30 September, 2014

1. Basic information

Name of the milestone report	**Milestone 3:** Step 3: Review climate-zoning and mapping of drought risk areas in Ukraine and Dniester river basin (Output 1 & Output 2) Step 6: Collection/Analyses /Comparing the soviet and EU drought indexes Step 4: Workshop for decision makers to present the new climate-zoning concept (in Moldova)
Activity leader	Dr.Tatiana Adamenko – UkrHydroMetCentre, Ukraine
Participating partners	GWP-Ukraine GWP-Moldova
Duration	January – June 2014
Chairman of the CWP	Anna Tsvietkova - GWP Ukraine Dumitru Drumea – GWP Moldova

**Milestone report is information about the progress made within this activity from previous milestone report for GWP CEE Regional Secretariat, Programme Manager, Peer Review Group and partners involved into IDMP CEE. It is not intended for further distribution.*

2. Activity Report

2.1. Short summary of the milestone report (max 2500 characters*); What have been done after the previous milestone report(s)?*

Ukraine. The analysis of rainfall quantity for different seasons of the year in the current climate and for the standard climatic period was done. The main trend is that in Ukraine the annual rainfall quantity is almost unchanged or slightly increased. A new agro-climatic zoning map for the period of active crop vegetation May-September–(HTC 5-9) and the period May - June (HTC 5-6) were developed. For the new zoning the data point observations of rainfall and sums of temperatures of 180 meteorological stations were used and followed by interpolation in the grid nodes.

A comparative analysis of HTC 5-9 2 for periods 1961-1990 and 1991-2013 was done. It was showed that during active vegetation period in Ukraine the amplification of climate aridity was observed in the areas that previously belonged to area of sufficient moisture.

SPI index was applied by Hydrometeorological Service in Ukraine for drought assessment and prediction. Comparison of Ukrainian indicators which are currently in operation in Ukraine with SPI drought indices showed that the SPI application is effective, especially for the evaluation of moisture in the cold season.

For review of the agroclimate zoning of the Dniester basin, jointly with Moldavian project partners, we processed and provided hydrometeorological information for the period from 1980 to 2013, including monthly precipitation, average monthly air temperatures, aggregate active temperatures, numbers of dry days, maximal and minimal air temperatures for 9 Ukrainian meteorological stations located nearby the Dniester basin.

Moldova The analysis of existed data on agroclimatic zoning was made on the base of materials from 11 stations located in the Moldavian part of the Dnester basin. As a result thematic maps with main trends on precipitations and temperatures were created for the crop vegetation for the period May-August. Prepared maps cover whole Dnester basin and allow identification of 10 zones for the whole territory, including 5 in Moldova.

Analysis of the Seleaninov index and SPI for the Moldavian part of the basin was performed and showed better applicability of the SPI for drought assessment in Moldova. Performed comparison also included last data obtained by GWP Moldova experts in regard to use extreme temperatures in order to estimate wintering conditions for certain crops, especially multiannual plantations.

As a part of activity 5.6 a number of consultations meetings in different parts of Moldova were organized by GWP Molodva (4 events) with participation of more than 70 participants. In the frame of these consultations local authorities, including farmer community and mayors of rural localities expressed theirs expectations from the actual project:

- Best EU practices on moisture conservation
- Possibility for funding of the drought reduction activities
- Development of the planning guidance on drought management measures
- Reducing of erosion as a part of moisture conservation

2.2. 2.2. Describe the progress to the objectives of your activity?

One of the key objectives of A5.6 - a review of the agro-climatic zoning of Ukraine and Moldovan territory in the Dniester River Basin was completed based on the main climatic trends from the observation data analysis for 1991-2013 (observations from 11 stations in Moldova and 9 in Ukraine). Development of maps of zoning of the Dniester basin. The EU indicator SPI was applied firstly in Ukraine and Moldova for climatic aridity assessment during short term periods, particularly for periods of extreme droughts in Ukraine (2003 and 2007) and Moldova (2003,2007,2012).

2.3. The expected final output (s). At what stage you are now in the process of producing the final output(s)?

Output 1 - *Updated argo-climatic zoning* and Output 2 - *Maps of the drought risky zones in territory of Ukraine and Dniester River Basin* has been completed (annex 1).
The farmers recommendations and new agro-climatic zoning in Ukraine and Moldova are prepared and will be published till September (Output 4). They will be used for awareness rising. In Ukraine upgrading of the models for prognoses of crop harvest losses related to the droughts (Output 3a) is planned till the end of 2014. Upgraded models will be done using the new zoning and EU indicator SPI.

In Moldova maps for agroclimatic zones in the Dniester river basin will be prepared with identification of agroclimatic zones. The text for publication of the guidance for farmers was also prepared and presented during consultation meetings with local authorities and farmer community.

2.4. Have you introduced any change in the original plan as outlined in the Activity List?

Time change for joint workshop on new agro-climatic zoning was moved from winter-spring 2014 to autumn 2014.Development of model for 1 more new crop was cancelled due to lack of resources. Change was already accepted by PRG in April 2014.

2.5. Identify links with other IDMP CEE activities

New agro-climatic zoning and using the EU indicators for upgrading modelling tools for crop harvest loses related to droughts will contribute in good practices on drought management in CEE region (act. 7.1) and tools for drought monitoring and knowledge in the regional context.
Relevant activities are in line with the ongoing project “Climate East” and “Climate Forum East”. Obtained experiences (IDMP) would be used in development of planning political documents on drought management and national climate change strategy.

2.6. Other issues (problems during the implementation, how they were solved, etc.)

Ukraine problems: Lack of GIS soft wear in Hydromet Ukraine and lack of the time resources to make all calculations for SPI. Ukraine was able to work on new zoning for Ukraine territory only and new GIS map for Dniester River Basin was done by Moldavian partner. Ukraine provided observation data and calculations for 9 Hydromet stations located in or close to the Dniester river basin. Still coordination between UA and MD needs improvement.
2.7. List if National Reports have been used, and if so, provide details on the National Reports (title, authors, publication data and location)

3. Attachments

- Annex 1_Milestone 3: Review climate-zoning and mapping of drought risk areas in Ukraine and Dniester river basin
- Annex 2_Report from Moldova workshop (6 June 2014) (Step 4 only for MD)
- Annex 3_Agroclimatic zonation Dniester_MD