Integrated Drought Management in Central and Eastern Europe

3rd Quarterly report

(July – September 2014)

Short summary of the main programme activities

1) National planning

The first draft of the **Guidelines for preparation of the Drought Management Plans** (act. 2.1) was prepared. Draft will be the main point of the discussion on the **2nd cycle of the National Consultation Dialogues which will start in October 2014.**

2) Demonstration Projects

During the summer most of the partners finalized their second outputs or draft versions of the final outputs:

- maps for determination of vulnerability zones of forests for future climate conditions (act. 5.2)
- collecting best practices on technical and non-technical small retention (act. 5.3)
- methods for drought hazards and risk management (act. 5.4)
- toolbox with the concrete identification of remote sensing and GIS data tools for agricultural drought monitoring and forecast (act. 5.5)
- upgraded climate-zoning of Ukraine territory and Dniester River Basin territory (joint Moldova –Ukraine river basin) and drought risk maps for agro sector of Ukraine and Dniester river basin (act. 5.6)

3) Regional cooperation

In July we have started with organization of the **3rd IDMP CEE workshop** which will take place on 2nd and 4th October in Budapest, Hungary. On 3rd October we will organize together with the Drought Management Center for Souteastern Europe (DMCSEE) a **joint training *"From monitoring to end users"***. The Training Workshop will have three main thematic sessions: (1) From monitoring to management; (2) Preparation of national and regional action plans and (3) Good practices and communication with end users – "NAPs/DMPs in action".

Monitoring is important part of the drought management process. A basis for monitoring are indicators and thresholds. Within activity **Drought information exchange platform** (act. 1.3) partners are collecting already established "alarm systems" on the national level and are trying to include them into already existing data exchange platform - European Drought Observatory.

4) Communication activities

Two videos within IDMP CEE are being prepared; A video producing company was selected for preparing a **video about IDMP in CEE**. The video will be finished in October 2014. The **second video** has a goal to present **IDMP CEE Small Water Retention Demonstration Projects** in Central and Eastern Europe.

5) Progress Reports

Peer Review Group prepared their 2nd PRG Report with the assessment of the overall project progress in the period from April to September 2014.

From April on all activity leaders are using a special template (*Milestone progress report*) which is prepared and submitted with all their milestone products, outputs, etc. The main point of these templates is to have a quick insight into the activity, what was done from previous report, what are the plans, what are connections with other activities, etc. All Milestone Progress Reports which was submitted from April 2014 on can be found here. They were basis for preparation of this Q3 report.

Detailed description of the programme activities

Work package 1	**Regional and Transboundary Cooperation**
Activity	*Act. 1.1:* **Cooperation with international basin commissions and regional organizations**
Responsible	*RWP Coordinator, IDMP CEE Programme Manager*
Programme Manager and Activity Leader of the act. 5.5 participated at the **Fourth Meeting of the Conference of the Parties to the Framework Convention on the Protection and Sustainable Development of the Carpathians (COP4).** Carpathian Convention was adopted and signed by the seven Parties (Czech Republic, Hungary, Poland, Romania, Serbia, Slovak Republic and Ukraine) in May 2003 in Kyiv, Ukraine, and entered into force in January 2006. It is the only multi-level governance mechanism covering the whole of the Carpathian area and besides the Alpine Convention the second sub-regional treaty-based regime for the protection and sustainable development of a mountain region worldwide. IDMP CEE was presented on one of their side events with focus on 5.5. demonstration project - *study on remote sensing of agriculture drought*. More information about this event in BTOR.	
Activity	*Act. 1.2:* **Review of the current status of the implementation of DM plans and measures within RBMP according to EU WFD**
Activity Leader	**Elena Fatulova** GWP Slovakia elena.fatulova@gmail.com
Partners	All 10 countries
Review of the current status of the implementation of DM plans and measures within RBMP according to EU WFD (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 published on GWP CEE website.	
Activity	*Act. 1.3:* ***Drought information exchange Platform***
Activity Leader	**Gregor Gregorič** Slovenian Environmental Agency /DMCSEE Gregor.Gregoric@gov.si
Partners	All 10 countries
The Implementation guide on drought information exchange platform was finalized and you can find it here. It contains detail description on how to put existing data on national level into the standardize file that can be included into the metadata catalogue of already existing platform JRS's European Drought Observatory. During the summer partners from all 10 countries were preparing their XML files for Drought Metadata Catalogue according to the steps and instructions described in the Implementation Guide. Currently metadata of 10 products from 4 countries (CZ, LT, SK, SLO) are available in Drought Metadata Catalogue. With the help of Activity Leader the rest of the countries will try to finalize this task till mid-November. Activity leader will prepare till the end of the year Implementation Report which is the final output of this activity.	

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

This Activity is part of the larger project which started already in 2012. The main aim of the project is to build an informal and professional partnership to facilitate official dialogue, cooperation and investment on the shared river basin systems between Kaliningrad Oblast, Poland, Lithuania and Belarus. Within IDMP CEE partners will create web-based GIS information system which will be used for sharing of information by project partners and stakeholders: governments, NGOs, the media, and other interested parties in and outside the basin.

14 water management and GIS experts from Lithuania, Belarus, Kaliningrad and Poland met at the workshop in Warsaw on 3rd July, 2014 to discuss joint GIS mapping for transboundary Nemunas and Pregolya river basins. Presentations on the current state of river basin management and available national GIS maps were made by the representatives of participant countries. Timetable, deadlines and responsible persons for the creation of joint GIS maps and common databases were discussed. You can read more about the workshop here.
In Q3 three licences of ArcGIS software were purchased for the development of GIS products.
Concluding workshop of experts from the project countries will be held on 4-7 November in Poland back-to-back with the main workshop.

Work package 2	**National planning processes**
Activity	*Act. 2.1:* **Guidelines for Drought Management Plan (WP2)**
Activity Leader	**Elena Fatulova** GWP Slovakia elena.fatulova@gmail.com
Partners	All 10 countries

The first draft of the **Guidelines for preparation of the Drought Management Plans** was prepared. Together with the template for providing national experiences into the Guidelines and instructions for the **2nd National Consultation Dialogues** was sent to all CWPs in mid-September.

On "for-partners" site you can find:

- Slovak Case Study
- Draft Guidelines (under act. 2.1)
- Template for the 2nd NCDs (under act.2.1)

Activity	***Act. 2.2:*** National Consultation dialogues (WP2)
Activity Leader	**Elena Fatulova** GWP Slovakia elena.fatulova@gmail.com
Partners	All 10 Country Water Partnerships

All the reports from the 1st cycle of the NCDs can be found on our web site under "national planning" and Summary report here.
CWPs will organize second NCDs in October, November and December. The main objective is to contribute to the completion of the draft of the Guidelines by:

- elaboration of the written comments, proposals for adjustment, correction and amendments of the draft Guidelines
- providing national experiences into the Guidelines annexes related to the key elements of the DMP according to the template.

Experiences gained in consultation dialogues (testing the guidelines at the national level) will provide additional feedback for the Guidelines.

Work package 5	**Demonstration Projects**
Activity	***Act. 5.1:*** Drought management by agricultural practices and measures-increasing soil water holding capacity (WP5)
Activity Leader	**Pavol Bielek** Slovak University of Agriculture pavol.bielek@gmail.com
Partners	Research Institute for Soil and Water Conservation (Czech Republic) Institute of Agricultural and Forest Environment, Polish Academy of Sciences (Poland) Biotechnical Faculty (Slovenia)
Based on an invitation from the Slovak partner in act. 5.1 (prof. Bielek), Regional Secretariat and the video team participated in infiltration experiment on 12 August in **experimental field of Slovak University of Agriculture** in Kolinany. Photos from measurements are on Flickr. Partners within this demonstration project are testing several approaches to agricultural practices which can improve the conditions for soil water holding capacity (traditional tillage, mouldboard ploughing, no-till farming, subsoiling, fertilizing (organic fertilizers) and combinations of them). Partners are now collecting experimental data and preparing them for their evaluation report which will be finalized in November 2014. By the end of the programme they will incorporate their field experiences from both years (2013 and 2014) into the final report – *practical recommendations for farmers and decision makers on preventive measures as tools for drought management in agricultural practices and technologies*. **On "for-partners" site you can find:** • Milestone 1: Set up of the experiments; start of the theoretical study • Milestone 2: Theoretical review of problems and first results of experiments	
Activity	**Act. 5.2**: Assessment of drought impact on forest ecosystems (WP5)
Activity Leader	**Galia Bardarska** GWP Bulgaria bardarska@dir.bg
Partners	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)
Partners were still completing their second output *"Determination of vulnerability forest zones in contemporary climate (1960-1991), 2050 (realistic scenario) and 2070 (optimistic, realistic and pessimistic scenarios)"*. They finished with their first step - production of maps for different periods and scenarios and continuing with *"determination of vulnerability zones of forests for future climate conditions on the base of De Martonne index"*. They will finish with Output 2 by the end of October 2014. Output 2 is a base for the final output of this demonstration project - *Comparative analysis of climate change impact on forests between 4 GWP CEE and establishment of recommendations for forest adaptation measures and mitigation actions*. **On "for-partners" site you can find:**	

• Milestone 1: Kick-off meeting and Forest policy • Milestone 2: Output 1 - *Establishment of methodology for assessment of drought impact on forest ecosystems in 2050 and 2070*	
Activity	***Act. 5.3:*** Natural small water retention measures (WP5)
Activity Leader	**Tomasz Okruszko** Warsaw University of Life Sciences (Poland) t.okruszko@levis.sggw.pl
Partners	University of Debrecen (Hungary) HYCOMP (Slovakia) Limnos Ltd (Slovenia)

Partners have developed draft Guidelines (first four chapters) which give an **overview of the needs and possible ways to improve the landscape capacity for storing water**. The Guidelines will give information on the technical and non-technical measures which can be used in order to store the water at its origin. In Q3 partners were collecting best practices on technical and non-technical small retention from all four involved countries. Template was also sent to other countries which are not involved into this activity to enrich the guidelines with the experiences from elsewhere.

In September **video on Small retention** was produced. 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. It will be available online in October 2014.

Activity	***Act. 5.4:*** Drought Risk Management Scheme: a decision support system (WP5)
Activity Leader	**Tamara Tokarczyk** Institute of Meteorology and Water Management, National Research Institute (Poland) tamara.tokarczyk@imgw.pl
Partners	Institute of Technology and Life Sciences (Poland) Vilnius University, Department of Hydrology and Climatology (Lithuania) National Meteorological Administration (Romania)

Partners finalized their second Output **Methods for drought hazards and risk management**. The work is concentrated on building methodology for the drought hazard and risk mapping with the use of GIS techniques that will constitute the key tool for drought management. The Output is divided into two reports:

- 2.1 report presents drought hazard assessment methodology based upon the indices applicable to the participating countries for the need of drought hazard map generation
- 2.2 report provide insights for the development of the methodology for vulnerability assessment for the particular sector of economy (i.e. agriculture and water resources) including drought impact analysis

Output 2 provides an inventory of the methods concerning drought risk management that were developed and used in the partners (PL, LIT, ROM) countries. The inventory will serve as the repository for the potential applications in the operational decision support system for the Odra River (Output 3).

On "for-partners" site you can find:

- Milestone1: Output 1 (Report 1.1 & Report 1.2,) - *Measures for the assessment of susceptibility and vulnerability to drought*
- Milestone 2: Output 2 (Report 2.1 & Report 2.2.) - *Methods for the drought hazard and risk management*
- Part of the Output 3 (Report 3.1) - *Framework for Drought Risk Management Scheme*

Activity	***Act. 5.5:*** Policy oriented study on remote sensing agricultural drought monitoring methods (WP5)
Activity Leader	**János Tamás** University of Debrecen (Hungary) tamas@agr.unideb.hu
Partners	Institute of Hydrology of the Slovak Academy of Sciences (Slovakia) University of Oradea (Romania)

Partners finalized their Output 2 - **identification of remote sensing and GIS data tools for agriculture drought monitoring and forecast**. This report is a toolbox with concrete identification of remote sensing and GIS data tools for agricultural drought monitoring and forecast, which eventually provides information on physical implementation of drought risk levels. As a result, five drought risk levels were developed to identify the effect of drought on yields: Watch, Early Warning, Warning, Alert and Catastrophe.

Till the end of the programme they will produce one last output. Green and brown water were identified (Output 1) and the calibration of remote sensing data was done (Output 2). The third Output will combine data from Output 1 and 2 in order to develop drought indicators and integrate them into a drought monitoring system (Output 3).

Article: From Spectral Time Series Analyses To Drought Monitoring – GWP IDMP was prepared and published by partners in act. 5.5 (J. Tamás1, A. Nagy, J. Fehér, N. Stelian and É. Lehoczky) for the Congress on computer in agriculture and natural resources; San Jose, Costa Rica, July 27-30, 2014.

On "for-partners" site you can find:

- Milestone 1: Output 1 - *Green and brown water resources on watersheds*
- Milestone 2: Output 2 - *Signalling and intervention levels of drought based on remote sensing datasets*

Activity	***Act. 5.6*** Upgrading agricultural drought monitoring and forecasting: the case of Ukraine and Moldova (WP5)
Activity Leader	**Tatiana Adamenko** HydroMet Centre of Ukraine (Ukraine) adamenko@meteo.gov.ua **Ecaterina Kuharuk** Soil Research Institute (Moldova) ecostrategii@yahoo.com
Partners	State Agency of Water Resources (Ukraine) GWP Ukraine GWP Moldova

In Q3 partners finalized **Output 1** - *Upgraded climate-zoning of Ukraine territory and Dniester River Basin territory (joint Moldova –Ukraine river basin)* and **Output 2** - *Drought risk maps for agro sector of Ukraine and Dniester river basin*. Moldavian partners also organized several **consultations for farmers** with the purpose to inform them about the IDMP CEE, to identify their expectation from the programme and to present them the main moisture conservation practices existed in Moldova. Photos on Flickr and report here.

Till the end of 2014:

- In Ukraine they will upgrade models for prognoses of crop harvest losses related to the droughts (Output 3a) and organize workshop for farmers.
- In Moldova they will prepare recommendations, proposals for the precipitation harvesting and practices for moisture conservation in 2 agricultural areas in Dniester river basin (Output 3b).

On "for-partners" web page you can find:

- Milestone 1: Data Collection and Analysis. Identification of the Climate Change trends (evidences) based on observation data (136 stations of UKR Hydromet and 7 stations in Moldova HydroMet network)
- Milestone 2: Analyses of the trends on water holding capacities of soils under climate change based on long term (1961- 2010 period) observation at meteorological stations of Ukraine and Moldova
- Milestone 3: Output 1 & 2 - Review climate-zoning and mapping of drought risk areas in Ukraine and Dniester river basin & Collection/Analyses /Comparing the soviet and EU drought indexes

Work Package 6	**Capacity Development**
Activity	*Act. 6.1* **Workshops**

3rd IDMP CEE workshop will take place on 2nd and 4th October in Budapest, Hungary.

Activity	*Act. 6.2* **Capacity building trainings**

On 3rd October we will organize together with the Drought Management Center for Souteastern Europe (DMCSEE) **joint training *"From monitoring to end users"***. The Training Workshop will have three main thematic sessions: (1) From monitoring to management; (2) Preparation of national and regional action plans and (3) Good practices and communication with end users – "NAPs/DMPs in action".

Activity	*Act. 6.3* **Peer Review Group (PRG)**

In September PRG produced their 2nd PRG Progress Report, assessing the progress made in the last six months. Draft was sent to all partners just before the 3rd Workshop. Final version will be prepared till the end of October.

You can find draft version here.

Work Package 7	**Knowledge and awareness**
Activity	*Act. 7.1:* **Good practice Compendium**
In this period current status of the existing Drought Management Plans across Europe and other existing policy and management documents were analysed and will be later on included into the Compendium. In the last period it is expected to include good practices from IDMP CEE demonstration projects and other similar projects implemented in EU. Draft of the compendium prepared till now, can be found here.	
Activity	*Act. 7.2:* **Rising awareness (dissemination activities)**
On 17 June (World Day to Combat Desertification) drought photo contest was launched. More information here. A video producing company was selected for preparing a video about IDMP in CEE. In September video team recorded in locations in Poland, Slovakia and Slovenia identified in cooperation with IDMP CEE experts. Video will be available online by the end of October 2014.	

Work Package 8	**Governance and Fundraising**
Activity	*Act. 8.1:* **Improving fundraising capacity of CWP and RWP**
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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.

Upcoming events

- Third IDMP CEE workshop and capacity building training, Budapest, Hungary, 2-4 October 2014
- 6th edition of the European River Restoration Conference, integrated with the Final event of the SEE River project on 27 - 29 October in TechGate in Vienna.
- 3rd Pan-EU Drought Dialogue Forum, 4 November 2014, Brussels, Belgium
- Final workshop of experts from act. 1.4 will be held on 4-7 November in Poland back-to-back with the main workshop.
- EUROPE-INBO 2014 - 12th European conference on the implementation of the Water framework directive on 12-15 November, Bucharest, Romania
- Presentation of the IDMP CEE at GWP Steering Committee Meeting on 24 November
- **2nd National Consultation Dialogues:**
  - 16 October, Budapest, Hungary
  - 26 November, Sofia, Bulgaria
  - 3 December, Ljubljana, Slovenia