during the breeding season. During the project, a Visitor guidance plan and an Action plan for river birds will be developed and concrete visitor management measures and public awareness campaigns will be implemented to avoid negative impacts of uncontrolled human activities;* • *raise awareness and recognition of Natura 2000 sites along the Drava River;* • *improve cross-border cooperation along the Drava through transfer ofknow-how and best practices, as well as cooperation within the planned 5-country UNESCO Biosphere Reserve "Mura-Drava-Danube" (between Croatia, Austria, Hungary, Slovenia, Serbia);* • *strengthen the inter-sectoral river management where all relevant sectors (water management, nature conservation and civil society) participate in the decision-making processes.*
Timescale (start/end date):	*December 2015/ November 2020.*
Evidence of success (results achieved):	*The main actions within the project will be implemented on the following 7 locations along the Drava River:* *Otok Virje (312 – 314,3 rkm)* *Stara Drava Varaždin (289,3 – 292 rkm)* *Donja Dubrava – Legrad (240 – 241,45 rkm)* *Most Botovo (226,6 – 227,9 rkm)* *Novačka (214 – 217 rkm)* *Miholjački Martinci (104 – 106 rkm)*

	Podravska Moslavina (96 – 98 rkm).
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*During the implementation, partners will also set up educational centers and educational paths along the Drava River and in addition implement visitor guidance actions. Moreover, several exhibitions and extensive awareness raising activities will be organized in cooperation with local citizens and schools.*
Further information:	*https://www.drava-life.hr/en/home/*

1. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Srećko Kukić***
Email:	*Srecko.kukic@gmail.com*
Telephone:	*+385 99 6666 800*
Your organisation	
Country:	*Croatia*
Region:	*Slavonia*
City:	*City in English*
Organisation name:	*City of Osijek*

2. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Croatia*
	Region	*Slavonia*
	City	*Osijek*
Main institution in charge:	*City of Osijek*	

Are you involved in an Interreg or other Europe project?	*Yes*

If you are involved in more than one project, please choose the project for which you are submitting this good practice.

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*REGIAMOBIL CE1658 Interreg central Europe* *BeePathNet-Reloaded, Ref. Synergy N^{o}8221, programm Urbact III*

3. Good practice general information		
Title of Best Practice :	*" Flood Prevention Project"*	
Geographical scope of the practice:	*Select National*	
Location of the practice	Country	*Croatia*
	Region	
	City	
	River/Basin	

Practice image:	
Title of practice:	*Flood Prevention Project in Croatia*

4. Good practice detailed information	
Short summary of the practice:	*„Flood Prevention Project" was implemented as part of the program of cooperation between the Council of Europe Development Bank and the Republic of Croatia.*
Detailed information on the practice:	*''Flood Prevention Project" included investments through which the existing flood protection system was improved, rehabilitated, completed and developed in order to achieve a high level of protection of target civilian population in priority river basins in Croatia, thus reducing flood occurrence and its adverse social and economic impacts.* *The Ministry of Environment and Energy was in charge of the Project in question (Project Promotor), whereas Hrvatske vode (Project Implementing Entity) were in charge of project implementation, with a special Project Implementation Unit set up within Hrvatske vode. The implementation of the Project in total value of approx. 80 million EUR is co-financed through the Council of Europe Development Bank (CEB) loan LD 1845-2014 in the value of approx. u 40 million EUR (50%), and through resources provided by Hrvatske vode (income based on the collection of water contributions and water regulation fee) in the amount of 40 million EUR (50%).*
Timescale (start/end date):	*31 December 2018/30 June 2019..*
Evidence of success (results	*This Project is a part of a larger Multi-Annual Programme of Constructing Water Regulation and Protection Facilities and Amelioration Facilities adopted by the Government of the Republic of*

achieved):	*Croatia in 2015 (hereinafter: the Program), as well as River Basin Management Plan of the Republic of Croatia which contains Flood Risk Management Plan for the period 2016 – 2021, which was adopted by the Government of the Republic of Croatia in July 2016. The program containing structural measures for flood risk management in the Flood Risk Management Plan is based on projects in the Program, with possible changes due to more detailed studies of flood risk management in river basins and feasibility studies. The Project will contribute to the implementation of the Program and the Flood Risk Management Plan and its overall long-term objective of reducing flood risks throughout Croatia to an acceptable level.* *The Project consisted of two components:* • *Component 1: construction of selected projects from the Program (sub-projects) from the Tentative list of 25 Sub-projects listed in Annex I to Appendix 1 of the Framework Loan Agreement, in total investment value of 74,347,888 EUR, including designing and supervision.* • *Component 2: technical assistance (5,652,112 EUR, about 7% of total project value). This component would be used to finance the development of river basin studies for priority systems, development of flood forecasting system and support to Project Implementation Unit.*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*Cooperation with different financial institutions.*
Further information:	*https://www.voda.hr/en/ceb/flood-prevention-project-funding*

1. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Srećko Kukić***
Email:	*Srecko.kukic@gmail.com*
Telephone:	*+385 99 6666 800*
Your organisation	
Country:	*Croatia*
Region:	*Slavonia*
City:	*City in English*
Organisation name:	*City of Osijek*

2. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Croatia*
	Region	*Slavonia*
	City	*Osijek*
Main institution in charge:	*City of Osijek*	

Are you involved in an Interreg or other Europe project?	*Yes*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*REGIAMOBIL CE1658 Interreg central Europe* *BeePathNet-Reloaded, Ref. Synergy N°8221, programm Urbact III*

3. Good practice general information		
Title of Best Practice :	*VEPAR project*	
Geographical scope of the practice:	*Select National*	
Location of the practice	Country	*Croatia*
	Region	
	City	
	River/Basin	

Practice image:	
Title of practice:	*VEPAR project - - Improvement of Non-Structural Measures of Flood Risk Management in the Republic of Croatia*

4. Good practice detailed information	
Short summary of the practice:	*In order to prevent catastrophic flood events, a project to improve non-structural flood risk management measures in the Republic of Croatia was conceived, which will improve Water and Environmental Monitoring, Analysis and Solutions. The project implementation will contribute to reducing the risk of floods; improvements will be made in monitoring, analyzing and finding optimal solutions for integrated and sustainable management of water, the aquatic environment and flood risks; missing data related to catchments, watercourses and regulatory and protective water structures will be provided and systematized; the network of hydrological measuring stations will be modernized and upgraded; flood forecasting mathematical models will be developed and improved; flood risk management studies; the necessary equipment for the implementation of flood equipment measures will be procured, promotion and visibility measures will be implemented, and the public will be educated and informed about flood risks.*

Detailed information on the practice:	*The subsidy contract for the Vepar project was signed on September 6, 2019. The beneficiary of the grant is Hrvatske vode, and the project partner is the State Hydrometeorological Institute. The planned duration of the project is 4 years and the total value of eligible costs is HRK 250 million; 85% will be financed by the European Regional Development Fund, and 15% will be financed by Hrvatske vode and the State Hydrometeorological Institute. The project is implemented within the Operational Program Competitiveness and Cohesion 2014-2020.* *The targeted result of this project is flood risk reduction in the Republic of Croatia, with other positive results related to the improvement in monitoring, analyses and finding optimal solutions for the integral and sustainable management of water, the aquatic environment and flood risks in the Republic of Croatia.* *Project activities include several subprojects:* • *Subproject A - Collection and analysis of data for flood risk management* • *Subproject B - Improvement of study and model bases for flood risk management* • *Subproject C - Improvement of the flood forecasting system* • *Subproject D - Improvement of the Surface Water Hydrological Monitoring System* • *Subproject E - Improvement of the Monitoring System for Regulatory and Protective Water Structures (RaPWS)* • *Subproject F - Flood defence equipment* • *Subproject G - Improving the system for informing the public and educating stakeholders* • *Subproject H - Improvement of flood risk management centres* • *Subproject I - Analysis of all Phase 1 activities carried out and preparation of work program for the next Program's phase*
Timescale (start/end date):	*6 September 2019 – 5 September 2023*
Evidence of success (results achieved):	*:*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*Using of SMART technologies in the flood preventions..*
Further information:	*https://meteo.hr/istrazivanje_e.php?section=projekti&param=projekti_all&el=VEPAR_e*

1. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Srećko Kukić***
Email:	*Srecko.kukic@gmail.com*
Telephone:	*+385 99 6666 800*
Your organisation	
Country:	*Croatia*
Region:	*Slavonia*
City:	*City in English*
Organisation name:	*City of Osijek*

2. Organisation in charge of the good practice

[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Croatia*
	Region	*Slavonia*
	City	*Osijek*
Main institution in charge:	*City of Osijek*	

Are you involved in an Interreg or other Europe project?	*Yes*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*REGIAMOBIL CE1658 Interreg central Europe* *BeePathNet-Reloaded, Ref. Synergy N°8221, programm Urbact III*	
3. Good practice general information		
Title of Best Practice :	*IGEA: flood risk management platform*	
Geographical scope of the practice:	*Select National*	
Location of the practice	Country	*Croatia*
	Region	
	City	
	River/Basin	

Practice image:	IGEA in2 GRUPA
Title of practice:	*IGEA: flood risk management platform*

4. Good practice detailed information	
Short summary of the practice:	*This project established the operational GIS Platform of the State Hydrometeorological Institute for storage and online display of data collected through the FRISCO 1 project aimed at flood control measures and laid the foundations for further upgrading and more efficient management of spatial data throughout Croatia.*

Detailed information on the practice:	*IGEA, a member of the IN2 group, has completed a software solution for a web GIS browser based on the IGEO Platform for the State Hydrometeorological Institute. The platform will be used for data management in order to reduce flood risk.* *IGEA has successfully implemented its own software solution IGEO and within the cross-border cooperation program on this Croatian-Slovenian Interreg project contributed to its main results. They consist of a series of common models, maps and tools for each of the six transboundary river basins (Kupa, Sutla, Drava, Mura, Dragonja and Bregana). The platform enables storage and online display of data for flood risk management, historical time series and real-time hydrological and meteorological data.* *The successful cooperation of the project teams has thus contributed to a project that will cover the needs of a wide range of target groups, with the greatest benefit to the population in the area of transboundary river basins*
Timescale (start/end date):	*September 1, 2018. – August 31, 2020*
Evidence of success (results achieved):	*:*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*Using of SMART technologies like GIS data in the flood preventions.*
Further information:	*https://www.igea.hr/igea-platforma-za-upravljanje-rizicima-od-poplava/*

29. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Srećko Kukić***
Email:	*Srecko.kukic@gmail.com*
Telephone:	*+385 99 6666 800*
Your organisation	
Country:	*Croatia*
Region:	*Slavonia*
City:	*City in English*
Organisation name:	*City of Osijek*

30. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in	*Country*	*Croatia*

charge:	*Region*	*Slavonia*
	City	*Osijek*
Main institution in charge:	*City of Osijek*	

Are you involved in an Interreg or other Europe project?	*Yes*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*REGIAMOBIL CE1658 Interreg central Europe* *BeePathNet-Reloaded, Ref. Synergy N°8221, programm Urbact III*	
31. Good practice general information		
Title of Best Practice :	*Multisensor Aerial Survey of the Republic of Croatia for the Purposes of Disaster Risk Reduction Assessment*	
Geographical scope of the practice:	*Select National*	
Location of the practice	Country	*Croatia*
	Region	
	City	
	River/Basin	

Practice image:	
Title of practice:	*Multisensor Aerial Survey of the Republic of Croatia for the Purposes of Disaster Risk Reduction Assessment*

32. Good practice detailed information	
Short summary of the practice:	*"Multisensor Aerial Survey of the Republic of Croatia for the Purposes of Disaster Risk Reduction Assessment" project includes the collection and analysis of the appropriate level of spatial data for the purpose of risk modelling in the Republic of Croatia.*

Detailed information on the practice:	*The project includes: spatial laser imaging (hereinafter: LIDAR) of the entire Republic of Croatia and corridor LIDAR imaging of all embankments as well as hyperspectral and thermal imaging of embankments for flood defense on the corridors of the Kupa, Sava, Drava and Danube rivers. Laser LIDAR aerial imaging of urban areas is performed with a density of 8 points per m2 while imaging outside urban areas is performed with a density of at least 4 points / m2. The Data storage system and the graphic workstations with monitors are procured within this project.* *PROJECT ACTIVITIES:* • *aerial LiDAR recording of the Republic of Croatia* • *aerial photogrammetric recording of the Republic of Croatia* • *hyperspectral and thermal imaging of the corridors of the Sava, Drava, Kupa and Danube rivers* • *establishment of the Center for Analysis and Processing of Multisensor Aerial Imaging Data* • *preparation of seismic risk assessment of the City of Zagreb* *OBJECTIVES AND RESULTS OF THE PROJECT:* • *development of digital relief model and digital surface model based on data obtained by aerial LiDAR imaging* • *preparation of a basis for disaster risk analysis, primarily earthquakes and floods* • *availability of analyzed data on the WEB-GIS portal to all services and bodies in the disaster risk system* • *development of a methodology for seismic risk assessment in the pilot area of the City of Zagreb applicable to all major cities in the Republic of Croatia*
Timescale (start/end date):	*may 2021./may 2023*
Evidence of success (results achieved):	*:*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*preparation of a basis for disaster risk analysis, primarily earthquakes and floods.*
Further information:	*https://potresnirizik.zagreb.hr/o-projektu/multisenzorsko-zracno-snimanje-republike-hrvatske-za-potrebe-procjene-smanjenja-rizika-od-katastrofa-kk-05-2-1-10-0001/34*

GREECE

33. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	Special Water Service
Email:	info.egy@prv.ypeka.gr
Telephone:	210 6475101
Your organisation	
Country:	Greece
Region:	Central Goverment
City:	

Organisation name:	Ministry of Environment and Energy

34. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

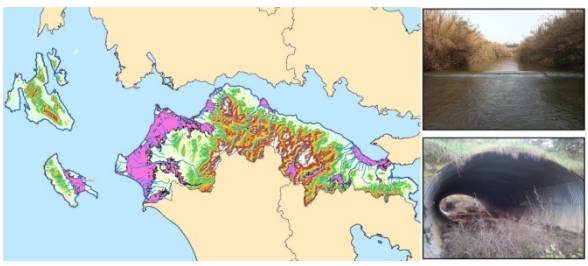
Location of the organisation in charge:	Country	GREECE
	Region	WESTERN GREECE
	City	PATRAS
Main institution in charge:		

Are you involved in an Interregor other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	-

35. Good practice general information		
Title of Best Practice :	Flood Risk Management Plan for the North Peloponnese Water Department	
Geographical scope of the practice:		
Location of the practice	Country	Greece
	Region	Northern Peloponnese
	City	PATRAS
	River/Basin	Glafkos

Practice image:	

	
Title of practice:	Flood Risk Management Plan for the North Peloponnese Water Department

36. Good practice detailed information	
Short summary of the practice:	This work reports on the most important floods of the Water Department of the Northern Peloponnese and the catchment area of the Glafkos river and the evaluation of the Flood Risk Management Plan. Flood Risk Management Plans cover all aspects of flood risk management focusing on prevention, protection and preparedness including flood forecasting and early warning systems and taking into account the characteristics of the specific catchment area or catchment area.
Detailed information on the practice:	A Potentially High Flood Risk Zone (ZDYKP) was designated taking into account: • The results from identifying areas where it is likely to there is a flood • Areas with potentially significant consequences from future floods, • The reports of the regional bodies and • The important historical floods.

Watercourse Name Basin	Water Basin Code	Lek area. Question (km2)	Typical control point	Flood area (km2) for T = 100 years
ZDYKP "Lowland zone of river basins of Peiros - Verga - Pinios - Glafkos" - GR02RAK0008				
GLAFKOS	GR 2714931	100,09	Greek Open university, Akrotiriou bridge	0,4

Areas where flooding is likely to occur are those that meet at least one of the following two restrictions:

	• They are located in alluvial deposits • They are located on the ground with a slope of less than 2%. The areas where there is a possibility of negative consequences from future floods are those that contain: • Cities and settlements • Industrial and commercial zones • Agricultural lands with significant economic value • Production units that may cause pollution • Protected areas • Cultural heritage sites • Infrastructure (road, railway network, ports, airports, hospitals,large dams) GLAFKOS river has caused many floods creating many disasters and deaths. Catastrophes took place in the floods of 1912 and 1915. It is mentioned that, before and after the 17th century there were swamps formed by the waters of Glafkos All of this was common until the 1970s, when its riverbed was made of concrete walls, at least in the lowlands. Similar works were carried out in the period 2009-2011, works for the regulation of its riverbed, with the construction of reinforced concrete walls and the reconstruction of the riverside road that crosses it. This road connects the perimeter road with the new port of the city and at its estuary an air bridge was built in the period 2012-2014.
Timescale (start/end date):	
Evidence of success (results achieved):	• better understanding and general awareness of flood risk • action plans that focus on evaluating, analysing and diagnosing the lessons learned from past flood events • creation of reports and pilot methodologies • organize technical seminars
Challenges encountered (optional):	
Potential for learning or transfer:	• Raising public awareness about the benefits of insurance floods and seek to increase coverage • Better integration of the effects of climate change on flood risk management • Support Green Development actions, • investing in technology and data to operate models that help manage flood risks. • installation and upgrading of rain and river metering stations These stations can better inform the meteorological and hydrological forecasts, especially for short-term events such as lightning floods.
Further information:	*https://floods.ypeka.gr/* *https://ypen.gov.gr/*

37. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***IOANNIS GASPARINATOS, IOANNIS KALOGHEROPOULOS and PINELOPI GRIVA***
Email:	
Telephone:	
Your organisation	
Country:	*GREECE*
Region:	*WESTERN GREECE*
City:	*PATRAS*
Organisation name:	*WESTERN GREECE REGION/TECHNICAL Dpt*

38. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*GREECE*
	Region	*WESTERN GREECE*
	City	*PATRAS*
Main institution in charge:	*WESTERN GREECE REGION/TECHNICAL Dpt.*	

Are you involved in an Interreg or other Europe project?	*no*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	-

39. Good practice general information		
Title of Best Practice :	*Restoration works of existing technical interventions*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*GREECE*
	Region	*WESTERN GREECE*

	City	*ACHAIA PERFECTURE*
	River/Basin	*GLAFKOS*

Practice image:	
Title of practice:	*Maintenance-restoration works of existing flood protection works of the river Glafkos*

40. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* *Present project concerns restoration works of existing technical works, construction of sarazanet, terraces and calm basins along the river Glafkos and neighboring torrents and branches of Regional Unit of Achaia.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* *The following works will be carried out for the maintenance - restoration of existing flood protection works:* - *Removal of alluvium under existing techniques* - *Excavation of existing foundation works on earthen semi-rocky soil* - *Demolition of individual elements or parts of reinforced concrete structures.* - *River bed cleaning, wastes, debris and vegetation removal* - *Constructions of damaged existing concrete techniques.* - *Restoration of existing and construction of new sarazanets and embankments.*
Timescale (start/end date):	*2019-2020*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* *The creation of floods in the area of Glafkos has in the past caused serious problems with the destruction of infrastructure, property and lives in the greater area of Patras. The restoration of the existing flood infrastructures ensures the effective facing of the extreme phenomena*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* Restoration of existing infrastructures for flood prevention ensure the sustainability of the river basin as well as raising people's awareness of the importance and conservation of flood areas.
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The implementation of flood prevention technical works and erosion prevention embankments on the edge of settlement and the preservation of floodplains and natural watercourses is an example of good practice for the protection of urban infrastructure.

Further information:	*Link to where further information on the good practice can be found*

41. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***IOANNIS GASPARINATOS, IOANNIS KALOGHEROPOULOS and PINELOPI GRIVA***
Email:	
Telephone:	
Your organisation	
Country:	*GREECE*
Region:	*WESTERN GREECE*
City:	*PATRAS*
Organisation name:	*WESTERN GREECE REGION/TECHNICAL Dpt*

42. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*GREECE*
	Region	*WESTERN GREECE*
	City	*PATRAS*
Main institution in charge:	*WESTERN GREECE REGION/TECHNICAL Dpt.*	

Are you involved in an Interreg or other Europe project?	*no*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	-

43. Good practice general information		
Title of Best Practice :	*Restoration works of existing technical interventions*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*GREECE*
	Region	*WESTERN GREECE*
	City	*ACHAIA PERFECTURE*
	River/Basin	*CHARADROS*

Practice image:	
Title of practice:	*Maintenance-restoration works of existing flood protection works of the river Charadros*

44. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* *Present project concerns restoration works of existing technical works, construction of sarazanet, terraces and calm basins along the river Charadros and neighboring torrents and branches of Regional Unit of Achaia.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* *The following works will be carried out for the maintenance - restoration of existing flood protection works:* - *Removal of alluvium under existing techniques* - *Excavation of existing foundation works on earthen semi-rocky soil* - *Demolition of individual elements or parts of reinforced concrete structures.* - *River bed cleaning, wastes, debris and vegetation removal* - *Constructions of damaged existing concrete techniques.* - *Restoration of existing and construction of new sarazanets and embankments.*
Timescale (start/end date):	*2019-2020*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* *The creation of floods in the area of Charadros has in the past caused serious problems with the destruction of infrastructure, property and lives in the greater area of Patras. The restoration of the existing flood infrastructures ensures the effective facing of the extreme phenomena*
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* Restoration of existing infrastructures for flood prevention ensure the sustainability of the river basin as well as raising people's awareness of the importance and conservation of flood areas.

Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The implementation of flood prevention technical works and erosion prevention embankments on the edge of settlement and the preservation of floodplains and natural watercourses is an example of good practice for the protection of urban infrastructure.
Further information:	*Link to where further information on the good practice can be found*

45. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	Maria Michalopoulou, Msc, PHD candidate Nikolaos Depountis , Assistant Professor of Technical Geology University of Patras
Email:	
Telephone:	
Your organisation	
Country:	*GREECE*
Region:	*WESTERN GREECE*
City:	*PATRAS*
Organisation name:	*UNIVERSITY OF PATRAS*

46. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

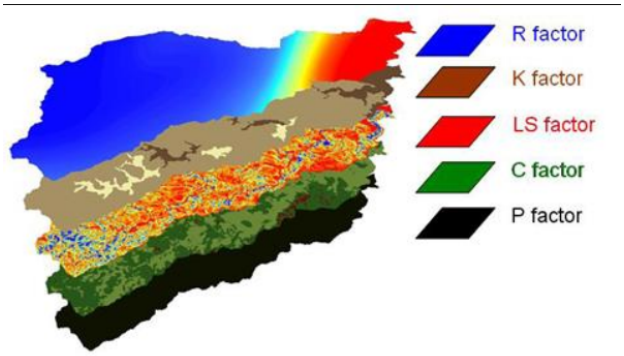
Location of the organisation in charge:	*Country*	*GREECE*
	Region	*WESTERN GREECE*
	City	*PATRAS*
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

47. Good practice general information		
Title of Best Practice :	**Estimating Soil Erosion Rate Changes in Areas Affected by Wildfires**	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*GREECE*
	Region	*WESTERN GREECE*
	City	*ILIA PERFECTURE*
	River/Basin	*PINIOS*

Practice image:	 Levels of RUSLE factoes
Title of practice:	*"Description of the application of the RUSLE model in an area of Ilia Regional Unity and more specifically in the catchment area of the river Pinios Ilia"*

48. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* Article 6 (5d) of Directive 2007/60 / EC highlights the need to draw up flood risk and hazard maps, describing the potential adverse effects associated with floods. The plans for flood risk management of watersheds at the level of water bodies include environmental vulnerability which is associated with the degree of soil erosion upstream and within flood zones which can lead to floods with an increased percentage of sediments in these zones. In the international literature there are many mathematical models that can be used to calculate soil erosion. USLE recommends one of the most common methods of calculating soil loss.

Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* The USLE method has been widely used to estimate surface and groove erosion nationwide in the United States. Therefore, the equation necessarily applied to conditions beyond the database. The result, which emerged empirically, was to make some changes that are incorporated into the Revised Global Territorial Loss Equation - *How does the practice reach its objectives and how it is implemented?* Research is carried out by keeping the local and regional authorities regularly informed - *Who are the main stakeholders and beneficiaries of the practice?*
Timescale (start/end date):	*e.g. June 2021 – May 2022/ongoing*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* The topography, geology, land uses and rainfall of the catchment area of the river system in question are essential elements for the application of the RUSLE soil erosion model. More specifically, in order to calculate each factor of the RUSLE soil erosion model, some primary data are collected and processed as presented below: - Rainfall data for a period of at least 30 years in order to use them to calculate the corrosion coefficient of rainfall (R). - Geological and soil data for the calculation of the soil erosion coefficient (K). Elevation data and specifically the digital terrain model for the calculation of the topographic factor (LS). - Land cover and land use data for the calculation of land cover and management coefficient (C) and erosion control coefficient (P).
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* Detailed scientific and technical knowledge coverage of the river basin as well as raising people's awareness of the importance and conservation of flood areas.
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The implementation of flood and erosion prevention embankments on the edge of settlement and the preservation of floodplains and natural watercourses is an example of good practice for the protection of urban infrastructure.
Further information:	*Link to where further information on the good practice can be found*

49. Good practice detailed information	
Short summary of the practice:	Development of a model for flood risk assessment on a regional scale using Geographic Information Systems (GIS). Cartographic overflow with a multitude of factors which are bibliographically related to flood phenomena (spatial distribution of the average annual rainfall, morphological slope of the relief, altitude zones, flow concentration, lithologies of geological formations, land uses).
Detailed information on the practice:	In the present work was applied using the Geographic Information Systems, for part of the Prefecture of Achaia, assessment of the spatial risk of flood management The use of an easy-to-use and fast tool to identify areas at high risk of flooding (flood-prone areas) is particularly important, especially in catchments where there is not an adequate hydrometeorological network and in areas with precise and chronological conditions simulations cannot be performed. A literature review is conducted on the subject, analyzing issues such as the water cycle, river systems, the phenomenon of floods and its various dimensions, as well as the European institutional framework that focuses on the prevention and management of water and floods. This is followed by an extensive analysis of the features of the area under consideration, as well as an analysis of the methodology on the basis of which it was delimited. In detail, reference is made to the geological and hydrogeological characteristics of the area, the catchments and the hydrographic network that make it up, the land uses / coverings, the climatic characteristics, the history of floods that have been marked in time, concerning its extent. The methodology, based on which the flood risk assessment of the study area was made. More specifically, reference is made to the methodological approach followed, as well as the way in which the selection of parameters / criteria that are related and contribute to the evolution of flood risk is analyzed. The following is the creation of the spatial database and the primary processing of these and then the way in which the risk factors were produced. Determining the importance of each factor was a key step before calculating the overall risk. Utilization of the results of the aforementioned methodology, which are essentially a prior knowledge of the areas and the respective settlements that show greater risk in floods. In other words, an integrated sustainable management strategy for floods in complex geomorphological areas is proposed

	under the European Floods Directive 2002/60 / EC. This strategy is presented in the form of directions that could in the future be incorporated in the institutional texts of spatial and urban planning. The method used is evaluated and some concerns and thoughts are presented regarding the ways in which the phenomenon of flood risk can be addressed based on the factors that affect it.
Timescale (start/end date):	
Evidence of success (results achieved):	- The most important factors influencing the occurrence of flood in the examined area are the average annual rainfall and the morphological slopes of the soil. - the areas that present a great and very high risk for the occurrence of floods are the coastal zone of the Achaea region as a whole, as well as the western part of the studied area, which is characterized by its low altitude and lowland. - Knowledge of the risk and vulnerabilities of the area of interest for the development of an Early Warning System
Challenges encountered (optional):	
Potential for learning or transfer:	-minimizing the effects of this phenomenon, with careful and gentle interventions -possibility of early warning of the population. - Cooperation between Government Bodies (both within the state and transnationally), National Meteorological and Hydrological Services and local communities is therefore necessary. -put into operation the National Early Warning System - Predicting slow-moving flood events such as river floods is now possible, especially if they also rely on a network of ground-based sensors to monitor river levels.
Further information:	

1. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	DESPOINA GIAMALAKI
Email:	
Telephone:	
Your organisation	
Country:	Greece
Region:	
City:	ATHENS
Organisation name:	Department of Geography/ Harokopio University

1. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*GREECE*
	Region	*WESTERN GREECE*
	City	*PATRAS*
Main institution in charge:		

Are you involved in an Interregor other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

1. Good practice general information		
Title of Best Practice :	Flood Risk Assessment of Areas of the Regional Unit of Achaia & Sustainable Spatial Planning Directions	
Geographical scope of the practice:		
Location of the practice	Country	Greece
	Region	Northern Peloponnese
	City	PATRAS
	River/Basin	Glafkos

50. Good practice detailed information	
Short summary of the practice:	Development of a model for flood risk assessment on a regional scale using Geographic Information Systems (GIS). Cartographic overflow with a multitude of factors which are bibliographically related to flood phenomena (spatial distribution of the average annual rainfall, morphological slope of the relief, altitude zones, flow concentration, lithologies of geological formations, land uses).
Detailed information on the practice:	In the present work was applied using the Geographic Information Systems, for part of the Prefecture of Achaia, assessment of the spatial risk of flood management The use of an easy-to-use and fast tool to identify areas at high risk of flooding (flood-prone areas) is particularly important, especially in catchments where there is not an adequate hydrometeorological network and in areas with precise and chronological conditions simulations cannot be performed. A literature review is conducted on the subject, analyzing issues such as the water cycle, river systems, the phenomenon of floods and its various dimensions, as well as the European institutional framework that focuses on the prevention and management of water and floods. This is followed by an extensive analysis of the features of the area under consideration, as well as an analysis of the methodology on the basis of which it was delimited. In detail, reference is made to the geological and hydrogeological characteristics of the area, the catchments and the hydrographic network that make it up, the land uses / coverings, the climatic characteristics, the history of floods that have been marked in time, concerning its extent. The methodology, based on which the flood risk assessment of the study area was made. More specifically, reference is made to the methodological approach followed, as well as the way in which the selection of parameters / criteria that are related and contribute to the evolution of flood risk is analyzed. The following is the creation of the spatial database and the primary processing of these and then the way in which the risk factors were produced. Determining the importance of each factor was a key step before calculating the overall risk. Utilization of the results of the aforementioned methodology, which are essentially a prior knowledge of the areas and the respective settlements that show greater risk in floods. In other words, an integrated sustainable management strategy for floods in complex geomorphological areas is proposed under the European Floods Directive 2002/60 / EC. This strategy is presented in the form of directions that could in the future be incorporated in the institutional texts of spatial and urban planning. The method used is evaluated and some concerns and

	thoughts are presented regarding the ways in which the phenomenon of flood risk can be addressed based on the factors that affect it.
Timescale (start/end date):	
Evidence of success (results achieved):	- The most important factors influencing the occurrence of flood in the examined area are the average annual rainfall and the morphological slopes of the soil. - the areas that present a great and very high risk for the occurrence of floods are the coastal zone of the Achaea region as a whole, as well as the western part of the studied area, which is characterized by its low altitude and lowland. - Knowledge of the risk and vulnerabilities of the area of interest for the development of an Early Warning System
Challenges encountered (optional):	
Potential for learning or transfer:	-minimizing the effects of this phenomenon, with careful and gentle interventions -possibility of early warning of the population. - Cooperation between Government Bodies (both within the state and transnationally), National Meteorological and Hydrological Services and local communities is therefore necessary. -put into operation the National Early Warning System - Predicting slow-moving flood events such as river floods is now possible, especially if they also rely on a network of ground-based sensors to monitor river levels.
Further information:	

ITALY

2. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***ENDRO MARTINI***

Email:	*endromartini@gmail.com*
Telephone:	*+39 3474475536*
Your organisation	
Country:	*Italy*
Region:	*Marche*
City:	*CAGLI (PU)*
Organisation name:	***Municipality of Senigallia** - Consultant-Expert in River Contracts*

3. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*No: I present six River Contracts case studies: in England, France, Alpine Region (Alpine Convention), Italy, Moldova, Italy*

ATT. case 1-Location of the organisation in charge:	*Country*	*ENGLAND*
	Region	*Lewisham*
	City	*London Boroughs*
Main institution in charge:	*LEWISHAM COUNCIL Town Hall*	

ATT. case 2-Location of the organisation in charge:	*Country*	*FRANCE*
	Region	*Provenza Alpi Rhone*
	City	*St Jean de Bournay*
Main institution in charge:	*Sindacat Riviere de 4 Vallèes*	

ATT. case 3-Location of the organisation in charge:	*Country*	*ALPINE CONVENTION - EUSALP (EU Strategy for the Alpine region), is an agreement signed in 2013 by the countries that are part of the European Union: Italy, France, Germany, Austria, Slovenia and two non-European states, Switzerland and Liechtenstein*
	Region	*Alpine Region*
	City	*Various*
Main institution in charge:	*EUSALP Structure*	

ATT. case 4-Location of the organisation in charge:	*Country*	*ITALY*
	Region	*Emilia Romagna*
	City	*FERRARA*
Main institution in charge:	*Consortium Reclamation Plain of Ferrara*	

ATT. case 5- Location of the organisation in charge:	*Country*	*MOLDOVA*
	Region	*Ialoveni District*
	City	*Causeni/Chisinau*
Main institution in charge:	*Agenţia "Apele Moldovei"- DBGA*	

ATT. case 6- Location of the organisation in charge:	*Country*	*Italy*
	Region	*TOSCANA*
	City	*Lucca*
Main institution in charge:	*Province of Lucca (EU MED)*	

Are you involved in an Interreg or another Europe project?	*Yes:* - ***This Interreg SMART RIVER*** - ***MED-Water in Core (Province Lucca)*** - **KEP ITALY CEI FUNDING TRIESTE** *- 2015-2021- Moldova Country – Smart River Exchange and River Contrasts- Project Manager* - ***UNDP, EUROPEAN UNION and ALGERIAN MINISTRY OF INTERIOR:*** *Algeria country. Scientific Coordinator from January 2019 to July 2021 of the Technical Team in charge of the elaboration of a "Methodological guide for the development of the Multi-Risk Prevention Plan" at local level (MRPP)" and of the "Communication and Awareness plan for the prevention of major risks" (CAPPMR).*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

4. Good practice general information		
Title of Best Practice:	*In the six-case study cited numerous good practices are illustrated, the details of which are proposed in the six attached presentations (5 slide and a publication)*	
Geographical scope of the practice:	*International/National/Regional/Local*	
Location of the practice	Country	*SIX: England, France, Alpine Region, Italy, Moldova, Italy*
	Region	*Various*
	City	*Various*
	River/Basin	*Various*

Practice image:	*See attached 5 slide presentation and a publication*
Title of practice:	*See attached 5 slide presentation and a publication*

5. Good practice detailed information	
Short summary of the practice:	*Improvement of water quality and achievement of the objectives set by the Water Framework Directive (Directive 2000/60 / EC and 2007/60/EC). Support for the ecological and multifunctional conversion. Identify areas for expansions, lamination and withholding of flood waters. Management of drought and minimum vitality in the riverbed.*

Detailed information on the practice:	*In the case studies presented we have situations of degradation of the river environment, pollution, floods and droughts to be solved raised by the local population to the competent administrations, and also addressed by the bodies responsible for the government of the territory.* *The good practices implemented in the examples have achieved the expected objective as in the English case where the watercourse enclosed in a concrete channel has become a natural environment redeveloped in a park area thanks to the proposals and the active participation of stakeholders. represented by public bodies and private associations and by individual citizens.*
Timescale (start/end date):	*Various from 2015 to 2021*
Evidence of success (results achieved):	*In all the case studies presented, the requests and responses from the bottom of the users represented the driving force and the push to compose participatory and shared interventions / actions and successful measures. Their taking charge by the decision-making bodies and the funding obtained to carry out numerous interventions proposed in the Action programs of the River Contracts is the demonstration of the results obtained.*
Challenges encountered (optional):	*The main challenges encountered in all cases were:* 1. *be able to systematize expert and local knowledge through a common "simple" language of reading the territory;* 2. *overcome conflicts of interest through solutions capable of guaranteeing "mutual gain".*
Potential for learning or transfer:	*All the practices illustrated in the case studies are potentially interesting and applicable in all regions that have similar situations to solve. Information on key success factors or factors that may have hindered them may be requested directly from case study authors. In September 2016, in a conference held in Ferrara* ***(Italy REMTECH ESONDA EXPO. Smart River International Conference. Integrate Management: water quality, Flood Risks and River Contracts),*** *information was transferred in a discussion and round table among numerous actors.* *There is a continuous exchange of information between those who wrote this document and numerous actors of River Contracts in Europe and around the world through a working group of the "Italian National Table of River Contracts" of which the writer is a member.*
Further information:	**ENGLAND:** *https://lewisham.gov.uk/mayorandcouncil/aboutthecouncil/strategies* **FRANCE:** *http://www.sirra.fr/* **EUSALP:** *https://www.alpine-region.eu/* **ITALY:** *https://www.bonificaferrara.it/* **MOLDOVA:** *http://www.apelemoldovei.gov.md/* *http://www.dbga.md/en_index.html* **WWAP UNESCO:** https://en.unesco.org/wwap

6. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***PP02-Marche Region***
Email:	*contrattidifiume@regione.marche.it*

Telephone:	*+39 071-2212217; +39 071-2212218;*
Your organisation	
Country:	*Italy*
Region:	*Marche*
City:	
Organisation name:	*Civil Protection and Territorial Security department*

7. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	
	Region	
	City	
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*Yes or no*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*PRTTofRCs*

8. Good practice general information		
Title of Best Practice :	*Set up the permanent tecnichal coordination table of RCs*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Italia*
	Region	*Marche region*
	City	
	River/Basin	*Regional rivers*

Practice image:	

Title of practice:	*permanent tecnichal coordination table of RCs*

9. Good practice detailed information	
Short summary of the practice:	permanent tecnichal coordination table of RCs
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* The permanent technical table for coordination of river contracts has been set up to homogenize, standardize and coordinate local development actions relating to the management of regional watercourses; - *How does the practice reach its objectives and how it is implemented?* the permanent technical table for coordination of RCs - prepares policy documents and templates for the homogeneous development of governance paths and implementation of river contracts; for example forms, in support of the Action Program or for the traceability of the process itself; prepares models for the census on the forecast and implementation of river contracts; proposes, prepares, carries out courses, seminars, meetings, promotional initiatives to raise awareness on the theme of river contracts to sensitize the local population; - *Who are the main stakeholders and beneficiaries of the practice?* The beneficiary is the same river contract, because both for the newly started RCs and for those ahead in the process, both have formats available to support the entire process, and the experience of each can be an example of replicability for another;
Timescale (start/end date):	*18 March 2016*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* The presence, at the technical coordination table, from time to time of experts / operators of the sector, identified in relation to the specific local situations to be addressed ensures that there is always a real analysis and identification of the risks of the territory in question; the contribution of the presence of experts, on the other hand, is to be able to plan and program actions / interventions that best contribute to the mitigation of flood risk. Achivements : template for the forms which the Action Programme(AP) are formed. Template for the form to tracing the internal process of RC.
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The experience, of each permanent tecnichal coordination table component, is made available to all the ”performers” who, through river contracts, undertake a smart governance to manage flooding risk of river communities.
Further information:	https://www.regione.marche.it/Portals/0/Paesaggio_Territorio_Urbanistica/Contratti_di_Fiume/Norme/DGR0217_16.pdf

10. Author contact information

The owner of the good practice should fill in the form info about your personal and organisational profile.	
Name:	***PP02-Marche Region***
Email:	*contrattidifiume@regione.marche.it*
Telephone:	*+39 071-2212217; +39 071-2212218;*
Your organisation	
Country:	*Italy*
Region:	*Marche*
City:	
Organisation name:	*Civil Protection and Territorial Security department*

11. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*Yes*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	
	Region	
	City	
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	*Yes or no*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	*FinS*

12. Good practice general information		
Title of Best Practice :	*Forms in support to RCs*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Italia*
	Region	*Marche region*
	City	
	River/Basin	*Regional rivers*
Practice image:		

Title of practice:	*Forms in support to RCs*

13. Good practice detailed information	
Short summary of the practice:	formats to support the drafting of the Action Program and the process of the River Contract
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* visiting the leading municipalities of each river contract initiated, the request they made to the technical secretariat of river contracts has always been that of being able to have support models available; - *How does the practice reach its objectives and how it is implemented?* The regional technical secretariat of river contracts in collaboration with the regional technical coordination table have drawn up three types of forms : 2 to support the action program(AP) and 1 to support the process of the river contract itself; - *Who are the main stakeholders and beneficiaries of the practice?* The beneficiary is mainly the steering committee (one of the organizational structures of the river contract consisting of stakeholders and municipalities signatories of the Document of Intent); its components are those who develop and lead the entire process and draw up most of the action sheets that make up the action program. Having models available to carry out these forms is greatly beneficial;
Timescale (start/end date):	*February 2021*
Evidence of success (results achieved):	*Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* This is a good practice because having a format available you only need to enter the required data in the appropriete spaces on the form; without further use of time;
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*
Potential for learning or transfer:	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The ease of use, adaptability and timing in producing the documentation to support some phases of the river contract process, makes this a good practice;
Further information:	*https://www.regione.marche.it/Portals/0/Paesaggio_Territorio_Urbanistica/Contratti_di_Fiume/Manualistica*

SLOVENIA

14. Author contact information

The owner of the good practice should fill in the form info about your personal and organisational profile.	
Name:	***Blanka Grajfoner, Slovenian Water Agency (Direkcija RS za vode, Projektna pisarna Maribor, Glavni trg 19c, 2000 Maribor***
Email:	*blanka.grajfoner@gov.si*
Telephone:	*+386 (0)2 234 96 35*
Your organisation	
Country:	*Slovenia*
Region:	*Podravje*
City:	*Maribor*
Organisation name:	*Municipality of Maribor*

15. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*No*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Slovenia*
	Region	*Podravje*
	City	*Maribor*
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

16. Good practice general information		
Title of Best Practice :	*Implementation of flood prevention measures in Meža riverbed at Pevalje*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Slovenia*
	Region	*Koroška*
	City	*Prevalje*

	River/Basin	*Meža River / affluent of Drava basin*

Practice image:	  *Photo Petra Kralj/ Slovenian Water Agency*
Title of practice:	*Implementation of flood prevention measures in Meža riverbed at Pevalje*

17. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* River Meža is an affluent river of Drava River in Koroška region where in spring and autumn floods are a threat to housings in villages and to industrial areas. Water management measures at River Meža at the village of Prevalje were implemented by the Slovenian Water Agency (state agency).
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* *Implementation of flood prevention measures in Meža riverbed at Pevalje* The main problem of the section of the Meža riverbed in Prevalje from the bridge on the Prevalje-Ravne road to the confluence of the Leško stream was the flooding of the surrounding populated area and the deterioration of the existing bank protection. The project Ensuring flood safety of the Drava River basin - the area of the River Meža was implemented by the Slovenian Water Agency. The aim of the project was to ensure long-term flood safety in the area. The investment was co-financed by the Republic of Slovenia and the European Union - the European Regional Development Fund. The total length of the construction works is 1213 m such as securing the left bank with a stone embankment and securing the right bank with a wall from

	stone and concrete as well as a stone embankment.
Timescale (start/end date):	*2018 - 2020*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* Flood prevention measures are implemented in a way that the ecological condition of watercourses is not deteriorated, vegetation is preserved as much as possible, groundwater pollution is reduced, and mitigation measures are implemented.
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* Raising people's awareness of the importance and conservation of flood areas.
Potential for learning or transfer-	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The implementation of flood prevention embankments on the edge of settlement and the preservation of floodplains and natural watercourses is an example of good practice for the protection of urban infrastructure.
Further information:	*Link to where further information on the good practice can be found* *https://www.porecje-drave.si/prevalje*

18. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Blanka Grajfoner, Slovenian Water Agency (Direkcija RS za vode, Projektna pisarna Maribor, Glavni trg 19c, 2000 Maribor***
Email:	*blanka.grajfoner@gov.si*
Telephone:	*+386 (0)2 234 96 35*
Your organisation	
Country:	*Slovenia*
Region:	*Podravje*
City:	*Maribor*
Organisation name:	*Municipality of Maribor*

19. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*No*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Slovenia*
	Region	
	City	
Main institution in charge:		

Are you involved in an Interreg or other Europe project?	
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

20. Good practice general information		
Title of Best Practice :	Implementation of water management measures at River Meža in Ravne	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Slovenia*
	Region	*Koroška*
	City	*Ravne*

	River/Basin	*Meža River / affluent of Drava basin*

Practice image:	  Photo: Ljiljana Sušnik
Title of practice:	Implementation of water management measures at River Meža in Ravne

21. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* River Meža is an affluent river of Drava River in Koroška region where in spring and autumn floods are a threat to housings in villages and to industrial areas. Water management measures at River Meža at the village of Ravne were implemented by the Slovenian Water Agency (state agency).
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* The implementation of water management measures at River Meža within the area of iron works in the town of Ravne was specific due to the industrial nature of the area through which the Meža River flows. Meža is a river affluent of Drava River. The iron industry has been in this area since 1774. Throughout history, many cables for electrical and other installations have been installed in the immediate vicinity of the watercourse for the needs of industrial facilities in which steel production took place. In the period from May 2018 to October 2019, concreting (protection of the foundations of retaining walls with stone in concrete), and raising of existing walls were carried out on the right bank of the river Meža. On the left bank, the arrangements are completed upstream of the technological bridge and downstream. Completion of the works was in 2020.

Timescale (start/end date):	*2018 - 2020*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* The project represents a systematic solution to flood problems in this area. Flood prevention measures are implemented in a way that the ecological condition of watercourses is not deteriorated, vegetation is preserved as much as possible, groundwater pollution is reduced, and mitigation measures are implemented.
Challenges encountered (optional): IZZIVI	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* Raising people's awareness of the importance and conservation of flood areas.
Potential for learning or transfer-	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* The implementation of flood prevention embankments on the edge of settlement and the preservation of floodplains and natural watercourses is an example of good practice for the protection of urban infrastructure.
Further information:	*Link to where further information on the good practice can be found* *https://www.porecje-drave.si/ravne*

22. Author contact information

The owner of the good practice should fill in the form info about your personal and organisational profile.	
Name:	***Tijana Micić***
Email:	*micic@vgb.si*
Telephone:	*+386 2 23 46 516*
Your organisation	
Country:	*Slovenia*
Region:	*Podravje*
City:	*Maribor*
Organisation name:	*Municipality of Maribor*

23. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*No*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Slovenia*
	Region	*Podravje*
	City	*Maribor*
Main institution in charge:	*Vodnogospodarski biro Maribor*	

Are you involved in an Interreg or other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

24. Good practice general information		
Title of Best Practice :	*Planning and implementation of flood barrier embankments at Dogoše (Maribor) and Duplek*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Slovenia*
	Region	*Podravje (region of River Drava area)*
	City	*Dogoše (Maribor), Duplek*

	River/Basin	*Drava*

Practice image:	
Title of practice:	*Planning and implementation of flood barrier embankments at Dogoše (Maribor) and Duplek*

25. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.*
Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* The high waters of the Drava River caused floods in 1998 and 2012 at a large part of the settlement of Sp. Duplek. Floodwaters spilled over the left bank at Drava River between Spodnji Duplek, Dvorjane, Vumpah and the Drava River, threatening the lower lying parts of the settlement of Spodnji Duplek. The Drava also flooded buildings on the right bank in the settlement of Dogoše. With the aim of ensuring flood safety for flood-endangered facilities in the municipalities of Duplek and Maribor at Dogoše, project documentation was prepared for the construction of the high-water embankment Vurberk-Duplek and Dogoše. The measures were planned on the basis of calculations of detailed 2D simulations of the Drava floodplain flow, which were

	calibrated according to the recorded high-water levels in 1998 and 2012. When planning and placing measures in space, water and riparian space was preserved as much as possible as well as terrain configuration and existing construction. The project was implemented at Dogoše - high water embankment (L = 2.3 km), high water wall (L = 100 m), at Duplek - high water embankment (L = 5.1 km) and individual measures for the protection of individual houses. The work was carried out by the company VGP Drava Ptuj.
Timescale (start/end date):	*2014 - 2015*
Evidence of success (results achieved): doseženi rezultati:	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* Implemented flood protection measures ensure flood safety in populated areas along the Drava, which have been subject to major floods in the past (2012). The construction of embankments will significantly reduce the number of people at risk of flooding facilities in the settlements of Dogoše and Duplek. In the Drava Duplek-Starše section, where the most flooded buildings were on the left bank, the number of flood-endangered buildings decreased by 92% during the Q100 flow. With the construction of the embankment, which on the left bank is removed from the riverbed by an average of about 600m, the geomorphological dividing line between the populated area and the area intended for flood and erosion processes is placed in space.
Challenges encountered (optional): IZZIVI	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.* Raising people's awareness of the importance and conservation of flood areas. Education and awareness-raising are also needed in the field of agriculture, to adapt farming methods in flood areas in order to reduce economic damage.
Potential for learning or transfer- **Ali obstaja potencial za prenos dobre prakse na druga mesta:**	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* Protecting existing facilities and infrastructure from floods while preserving flood plains and areas for flood and erosion processes remains one of the major challenges of today. In the past, measures were carried out mainly by regulating (deepening and widening) the existing riverbeds and the construction of embankments directly along the riverbed. Today, flood management and protection are focused on spatial solutions, where the preservation of floodplains and the existing morphological and biodiversity status of watercourses is essential. For this reason, the implementation of flood prevention embankments on the edge of settlement and the preservation of floodplains and natural watercourses is an example of good practice for the protection of infrastructure.

Further information:	*Link to where further information on the good practice can be found* *https://www.vgb.si/p/posts/nacrtovanje-in-izvedba-protipoplavnih-nasipov-v-dupleku-in-dogosah-1.php?p=5*

26. Author contact information *The owner of the good practice should fill in the form info about your personal and organisational profile.*	
Name:	***Tijana Mićić***
Email:	*micic@vgb.si*
Telephone:	*+386 2 23 46 516*
Your organisation	
Country:	*Slovenia*
Region:	*Podravje*
City:	*Maribor*
Organisation name:	*Municipality of Maribor*

27. Organisation in charge of the good practice *[If your organisation is not the one in charge of the good practice, you can indicate the relevant organisation in this section of the form. But your contact details will still be linked to the submitted good practice.]*	
Is your organisation the main institution in charge of this good practice?	*No*

In case '**no**' is selected, the two following sections appear:

Location of the organisation in charge:	*Country*	*Slovenia*
	Region	*Podravje*
	City	*Maribor*
Main institution in charge:	*Vodnogospodarski biro Maribor*	

Are you involved in an Interreg or other Europe project?	*No*
If you are involved in more than one project, please choose the project for which you are submitting this good practice.	

In case '**yes**' is selected, the following section appears:

Please select the project acronym:	

28. Good practice general information		
Title of Best Practice :	*Planning and implementation of the Pristava reconstruction of river Pesnica accumulation*	
Geographical scope of the practice:	*Select National/Regional/Local*	
Location of the practice	Country	*Slovenia*
	Region	*Podravje (region of River Drava area)*
	City	*Pesnica Municipality - rural area around Maribor*
	River/Basin	*Pesnica - Drava*

Practice image:	
Title of practice:	*Planning and implementation of the Pristava reconstruction of river Pesnica accumulation*

29. Good practice detailed information	
Short summary of the practice:	*[160 characters] This short text works as a preview for the good practice and it will appear at card level.* The accumulation reservoir Pristava was built to retain high waters of the Pesnica River, which is an affluent of Drava River.

Detailed information on the practice:	*[1500 characters] Please provide information on the practice itself. In particular:* - *What is the problem addressed and the context which triggered the introduction of the practice?* - *How does the practice reach its objectives and how it is implemented?* - *Who are the main stakeholders and beneficiaries of the practice?* The - affluent of Drava River - Pesnica is situated in the neighbouring municipality of Maribor. The accumulation reservoir Pristava was built in the 1970s as part of the construction of reservoir of flood waters of Pesnica. Along with the Pernica reservoir, the Pristava reservoir plays a key role in retaining the high waters of the Pesnica River. After the construction works of the motorway in the water regime of Pesnica, the Pristava reservoir did not ensure adequate functionality and safety at existing facilities. The overflow facility of the reservoir was demolished due to high waters and later partially improved. For this reason, the Ministry of the Environment and Spatial Planning has started preparing project documentation for the reconstruction of Pristava. The main goal of the reconstruction of accumulation Pristava was to reduce the flow of high water downstream and ensure the stability of facilities (barrier embankment, overflow) due to the increased load after the implementation of interventions in the upstream section. As part of the reconstruction, the construction of a new overflow facility with flexible hydromechanical equipment, and safety overflow were planned, as well as the reconstruction of the existing dam with a new maximum level and increased retention volume of the reservoir. All planned solutions were hydraulically verified using a combined 1D / 2D mathematical model. Maps of flood hazards and flood hazard classes in the wider area were also prepared. Construction began in 2016 and took place while maintaining a permanent lake in the reservoir.
Timescale (start/end date):	*2014 - 2015*
Evidence of success (results achieved):	*[500 characters] Why is this practice considered as good? Please provide factual evidence that demonstrates its success or failure (e.g. measurable outputs/results).* The Pristava Reservoir together with the Pernica Reservoir forms a modern system of anti-flood measures to replace excluded flood volumes and to prevent the peak of the flood wave from increasing and exacerbating the flood risk as a result of expansion and construction of infrastructure (motorways) in the floodplain. Synchronous management of both reservoirs ensures optimal retention of high water waves in both reservoirs and reduces the extent of flooding downstream
Challenges encountered (optional):	*[300 characters] Please specify any challenges encountered/lessons learned during the implementation of the practice.*

	Multipurpose high-water reservoirs with permanent lakes require important coordination between all stakeholders in the area and its users (fishermen, farmers, environmentalists, etc.), while maintaining high environmental targets and its primary function of flood wave prevention.
Potential for learning or transfer-	*[1000 characters] Please explain why you consider this practice (or some aspects of this practice) as being potentially interesting for other regions to learn from. This can be done e.g. through information on key success factors for a transfer or on, factors that can hamper a transfer. Information on transfer(s) that already took place can also be provided.* An integrated approach to flood and erosion risk reduction planning is one of the basic objectives of water management in the floodplain. The planning of comprehensive, long-term anti-flood measures for flood risk management ensures, in addition to environmental objectives, the preservation of water and riparian space required for flood and erosion processes. By keeping high waters in the river basin, we are meeting the basic goals of reducing the risk of floods.
Further information:	*Link to where further information on the good practice can be found* https://www.vgb.si/p/posts/nacrtovanje-in-izvedba-rekonstrukcije-ak-pristava-2.php