


TAKING
COOPERATION
FORWARD

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 **JOINT STRATEGY**
FOR INTEGRATED AND PARTICIPATORY WATER AND LAND USE MANAGEMENT
CONSIDERING CLIMATE CHANGE

 TEACHER-CE | PP4 WULS | Tomasz Okruszko, Louis Courseau, Damian Bojanowski,
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WP Title:

**JOINT STRATEGY defining potential commitments
in improvement of planning process considering CC**

JOINT = developed by all project partners in collaboration with stakeholders

Output Title:

**Strategy for water management planning processes including
CC adaptation and risk prevention**

Main deliverables:

**D.T4.1.1 Identification of gaps in existing strategies and
directives implementation on operational level**

**D.T4.1.2 Vision and objectives for improvement
of existing strategies and policies**

**D.T4.2.1 Strategy for integrated and participatory water
and land use management considering climate change**



The way to the strategy



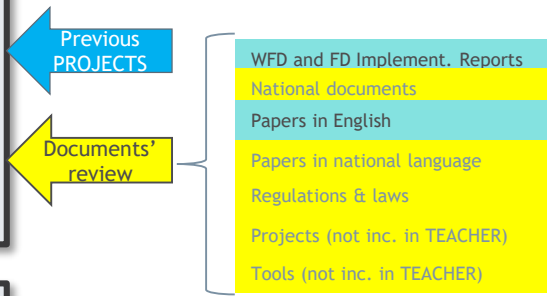
A.T4.1 Strategy development

TEACHER-CE

D.T4.1.1 Identification of gaps in existing strategies and directives implementation on operational level

Gaps and measures identification by documents & projects review - broad perspective

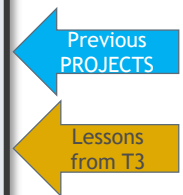
State of CCA in water management planning in CE region (statistics with no country names)



D.T4.1.2 Vision and objectives for improvement of existing strategies and policies

recommendations developed in cross-fertilised projects lesson learned from T 3.2

Existing strategies improvement



D.T4.1.3 Project team thematic workshop PW6

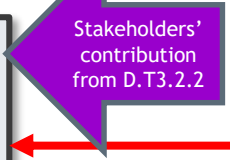
Other workshops & TM

A.T4.2 Strategy implementation

D.T4.2.1 Strategy for integrated and participatory water and land use management considering climate change

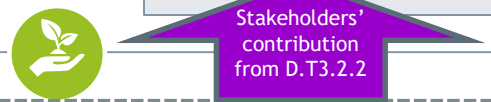
identification of key actors and measures to be taken to get better implementation of WFD, FD, DWD, RBMP on local lvl

Strategy synopsis



Result indicator:
18 Institutions adopting Strategy

D.T4.2.2 Linking TEACHER project with key stakeholders - forum for integrated water management



D.T4.2.3 Set-up of follow-up activities

Assessment of future directions in terms of water and land use management considering CCA

challenges and potential opportunities for further joint act.

TAKING COOPERATION FORWARD

D.T4.1.1

Identification of gaps in existing strategies and directives implementation on operational level

D.T4.1.2

Vision and objectives for improvement of existing strategies and policies

D.T4.2.1

Strategy for integrated and participatory water and land use management considering climate change



FROM GAPS IDENTIFICATION TO STRATEGY IMPROVEMENT

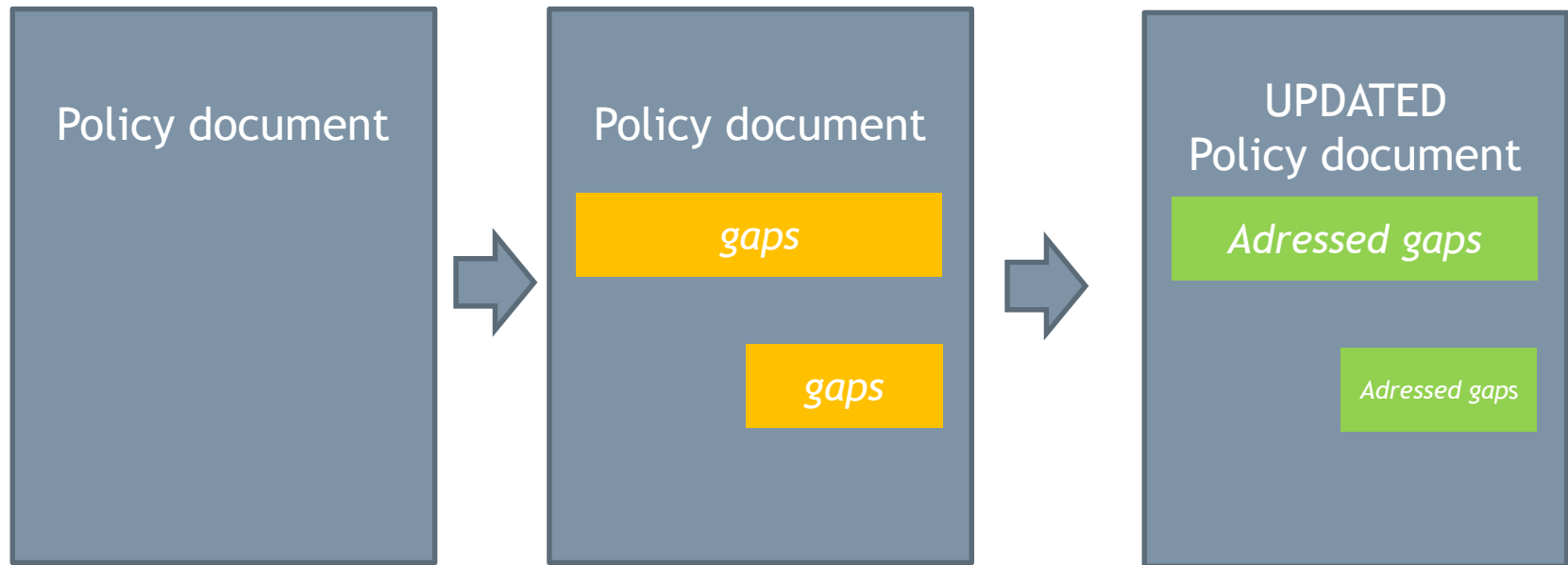
#0: designating local policy documents to update

#1: Identification of gaps

- Documents review
- Literature

#2: Addressing gaps:

- Toolbox
- Recommendations



REVIEW OF EXISTING STRATEGIES IN POLICY DOCUMENTS

A large variety of document types was reviewed:

Type of documents	Country (anonymized)							Total
	A	B	C	D	E	F	G	
Climate strategy			2		2	1	1	6
Drought management plan			1	1	1		1	4
Environmental Strategy	5		1		4	2	4	16
Flood risk management plan	1	1	2	4	1	1		10
Local plan of Adaptation to Climate Change		1		1	3			5
Local spatial development plan/strategy					1	1		2
National plan of adaptation to Climate Change		2		1		1		4
National spatial development plan/strategy		1	2	1		1		5
Other document			1	3				4
Other plan in the field of water management			2	2	3		1	8
Other strategy		1	2		2		12	17
Regional plan of adaptation to Climate Change		2		2				4
Regional spatial development plan/strategy	4	2	2	2	5			15
River basin management plan		1	3	2	1	2	1	10
Total	10	12	18	19	23	9	20	110



DOCUMENT REVIEW - GAPS IDENTIFICATION

RESULTS OF THE GAPS IDENTIFICATION BASED ON THE REVIEW FORM

Section	#	Questions	Start Answer	Decided Answer	Quotes from the document considered in DA (optional if the description in the previous column is considered complete)	Explanation and help	Search words	
	1	Document title (in national language)						
	2	Type of documents						
	3	Geographical coordinates of the document						
	4	Year of publication						
	5	Author						
	6	Link to the document						
	7	Geographic scope of the document						
	8	Basic planning unit of the document						
	9	Which fields of action does the document refer to? And does it focus on adaptation to Climate Changes (CCA) or on countering Climate Changes (CCE)?						
	SECTION A	General information about the document						
10	10	Flood/Flood risk (management)						
11	11	Flood/Flood risk (management)						
12	12	Groundwater management						
13	13	Drinking water supply (management)						
14	14	Irrigation water (management)						
15	15	Water scarcity and drought risk (management)						
16	16	Management of water-dependent ecosystems						
17	17	Other (describe)						
SECTION B	Description of the climate change base							
18	18	Did the information of the CC model used downstream?						
19	19	Please specify how to use the "standard output" option.						
20	20	Have the projections of the CC model been "translated" / presented to the basic planning units of document for operational purposes?						
21	21	Please also provide information about the resolution / scale of the CC scenario (e.g. country, river basin, sub-basins, administrative region, water bodies, 25 km x 25 km squares, ...) in the "standard output" table of the CC model used? (The reference period is the period from which the model projections are compared)						

Very prevalent gaps:

- Weak hydrogeological description
- No water use forecast
- No consideration of CC impact at the operational level, e.g.:
 - No CC- resilience test of measures,
 - No evaluation of effectiveness of the adaptation measure
- Weak assessment of the document realisation in the field of emission of greenhouse gases or adaptation to the CC

Quite prevalent gaps:

- None-optimal geographic scale
- Weak meteorological description
- Weak hydrological description
- No consultation with neighbouring countries in the field of adaption measures

uncommon gaps:

- Absence of adaptation measure associated with the FoA of the document



GAPS IDENTIFIED BY LITERATURE REVIEW

- The review of English-language scientific literature was carried out by PP4,
- the review of gray and scientific literature in national language was conducted by members of the Review Group from individual countries.
- 25 articles (Scientific & grey) from the searched databases were selected and subjected to further analysis

Gaps examples:





- *A lack of expertise in dealing with climate challenges in an integrated manner,*
- *Insufficient human resources to develop and implement a comprehensive climate change adaptation strategy,*
- *Low budget and few opportunities to make large investments for climate change adaptation and mitigation,*
- *Limited benefit from climate-related research programs and funding,*
- *Less autonomy due to dependency on or limitations by upper governance levels.*
- *Tools functionalities and features:*
 - *limited to specific impacts or sectors such as wetland changes, coastal flooding and erosion;*
 - *address problems at a coarse national/sub-continental scale,*
 - *not useful to respond and manage risks locally;*
 - *difficulties in answer effectively to a variety of important decision making questions*



EXISTING STRATEGIES AND THEIR GAPS

The review of existing policy documents, literature and previous projects connected with TEACHER-CE leads to the identification of ~90 gaps.

The most relevant gaps:

-  Weak meteorological/hydrological description of the CC effects
-  No evaluation of effectiveness of the adaptation measure
-  No water use forecast
-  No test of robustness to CC for proposed measures

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D.T4.1.1

Identification of gaps in existing strategies and directives implementation on operational level

D.T4.1.2

Vision and objectives for improvement of existing strategies and policies

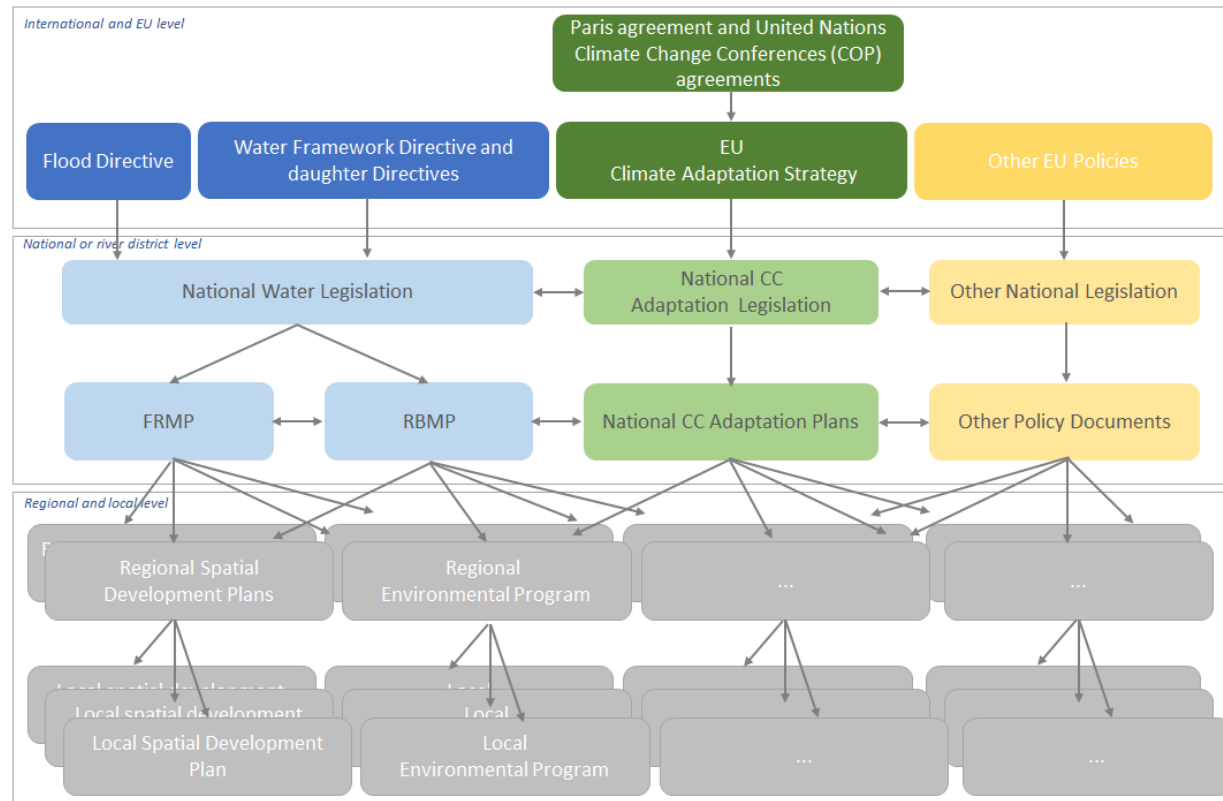
D.T4.2.1

Strategy for integrated and participatory water and land use management considering climate change



HOW TO USE THE OUTCOMES OF EU/NATIONAL STRATEGIES TO IMPROVE LOCAL ONCE

- Description of the planning process from EU to local level
- Presentation of **objectives** that results from the WFD, FD, DWD and GWD for the different Fields of Actions used in TEACHCER-CE in the context of CC, and **tools** that may help to reach them.



Assumptions

1. Many documents analyzed under D4.1.1 containing strategies (water management, implementation of directives), **especially below the national level, are in the process of updating or will be subject to updating.**
2. According to the assumptions written in the documents at the EU and the national level, **updating of regional and local documents is required**, which should improve the current water management and add / develop CCA issues.
3. **improving strategy = to integrate CC issues into (new/existing) strategy**

Vision & Objectives

1. Therefore, the **TEACHER strategy contains sets of possibly universal recommendations** for improvement and CCA that could be incorporated into updated documents of various types and levels.
2. These recommendations:
 - lead to the **filling of** as many of the **gaps** identified in D4.1.1 as possible, especially gaps in CCA integration
 - **promote and stimulate adoption of tools from TEACHER Toolbox** for efficient use for decision making in water management planning.



OPERATIONAL RECOMMENDATIONS)

Proposal of guidelines for elaboration of local CC strategies resulting from regional and national strategies and plans

- lead to address the gaps identified in D4.1.1;
- take into account the ADAPT platform assumptions of the European Commission
- the guidelines will mainly refer to the TEACHER-CE toolbox+ Cross-fertilized projects;
- step by step guideline:



D.T4.1.1

Identification of gaps in existing strategies and directives implementation on operational level

D.T4.1.2

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D.T4.2.1

Strategy for integrated and participatory water and land use management considering climate change



D.T4.2.1 Strategy for integrated and participatory water and land use management considering climate change

The 5 general recommendations of the D.T4.1.2 structure the strategy part about measures:

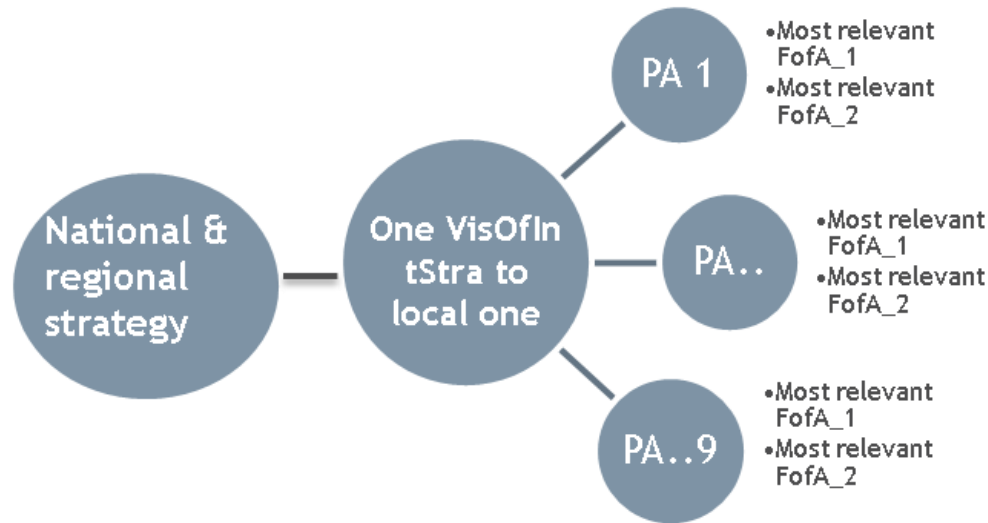
1. Integrating assumptions of national/regional documents into the planning process
2. Mainstreaming the climate change effects adaptation into the planning process
3. Maximizing of cross-sectoral benefits
4. Privileging the implementation of nature-based solutions, implementing sustainable land use
5. Stakeholder's involvement

And is completed by measures from:

- the stories (as measure implementation or recommendation examples);
- Lookup table of measures
- measures proposed from the "Key messages regarding policy recommendations from the TEACHER project" - discussion paper by PP 03, based on the pilot activities in Görlitz/east Saxony and the discussions in the workshops and expert meetings in the pilot area



D.T4.2.1 Strategy for integrated and participatory water and land use management considering climate change



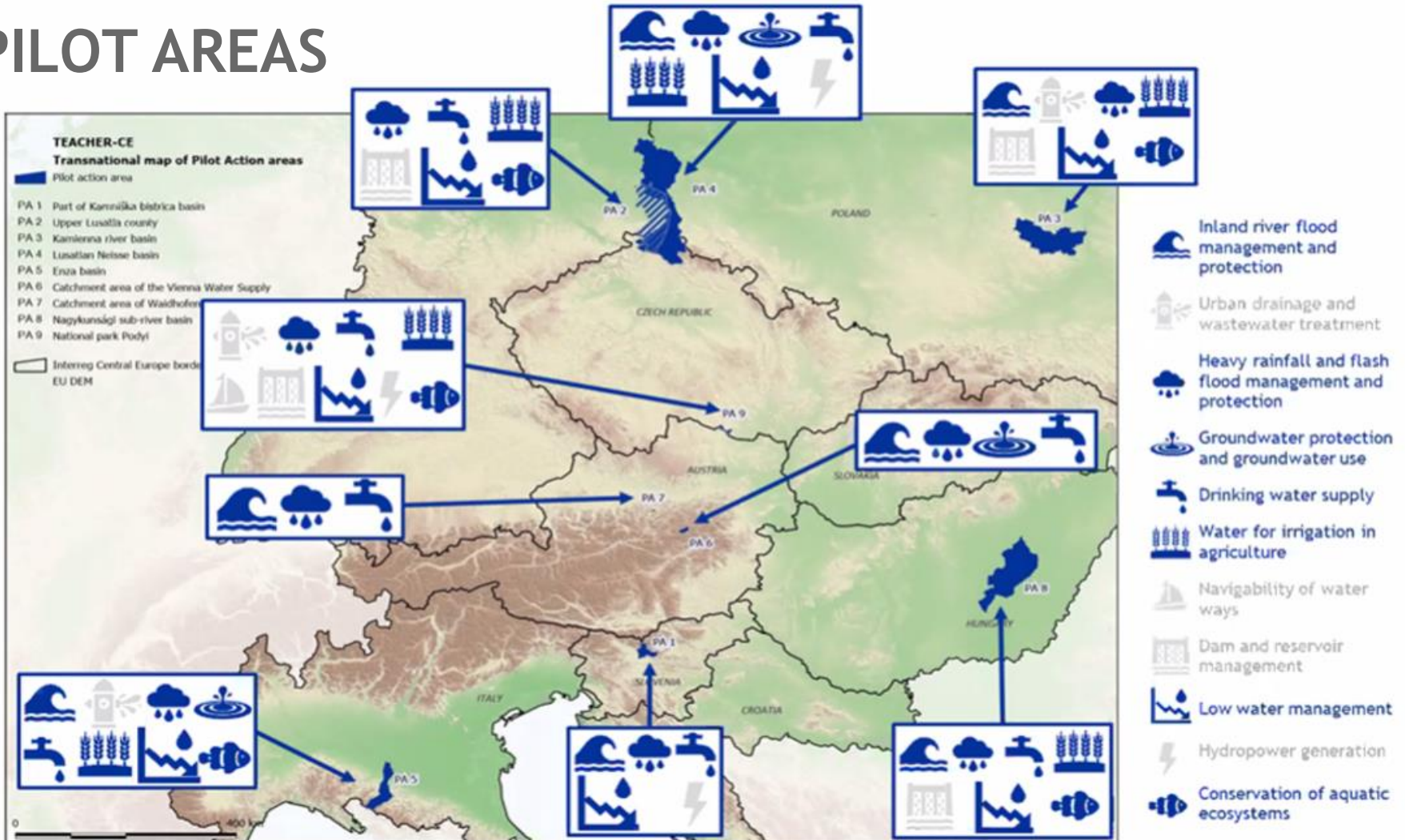
VisOfIntStra- vision of integration strategy

Each Partner has chosen 2-3 examples, understood as cases in 2-3 FoAs in particular area (resulting in about 18 combinations in total), which can lead to acceptance our recommendations by institution responsible for these FoAs (waterworks in fields connected to drinking water, municipality in fields connected to spatial planning).

INTEGRATED means transferring information from the national and regional strategy and developing a local strategy
JOINT means that the strategy is prepared by all PPs and consulted with Stakeholders



PILOT AREAS



ANALYSIS OF STRATEGIC DOCUMENTS IN 9 PILOT AREA AND PROPOSAL OF RECOMMENDATIONS FOR TAKING CLIMATE CHANGE INTO ACCOUNT

Field of action		Slovenia	Germany	Poland	Poland	Italy	Austria	Austria	Hungary	Czech Rep.
		Kamniška Bistrica	Upper Lusatia	Kamienna	Nysa Łużycka	Enza	Vienna Water Drinking Water Sources	Waidhofen/ Ybbs Drinking Water Sources	Nagykunsagi	Podyjí National Park
Fluvial flood risk management		*			*	*			*	*
Pluvial flood risk management			*	*					*	
Drinking water supply management		*					**	**		*
Water scarcity and drought management			*		*	*			*	
Management of water-dependent ecosystems			*	*						



D.T4.2.1 Strategy for integrated and participatory water and land use management considering climate change

FACT SHEET STRUCTURE

Pilot Area
Field of Action
Definition of the issue
(1) Existing important policy documents (1),
(2) Their gaps
(3) Recommendations for improvement
Measures
Potential synergies

Pilot Area	PA1 Kamniška Bistrica River Basin
Field of Action	Drinking water supply management
Definition of the issue	The Kamniška Bistrica is the largest Slovenian torrential river, which originates in the mountainous area Kamnik Alps with peaks over 2000 m high and flows through the town of Kamnik to the lowlands. The Kamniška Bistrica river supplies the Iverje drinking water source, which is the main source of drinking water in the area. The upper course of the Kamniška Bistrica has a very good ***** *****
Existing important policy documents (1),	(1)Decree on drinking water supply - Uredba o oskrbi s pitno vodo (Uradni list RS, št. 88/12)). Drinking water sources are divided into two categories: Water sources for private (local) use and water sources managed by public utilities and serving public water supply. The use of water sources is determined by a water right that defines how much water may be used.
Their gaps (2) and	(2)On the territory of PA Kamniška Bistrica there are 11 allocated water rights for drinking water sources for private use. These water sources do not require drinking water protection zones and are not regularly tested for their water quality.
Recommendations for improvement (3)	(3)The quality and quantity of water used from the water sources should be controlled so that they are within the limits set by Water right. ***** *****
Measures	The Slovenian Water Act, especially the part on the drinking water protection zone's (DWPZ) in Slovenia, needs to be updated at the national level. Drinking water production is relatively shallow and depends heavily on riverbed works and the quality of the Kamniška Bistrica River. Deeper wells and the use of the aquifer with karst fractures would be better (some studies have already been carried out). An agreement to regulate the facilities and activities on Velika, Mala planina and the surrounding mountains is crucial for improving water protection; this includes the regulation of proper wastewater treatment.
Potential synergies	In PA Kamniška Bistrica, the management of drinking water supply is related or affected by most of the fields of actions. The biggest impact is seen by Fluvial and Pluvial flood risk management. In order to effectively manage the problems related to surface water and groundwater, cross-sectoral cooperation between these three areas is required.



From the case studies described in the factsheet key messages were identified:

- ***Using all the potential of local spatial development plans e.g.:*** by defining buffering zones in wetlands and river valleys to improve nutriment or water retention possibilities (PL), defining multifunctional land uses (parking areas suitable for collection, storage and drainage of water (DE));
- ***Improving the efficiency of water uses by regulation/controls:*** a rational water resources usage could lead to a high-water availability for agriculture, manufacture, and can bring a positive impact on the natural environment (IT);
- ***Broaden the scope of CC adaptation documents*** to cover relevant issues (SI)
- ***Providing more detailed predictions on climate change effects on drinking quality*** supply, taking into considerations extreme events (CZ);
- ***Improving water retention capacity*** of the river basin has an impact on the flood situation, improves soil water management, increases the available irrigation water supply, and beneficial for water dependent ecosystems (HU);

