

## **Integrated Drought Management in Central and Eastern Europe**

**1<sup>st</sup> Quarterly report**  
**(January – March 2015)**

### ***Short summary of the main programme activities***

---

#### **1) In the first quarter of 2015 IDMP CEE partners have completed with their tasks and finalized their last reports or outputs:**

- Implementation report with short description of selected data exchange platform (European Drought Observatory) and information which data have been added to the platform from contributing partners (act. 1.3);
- Guidelines for preparation of Drought Management Plans (act. 2.1);
- Practical recommendations for farmers and decision makers on preventive measures as tools for drought management in agricultural practices and technologies (act. 5.1);
- Adaptation measures for the forests to mitigate negative effects of the drought (act. 5.2);
- Guidelines on Natural Small Water Retention Measures combining drought mitigation, flood protection and biodiversity conservation (act. 5.3);
- Framework for Drought Risk Management Scheme that can facilitate the preparation of decision support systems for drought risk management (act. 5.4);
- Decision support system for drought monitoring by concrete identification of remote sensing and GIS data tools for agricultural drought monitoring and yield loss forecast (act. 5.5);
- Upgrading of forecasting models for identification of crop yield losses caused by droughts in Ukraine (act. 5.6);
- Development of proposals for the precipitation harvesting and practices for moisture conservation in agricultural lands in Moldova (act. 5.6).

All final outputs/reports will be available online after the final workshop in Bucharest (21-22 April). They need to be reviewed by IDMP CEE Peer Review Group, proofread and some of the outputs (guidelines) will also be graphically improved.

See current situation within each activity in below [detail description](#).

**2) We started with “follow-up” activities** and producing first project proposals (topics) for continuation of drought related activities in the region. Read more [here](#).

**3) Final (fourth) workshop** will be held from 21-22 April 2015 in Bucharest, Romania. Event will be again back-to-back with the GWP CEE Council meeting (19-20 April). On 21 April we will have regular IDMP CEE workshop and on 22 April focus will be more on future “drought activities” (follow up projects).

Read more about both events [here](#).

Check the latest news on our web page:

<http://www.gwp.org/en/GWP-CEE/IDMPCEE/News-and-events/>

Here you can access all Activity Lists, milestone reports, past BTORs and other internal documents:

[IDMP CEE for partners](#).

## *Detailed description of the programme activities*

<b>Work package 1</b>	<b>Regional and Transboundary Cooperation</b>
<b>Activity</b>	<b>1.1: Cooperation with international basin commissions and regional organizations</b>
<b>Responsible</b>	<i>RWP Coordinator, IDMP CEE Programme Manager</i>
<p>Programme Manager together with Regional Coordinator participated on the <b>training workshop on Mainstreaming Gender and Corporate Social Responsibility (CSR)</b> that was held in Athens on 2-4 March 2015. Goal was to increase use of gender and CSR perspectives in GWP water related work and projects. The workshop was designed for GWP-MED in frame of project "Governance &amp; Financing for the Mediterranean Water Sector". SIDA supported this project with a gender and CSR experts. You can read more about this event <a href="#">BTOR</a>.</p> <p>The <a href="#">International Conference on Drought Research and Science-Policy Interfacing</a> was the final event of the EC-funded project <a href="#">DROUGHT-R&amp;SPI</a>. Main aim of the event was to discuss drought related research and the advances on response policies in order to foster the development of drought policies and plans to reduce risk and vulnerability, and to enhance preparedness and resiliency. Focus of the conference was also on presentation of the results of DROUGHT-R&amp;SPI project and other interesting presentations that deal with the three drought aspects: identification, assessment and policies. IDMP CEE Programme Manager was invited to the event by Mr Van Lanen who is a coordinator of the above mentioned project and also member of the IDMP CEE Peer Review Group. IDMP CEE was presented in a poster session as a part of the poster <i>Drought vulnerability assessment for different hydrological conditions based on Standardized Runoff Index and flow duration curve in Lithuania</i>, which was submitted by one of the IDMP CEE partner, Vilnius University. Poster can be found <a href="#">here</a> and more information about the event in <a href="#">BTOR</a>.</p>	
<b>Activity</b>	<b>1.2: Review of the current status of the implementation of DM plans and measures within RBMP according to EU WFD</b>
<b>Activity Leader</b>	<b>Elena Fatulova</b> GWP Slovakia <a href="mailto:elena.fatulova@gmail.com">elena.fatulova@gmail.com</a>
<b>Partners</b>	All 10 countries
<p><b>Review of the current status of the implementation of DM plans and measures within RBMP according to EU WFD</b> (act. 1.2) was finalized by the end of March 2014. The report summarizes the assessment of the drought relevance within the region and identifies the gaps in the national drought management strategies in comparison to EU strategy. The report is <a href="#">published on GWP CEE website</a>.</p>	
<b>Activity</b>	<b>1.3: Drought data exchange Platform</b>
<b>Activity Leader</b>	<b>Gregor Gregorič</b> Slovenian Environmental Agency /DMCSEE <a href="mailto:Gregor.Gregoric@gov.si">Gregor.Gregoric@gov.si</a>
<b>Partners</b>	All 10 countries
<p>The second output - <b>Implementation Report</b> was finalized at the beginning of January 2015. Its main aim is to give a short description of selected data exchange platform (European Drought Observatory) and report on which data have been added to the platform from contributing partners. <i>Report will be available online after the final workshop in April 2015.</i></p>	

<b>Activity</b>	<b>1.4: Development of GIS Based Communication Technology Platform for the Sustainable Management of Transboundary Water Resources in Lithuania, Poland and Kaliningrad Region (Russia)</b>
<b>Activity Leader</b>	<b>Bernardas Paukstys</b> GWP Lithuania bernardas@iti.lt
<b>Partners</b>	GWP Poland Kaliningrad district Central Research Institute for Complex Use of Water Resources, Belarus

Activity finished at the end of 2014. **Joint GIS maps for the transboundary Nemunas (Neman) and Pregolya river basins** have been compiled, common databases created and visualization of hydrological and human pressure information ([video](#)) provided. You can access Interactive map and database on this [link](#). Neman and Pregolya river basins are shared by Belarus, Lithuania, Kaliningrad Oblast (Russia) and Poland. One of the important outcomes of the project was also stronger professional cooperative links between the water management and GIS experts of neighbouring countries Belarus, Lithuania, Kaliningrad and Poland.

<b>Work package 2</b>	<b>National planning processes</b>
<b>Activity</b>	<b>2.1: Guidelines for Drought Management Plan</b>
<b>Activity Leader</b>	<b>Elena Fatulova</b> GWP Slovakia elena.fatulova@gmail.com
<b>Partners</b>	All 10 countries

In March 2015 **Guidelines for preparation of the Drought Management Plans (DMPs)** was finalized. The general objective was to develop Guidelines for the **national level** as a practical guide providing support for timely production of DMPs within development of the RBMPs. The Guidelines are primarily addressed to the public bodies and competent authorities responsible for drought planning. The emphasis was given to simplicity in order to be easily understandable by brought public. They will be available online in April/May 2015 together with the summary of the **2<sup>nd</sup> National Consultation Dialogues**.

On “for-partners” site you can also find:

- [Slovak Case Study](#)
- [List of drought definitions](#)

<b>Activity</b>	<b>2.2: National Consultation dialogues</b>
<b>Activity Leader</b>	<b>Elena Fatulova</b> GWP Slovakia elena.fatulova@gmail.com
<b>Partners</b>	All 10 Country Water Partnerships

**2<sup>nd</sup> National Consultation Dialogues (NCDs) took place:**

- 12 June, Czech Republic
- 16 October, Hungary
- 20 November, Lithuania
- 20 November, Romania
- 26 November, Bulgaria
- 3 December, Slovenia
- 8 December, Poland
- 12 December, Ukraine
- 12 December, Moldova

(Due to problems in GWP Slovakia they didn't organized their 2<sup>nd</sup> NCD).

The main objective of the 2<sup>nd</sup> NCDs was contribution to the completion of the Guidelines by elaboration of the written comments, proposals for adjustment, corrections, amendments of the draft version and with providing national experiences related to the key elements of the Drought Management Plan:

- examples of the national methodologies for assessment of historical drought;
- examples of the national drought indicator systems;
- examples of the national drought classification and early warning systems;
- examples of national organizational structures to deal with drought;
- examples of national program of measures for preventing and mitigating drought;
- examples of the national research programme supporting drought management.

Some of the examples were included into the Guidelines as “case studies”.

All reports can be found on our web page, under [National planning](#), also there is a [Summary report](#) from the 1<sup>st</sup> cycle of NCDs. *Summary of the 2<sup>nd</sup> NCDs will be available online in April 2015.*

<b>Work package 5</b>	<b>Demonstration Projects</b>
<b>Activity</b>	<b>5.1: Drought management by agricultural practices and measures-increasing soil water holding capacity</b>
<b>Activity Leader</b>	<b>Pavol Bielek</b> Slovak University of Agriculture pavol.bielek@gmail.com
<b>Partners</b>	Research Institute for Soil and Water Conservation (Czech Republic) Institute of Agricultural and Forest Environment, Polish Academy of Sciences (Poland) Biotechnical Faculty (Slovenia)

In March partners prepared final report where they joint their field experiences from both years (2013 and 2014) into **practical recommendations for farmers and decision makers on preventive measures as tools for drought management in agricultural practices and technologies**.

Results of the 5.1 activity describe concrete methods and procedures for increasing soil water holding capacity. Proposed methods are: subsoiling, organic matter application into the soil, conservation tillage (to the deep 10 cm), ecological farming (preferring of organic fertilizers), composting tillage, no-till farming and another no radical partial measures increasing of water infiltration into the soil profile and improving water regimes of the countries.

*Final report will be available after peer review in April 2015.*

<b>Activity</b>	<b>5.2: Assessment of drought impact on forests</b>
<b>Activity Leader</b>	<b>Galia Bardarska</b> GWP Bulgaria bardarska@dir.bg
<b>Partners</b>	Vilnius university; Dept. of Hydrology & Climatology (Lithuania) Institute of Forestry; Research Centre for Agriculture and Forestry (Lithuania) Slovenian Forestry Institute, Department for forest ecology (Slovenia) National Scientific Centre for Global Changes (Bulgaria) Forest Research Institute (Bulgaria) Ukrainian Research Institute of Forest and Forest Melioration (Ukraine)

»Forest demonstration project« finalized their 2nd main output **Adaptation measures for the forests to mitigate negative effects of the drought** - will be used in forestry chapter of the new National strategies on adaptation to climate change and RBMPs 2016-2021/2021-2027. These measures are also applicable in the future management plans of the forestry sector in 4 GWP CEE countries as well as in other CEE countries.

In previous period they prepared **Determination of vulnerability forest zones** in current climate (1950-2000), 2050 and 2070 according to IPCC AR5 (2014) and distribution of forest areas and tree species over vulnerability zones.

*Both outputs will be available online after peer review in April/May 2015.*

<b>Activity</b>	<b>5.3: Natural small water retention measures</b>	
<b>Activity Leader</b>	<b>Tomasz Okruszko</b> Warsaw University of Life Sciences (Poland) t.okruszko@levis.sggw.pl	
<b>Partners</b>	University of Debrecen (Hungary) HYCOMP (Slovakia) Limnos Ltd (Slovenia)	
<p>Natural water retention measures (NWRM) as it is understood in EU stress the importance of green infrastructure as a part of both achieving the good ecological status of European water bodies as well as reducing the risk of floods. Partners within 5.3 activity have enriched this approach by adding the small hydraulic infrastructure as a proper measure to achieve those goals and moreover adding the task of increasing the robustness of the landscape against the drought events by increasing the landscape water retention.</p> <p><b>Guidelines on Natural Small Water Retention Measures combining drought mitigation, flood protection and biodiversity conservation</b> was finalized in March 2015 but <i>will be available online in April/May 2015 (after proofread, graphic design)</i>. Guidelines are supported also with few <b>case studies</b> (best cases) from participating countries with maps, graphs and photos.</p> <p>In November a <a href="#">video on Small retention</a> was released. The purpose of the video is to explain what Small Retention is, why it is important and show some of the demonstration projects - water reservoirs, ponds, etc.</p>		
<b>Activity</b>	<b>5.4: Drought Risk Management Scheme: a decision support system</b>	
<b>Activity Leader</b>	<b>Tamara Tokarczyk</b> Institute of Meteorology and Water Management, National Research Institute (Poland) tamara.tokarczyk@imgw.pl	
<b>Partners</b>	Institute of Technology and Life Sciences (Poland) Vilnius University, Department of Hydrology and Climatology (Lithuania) National Meteorological Administration (Romania)	
<p>Demonstration project 5.4 provides scheme of planning process for drought risk management. The overall goal of this activity was to provide the recommendations for operational support system in drought risk management.</p> <p>Partners completed with their final (3rd) output <b>Framework for Drought Risk Management Scheme</b>. Purpose of the Output 3 was to present a basic roadmap for integrating, developing and planning drought risk management tools at different levels, based on best practices, lessons learned and experiences introduced by project partners. The output has two parts; first part provides the context for the framework development that demonstrates the operational risk assessment in the region of Middle and Upper Odra River basin; the second part presents a planning process (scheme) that can facilitate the preparation of decision support systems for drought risk management. Developed framework defines main principles for drought management that can be applied for various drought aspects.</p> <p><i>Output will be available online after peer review in April/May 2015.</i></p> <p>Both previous finalized outputs are already on our web page:</p> <ul style="list-style-type: none"><li>• Developing <a href="#">methodology for drought hazard mapping</a> with the use of measures for drought susceptibility assessment</li><li>• Framing <a href="#">methodology for vulnerability to drought assessment</a> based on available GIS information including population map, type of economic</li></ul>		

<b>Activity</b>	<b>5.5: Policy oriented study on remote sensing agricultural drought monitoring methods</b>
<b>Activity Leader</b>	<b>János Tamás</b> University of Debrecen (Hungary) tamas@agr.unideb.hu
<b>Partners</b>	Institute of Hydrology of the Slovak Academy of Sciences (Slovakia) University of Oradea (Romania)
<p>The main aim of this activity was to establish decision support system for drought monitoring by concrete identification of remote sensing and GIS data tools for agricultural drought monitoring and yield loss forecast, which eventually provides information on implementation of drought risk levels.</p> <p>The objectives were to:</p> <ul style="list-style-type: none"> <li>• identify green and brown water resources on watersheds on the role of soil and crop water content status in water balance for the most important crops and fruit (wheat, corn and apple) – Output 1: <a href="#">Green and brown water resources on watersheds</a>;</li> <li>• formulate concrete signalling and intervention levels of drought by which spatial and temporal extent of risk to the actual drought situation in the crops and apple can be quantified – Output 2: <a href="#">Identification of remote sensing and GIS data tools for agriculture drought monitoring and forecast</a>;</li> <li>• define the integration of RS and GIS tools and intervention levels for drought monitoring system to facilitate decision makers.</li> </ul> <p>In Q1 2015 they finalized Output 3 which combines data from Output 1 and 2 in order to develop drought indicators and integrate them into a drought monitoring system. <i>It will be available online after peer review in April 2015.</i></p>	

<b>Activity</b>	<b>5.6 Upgrading agricultural drought monitoring and forecasting: the case of Ukraine and Moldova</b>
<b>Activity Leader</b>	<b>Tatiana Adamenko</b> adamenko@meteo.gov.ua <b>Ecaterina Kuharuk</b> ecostrategii@yahoo.com
<b>Partners</b>	HydroMet Centre of Ukraine (Ukraine) Soil Research Institute (Moldova) State Agency of Water Resources (Ukraine) GWP Ukraine GWP Moldova
<p>Ukrainian and Moldavian partners are finalizing their main outputs:</p> <ul style="list-style-type: none"> <li>• <b>Upgrading of forecasting models for identification of crop yield losses caused by droughts</b> (2 crops) Ukraine;</li> <li>• <b>Development of proposals for the precipitation harvesting and practices for moisture conservation</b> in agricultural lands - Moldova</li> </ul> <p><i>Both reports were finalized in March 2015 and will be available online after the final workshop in April/May 2015.</i></p>	

<b>Work Package 6</b>	<b>Capacity Development</b>
<b>Activity</b>	<b>6.1 Workshops</b>
<p><b>Final (fourth) workshop</b> will be held from 21-22 April 2015 in Bucharest, Romania. Event will be again back-to-back with the GWP CEE Council meeting (19-20 April). An important part of the workshop will be a full day session on follow-up drought activities in the region together with the Drought Management Centre for Southeastern Europe (DMCSEE) participants and other international organization from the region (G-WADI, JRC, etc.)</p>	



Objectives and topics of the Final IDMP CEE workshop (21 April, 2015):

- an overview of the programme achievements and outputs;
- lessons learned and transfer of knowledge into other regions and countries;
- dissemination of programme results to end users (plan or proposals how results will be disseminated);
- added value of the final outputs for the programme beneficiaries;
- follow up proposals and suggestions for IDMP CEE in terms of activities, work packages, partnership and funding possibilities;

Objectives and topics of the Workshop on follow-up drought activities in the region (22 April, 2015):

- examples of existing drought initiatives and projects including ingredients of their success;
- funding possibilities in the area of climate change adaptation, drought and others related to IDMP CEE;
- concrete follow-up proposal(s) with objectives, expected deliverables, partnership, budget, timeframe, next steps, etc.
- 

#### **Activity**                      **6.2 Capacity building trainings**

/

#### **Activity**                      **6.3 Peer Review Group (PRG)**

Since the beginning of the Programme (March 2013) Peer Review Group evaluated everything what was prepared within all IDMP CEE activities and summarized their assessment in two Progress reports (also available on partner web page):

- [1<sup>st</sup> PRG Progress Report](#) (2013 – March 2014)
- [2<sup>nd</sup> Progress Report](#) (April – September 2014)

*Third Progress Report will be prepared after the final workshop in April/May 2015.*

### **Work Package 7                      Knowledge and awareness**

#### **Activity**                      **7.1: Good practice Compendium**

Main objective of this activity is to prepare a “publication which will be a mix of existing information and accomplishments of this project. Mainly success stories from WP2 and WP5 are expected to be described in the publication.”

In this period a review of all results and outputs from IDMP CEE activities was made. Structure of the whole Compendium was prepared and appropriate activities/outputs were incorporated into the Compendium. Content of the compendium is mainly based on the final results from the rest of the activities. They were finalized in March which is the main reason why Compendium is not finished yet. Content of the compendium and which good practices to include will also be one of the main topics at the final workshop in April 2015.

#### **Activity**                      **7.2: Rising awareness (dissemination activities)**

In Q1 partners have finished with their outputs. Focus of the communication activities in the next period will be on how to present results to the end users, policy level, etc. Some of the outputs will be graphically designed and some of them will get a short summary (fact sheets or photo stories, etc.) with the purpose to reach broader audience and promote IDMP CEE results more efficiently.

<b>Work Package 8</b>	<b>Governance and Fundraising</b>
<b>Activity</b>	<b>8.1: Improving fundraising capacity of CWP and RWP</b>
/	
<b>Activity</b>	<b>8.2: Project preparation activities</b>
<p>In 2015 we added a new activity focusing on “follow-up” of IDMP CEE.</p> <p>In March we started the discussion among partners about the potential “follow-up” activities connected or related to IDMP CEE. As a first step a list of several interesting topics which can be later developed into projects and also applied to a specific programme or even used in calls for proposals was prepared. Document was prepared in cooperation with Drought Management Centre for Southeastern Europe and in combination with the proposals or ideas which were gathered at the National Consultation Dialogues. All partners were asked to check the document and send their proposals, ideas in which topics they are interested in, how they see themselves in it, what should be concrete activities/tasks, etc. Third step will be a special “follow-up” workshop as a part of the final IDMP CEE workshop on 22 April in Bucharest where all ideas will be discussed and developed further into more concrete proposal(s).</p>	

### **Upcoming events**

- [World Water Forum](#) in Republic of Korea, 12-17 April 2015
- Final IDMP CEE Workshop in Bucharest, Romania, 21-22 April 2015