

Integrated Drought Management in Central and Eastern Europe

ACTIVITY LIST

1. BASIC INFORMATION

Number of Activity:	Activity 5 3
Number of Activity.	
Title of the activity:	Natural small water retention measures
Duration of the activity:	April 2013 – March 2015
Activity leader:	Tomasz Okruzsko (PL)
Chairman of the CWP:	Tomasz Okruzsko
	(t.okruszko@levis.sggw.pl)
Description of the activity:	

So called "small retention" belongs to adaptive measures as it serves to extreme climate variability; specifically to retain water in the land during wet periods and slow down flood waves during the flood periods. On the other hand it increases the buffering capacity of landscape during the drought period due to increased water retention dry season and preserves ecosystems that are sensitive to water losses. Main objective is to address nature and landscape values and co-operation with the stakeholders (especially farmers) in order to regard flooding not only as a threat but also as an opportunity for broad rural development, nature restoration, recreation, "enrichment" of the habitat and (last but not least) for a new approach to water. The measures include both small scale hydraulic structures as well as non-technical activities as reforestation, restoration of wetlands, re-meandring of rivers, and soil structure improvement.

The case study will summarize experiences from already implemented projects in Poland, Slovakia Hungary, and Slovenia. Based upon critical analysis, tools for systematic application of the non-traditional measures will be developed. These will include the use of GIS tools for optimization of a system of small water retention measures in the landscape (choice of catchments for investments), recommendations for legislation, integration of these measures into national flood and drought protection plans, recommendations for financing and role of local communities in application of these measures.

Basing on experience of the four countries we can demonstrate usefulness of the approach for lowlands (Poland, Hungary) hill and mountains (Slovakia and Slovenia) landscape in more Atlantic/continental



(Poland, Slovakia) and Mediterranean/continental (Slovenia, Hungary) climate.



2. CONTRIBUTING ORGANIZATIONS / EXPERTS

Country	Organization	Contact
Hungary	University of Debrecen	János Fehér, HU Team Leader Ms Judit Gáspár, Ret. Senior Scientist (from late VITUKI) Ms Mónika Mándoki, freelance expert (previously Research Associate in late VITUKI) Prof. János Tamás, University of Debrecen
Slovakia	нүсомр	Vladimir Mosny
Poland	Warsaw University of Life Sciences	Tomasz Okruszko - leader
Slovenia	Limnos d.o.o.	Darja Istenič

3. PLAN for IMPLEMENTATION of the activity

Name of the output	Natural landscape retention – combining drought mitigation, flood protection and biodiversity conservation.
Type of the output (analysis, report, guideline, workshop, brochure, etc.):	Guideline
Form (website, CD, printed, database, audio-visual, computer software, etc.):	<i>Printed & CD, website (including cases for GWP Toolbox)</i>
Purpose of the output:	Practical tool for individuals, NGO's and administration how to plan and implement natural landscape retention measures.
Structure and description (contents, requirements for use, chapters, etc.)	The Guideline will consist of the following chapters (tentative titles and no sub-chapters yet): 1.Introduction – why do we need to increase the landscape retention?



2. What are the technical and non-technical measures to		
increase the landscape retention?		
3. How to choose the catchment for the retention measures?		
4. How can we evaluate the results in the terms of flood		
protection, drought mitigation and biodiversity increase?		
5. How can we incorporate the natural landscape retention in		
the RBMP, FPMP and DMP?		
6. Experiences and critical analysis from already implemented		
projects in Poland, Slovakia, Hungary and Slovenia including		
stakeholders.		
7. Conclusion – what is the best action plan?		

Steps for implementation of the activity	Till when?	Who is responsible?
Preparation of the template for gathering experience (points 2 and 5 of the final report).	Aug 2013	PL WULS/ITE (prof Waldemar Mioduszewski)
Practical and legal experience from Poland.	Sep 2013	PL WULS (dr Ignacy Kardel)
Practical and legal experience from Slovakia	Sep 2013	SK
Practical and legal experience from Slovenia	Sep 2013	SLO
Practical and legal experience from Hungary	Sep 2013	HUN
Workshop to summarize the experiences and make future planning.	Oct 2013	PL WULS (prof. Tomasz Okruszko)
GIS based methodology for the catchment comparison (point 3 of final report).	Nov 2013	PL WULS (dr Ignacy Kardel)
Development (literature search) of effectiveness indices for flood protection, drought and biodiversity. Fitting the natural	Feb 2014	ALL



retention measures to IRBMP, FPMP and		
DMP		
Workshop (or Skype) for choice of the indices		
which can be used in different landscape		
setting and climatic conditions under	March 2014	PL WULS (prof Tomasz Okruszko)
constrained data access (point 4 of final		
report)		
Drafts of 2,3,4,5 ready		PL WULS (prof. Tomasz Okruszko)
	April 2014	
		+ALL
Development of template for example		DL WILLIS /ITE (prof Waldomar
Development of template for example	April 2014	PE WOLS/ITE (prof waldelliar
		Mioduszewski)
Best example from Poland	Aug 2014	PL WULS (dr Ignacy Kardel)
Best example from Slovakia	Aug 2014	SK
Best example from Slovenia	Δυσ 2014	\$10
	Aug 2014	510
Best example from Hungary	Aug 2014	HUN
Workshop (or Skype) for choice of the best	Sep 2014	PL WULS (prof. Tomasz Okruszko)
example		, , , , , , , , , , , , , , , , , , ,
Draft of 1, 6 , 7 ready		PL WULS (prof. Tomasz Okruszko)
	Oct 2014	
		+ALL
Extended draft of Cuidling ready		
	lan 2015	PL WOLS (prof. Tomasz Okruszko)
	3011 2013	+ALL
Tuning workshop	Feb 2015	PL WULS (prof. Tomasz Okruszko)
	2015	
FINAL OUTPUT: Guidline	2015	PL WOLS (prof. Tomasz Okruszko)