

TAKING  
**COOPERATION**  
FORWARD



Final Conference  
February 2 2022



**Project TEACHER-CE**  
**CC-ARP-CE Toolbox**



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# CONCEPTUAL SCHEME OF THE TOOLBOX

Users/stakeholders providing  
 different perspectives &  
 cross-sectoral aspects  
 (cooperation/competition)

National & EU  
 tools for water  
 management  
 (FWD, FD)

measures

issues



Simplified GIS:  
 issues,  
 measures,  
 spatial  
 orientation,  
 climate change

Link to existing toolboxes:  
 PROLINE, SUSTREE,  
 RAINMAN, FRAMWAT,  
 DRIDANUBE...

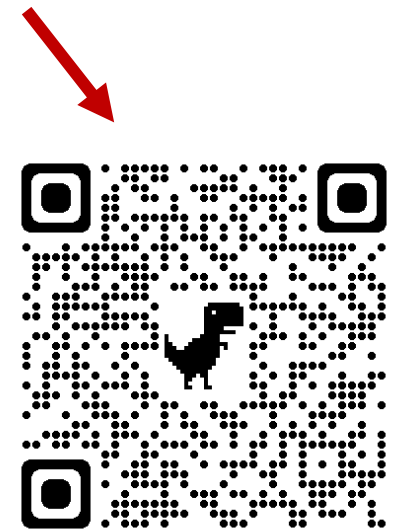
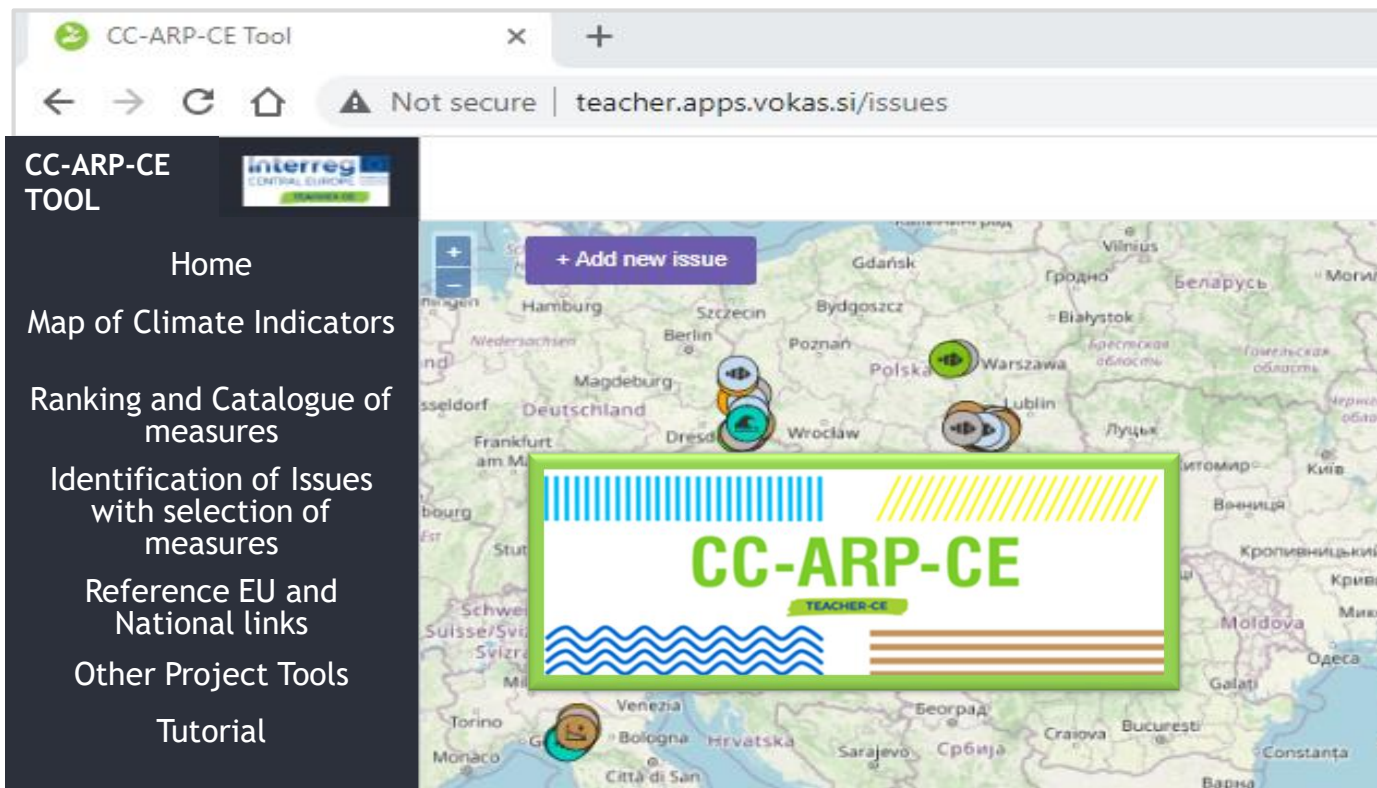
Harmonized  
 catalogue of  
 measures

TAKING COOPERATION FORWARD



CC-ARP CE is available at:

<http://teacher.apps.vokas.si/>



## GOALS

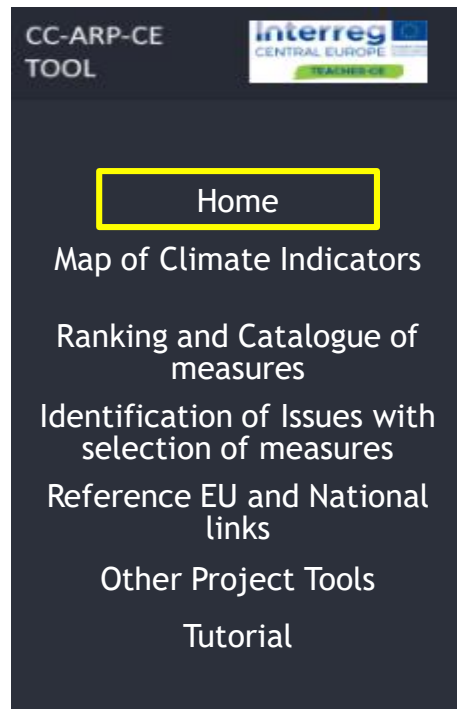
1. Platform for the Identification of the important water management Issues on addressed catchments
2. Identification and discussion of measures based upon the comprehensive catalogue of measures
3. Strategy for water management planning processes including CC adaptation and risk prevention
4. Improved navigation among the tools project level, EU level, and country level
5. Recommendations on post - event analysis - flood forensics



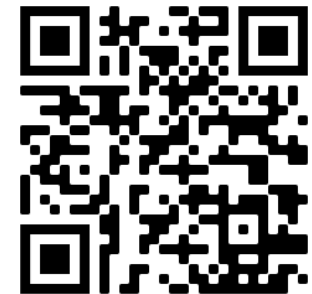
# THANK YOU FOR YOUR ATTENTION



## TOOLBOX FEATURES




**WELCOME TO THE TEACHER-CE PROJECTS' TOOLBOX: CC-ARP-CE**



# CC-ARP-CE: GIS (ISSUES, CLIMATE DATA)

CC-ARP-CE  
TOOL



Home

**Map of Climate Indicators**

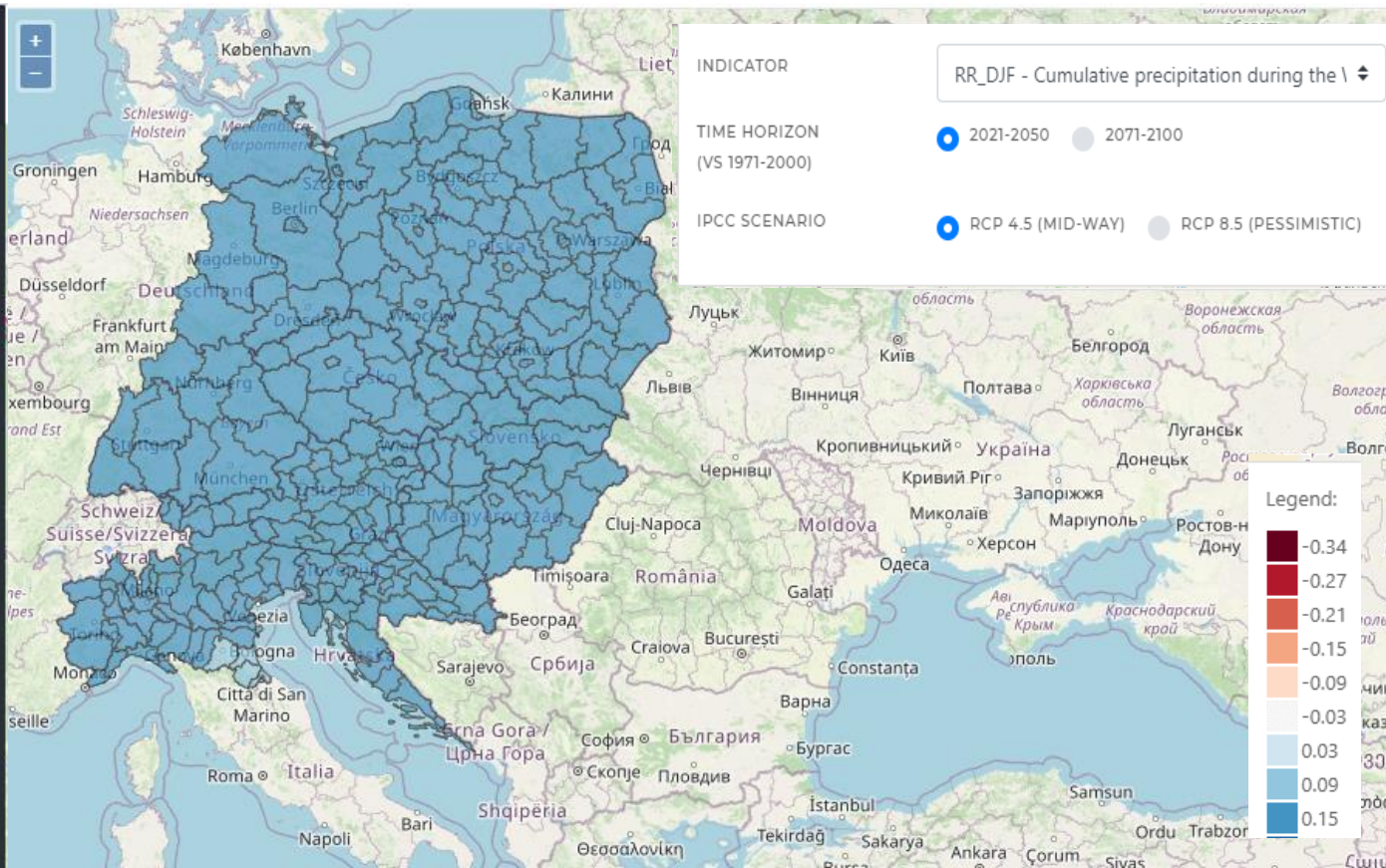
Ranking and Catalogue of measures

Identification of Issues with selection of measures

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## Climate Change Scenarios & Climate Indicators



CC-ARP-CE TOOL



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Filter by ?

Language 

**Land cover/use**

- Grassland
- Wetland
- All land uses (general water management)
- Agriculture
- Forest
- Urban

**Topographic Settings**

- Mixed settings
- Mountain
- Plain

**Adaptation Target (multiple options are recommended)**

- Water quality
- Water quantity / Water quality / Flood mitigation
- Water quality / Flood mitigation
- Water quantity / Water quality
- Water quantity
- Flood mitigation

**Planning time horizon**

- Operational (day by day)
- Strategic (up to 5 years)

## Selecting measures according to criteria (AHP - Analytic Hierarchy Process)

Choose which parameter values more ?

Cost of the measure

Water protection functionality

9

more equal more

I cannot provide a judgment

Duration of implementation

Water protection functionality

9

more equal more

I cannot provide a judgment

Time interval of sustainability

Water protection functionality

9

more equal more

I cannot provide a judgment

Multi-functionality

Water protection functionality

9

more equal more

I cannot provide a judgment

## List of user prioritised measures

Score	Name	Land cover/use	Topographic settings	Adaptation target	Planning time horizon	Water protection functionality	Cost of the measure	Duration of implementation	Time interval of sustainability	Multi-functionality
0.96	Avoidance of clear-cut applications (except sanitary cuts)	Forest	Mountain	Water quality / Flood mitigation	Strategic (up to 5 years)	★★★★★	★★★☆☆	★★★★★	★★★★★	★★★★★
0.96	Restrictions of forest roads within Drinking Water Protection Zones (DWPZ)	Forest	Mountain	Water quantity / Water quality / Flood mitigation	Strategic (up to 5 years)	★★★★★	★★★☆☆	★★★★★	★★★★★	★★★★★
0.96	Protection of old, huge and vital tree individuals	Forest	Mountain	Water quality / Flood mitigation	Strategic (up to 5 years)	★★★★★	★★★☆☆	★★★★★	★★★★★	★★★★★


**163 measures + users can propose new measures**





# CC-ARP-CE: GIS (ISSUES, CLIMATE DATA)

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**view climate indicators**

Add new issue  
Reference elevation used for calculation of indicators: 474 m a.s.l.  
Min / max elevation in the region: 282 m a.s.l. / 790 m a.s.l.

ABBREVIATION	INDICATOR	2021-2050 (OPTIMISTIC)	2071-2100 (OPTIMISTIC)	2021-2050 (PESSIMISTIC)	2071-2100 (PESSIMISTIC)	UNIT	IMPORTANCE
RR_DIF	Cumulative precipitation during the Winter season (December-January-February) averaged over 30 years	0.114	0.137	0.11	0.206	% (Relative)	
RR_MAM	Cumulative precipitation during the Spring season (March-April-May) averaged over 30 years	0.052	0.065	0.041	0.098	% (Relative)	
RR_JJA	Cumulative precipitation during the Summer season (June-July-August) averaged over 30 years	-0.012	0.027	0.012	-0.115	% (Relative)	
RR_SON	Cumulative precipitation during the Autumn season (September-October-November) averaged over 30 years	-0.027	0.058	0.064	0.019	% (Relative)	
PRCPTOT	Annual total precipitation in wet days	6.792	51.92	23.932	18.481	mm (Absolute)	
Rx_1D	Yearly maximum 1-day precipitation averaged over 30 years	3.692	6.854	5.204	11.081	% (Relative)	
R20mm	Annual count of days when daily precipitation ≥ 20mm averaged over 30 years	0.311	1.063	0.669	0.926	days (Absolute)	

Back

Save Evaluate measures View climate indicators


Report Fluvial flood risk management 4/15/21

Identify new Issue / browse through existing issues / comment an issue proposed by other user, and: evaluate measures or view climate indicators



# CC-ARP-CE: LINK TO EU & NATIONAL TOOLS

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EUROPEAN UNION AUSTRIA CZECHIA GERMANY HUNGARY ITALY POLAND SLOVAKIA SLOVENIA

## Slovenia

Show 20 entries


Search:

FIELDS OF ACTION IN WATER MANAGEMENT	GIS TOOLS	DATA PORTALS
Fluvial flood risk (management)	<a href="#">Atlas voda</a>	<a href="#">eVode portal</a>
Pluvial flood risk (management)	<a href="#">Atlas voda</a>	
Groundwater management	<a href="#">Kakovost podzemnih voda; Atlas voda</a>	<a href="#">Podzemne vode</a>
Water Scarcity and Drought (management)	<a href="#">Ocenjen vpliv suše na pridelek kmetijskih rastlin, pridobljen iz poročevalske mreže DriDanube</a>	<a href="#">Sušomer</a>
Drinking water supply (management)	<a href="#">Atlas voda</a>	<a href="#">Podzemne vode</a>
Management of water-dependent ecosystems		
Irrigation water (management)	<a href="#">Javni pregledovalnik grafičnih podatkov MKGP</a>	<a href="#">MKGP portal</a>

## References to EU & National GIS tools and data portals



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## Links to tools from connected EU projects

- [GOWARE toolbox and strategy development for Drinking water sources protection with interaction to floods and CC.](#)



The tool represents a Decision Support Tool (DST) developed for supporting the implementation of innovative Best Management Practices (BMPs) for drinking water protection, also with regard to floods and droughts.

- [Decision Support System \(DSS\) for water retention planning of measures:](#)

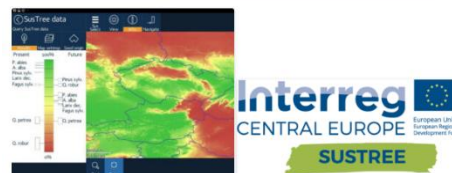


The application is intended for people involved in the planning of water retention measures to mitigate the effects of drought, flooding and surface ...

- [RAINMAN Toolbox for heavy rain risk management:](#)



- [SUSelect tool – Forest CC vulnerability assessment tool and seed transfer models](#)



## Links to Other EU projects

### DIRECT EXPLOITATION OF RESULTS – Other European projects

- LUMAT – LumaTo (DSS) tool and action plan for sustainable development on threatened sites by integ emphasizing CC adaption processes

The tool, developed in Interreg Central Europe project LUMAT – Implementation of Sustainable Land Use in of Functional Urban Areas, is designed for the management of urban-peri-urban relationships and their su places more liveable. LUMATO carries out an integrated environmental analysis for these Functional Urban evaluating soil threats and the potentials for revitalization. A decision support system (DSS) guides stakeho threatened sites.

- Life Local Adapt – ReKIS tool supporting CC adaptation of communities – rollout of CC adaptation stra

The project Life Local Adapt – Integration of climate change adaptation into the work of local authorities for sized municipalities, districts and counties up to 100,000 inhabitants and points out suitable and diversific for local stakeholders of administration and citizens in municipalities.

- KAMPINOS – Verification of the effectiveness of natural small water retention measures, toolbox valid

In the course of the project LIFE+ KAMPINOS WETLANDS PL – Wetlands conservation and restoration in Pus numerous data regarding small water retention measures were collected.





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