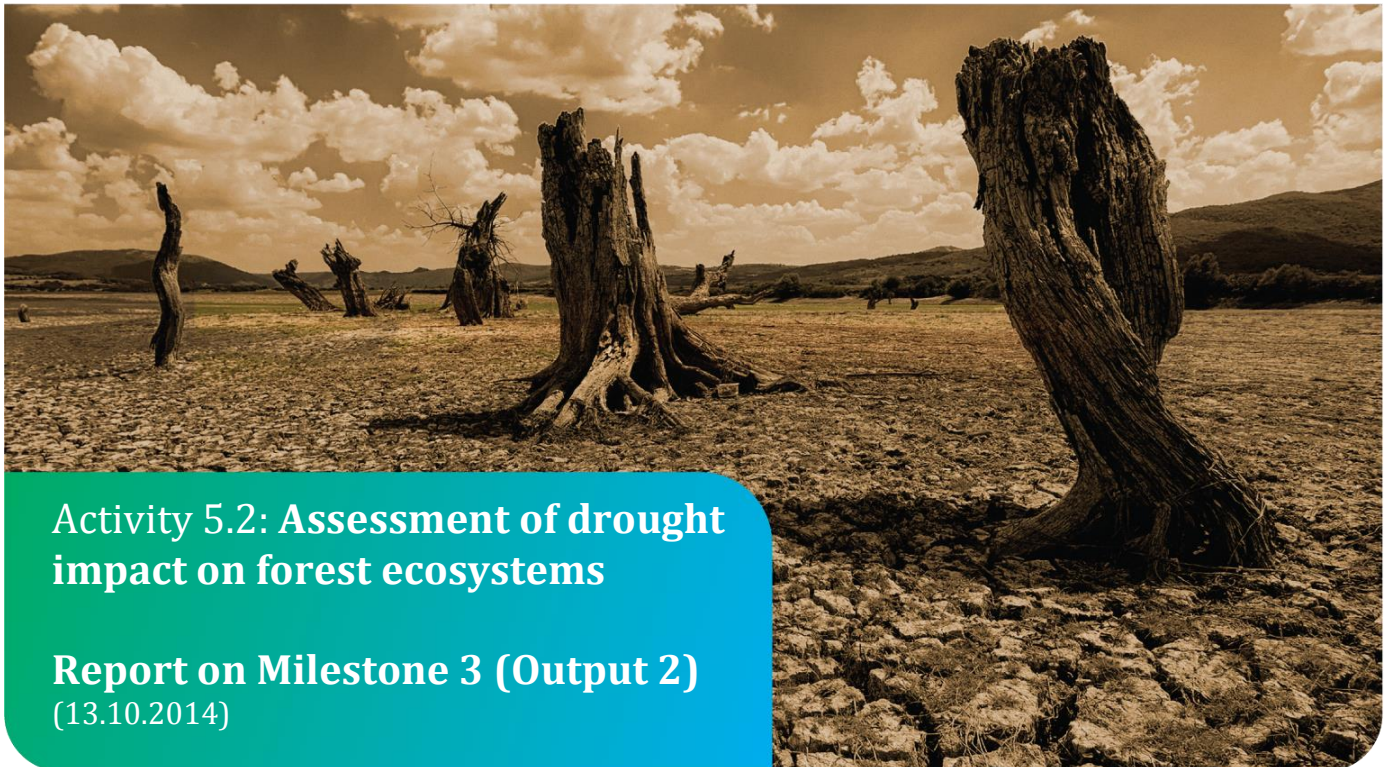


Integrated Drought Management

Programme in Central and Eastern Europe



**Activity 5.2: Assessment of drought
impact on forest ecosystems**

Report on Milestone 3 (Output 2)
(13.10.2014)

1. Basic information

Number of the activity	Activity 5.2
Title of the activity	Assessment of drought impact on forests
Name of the milestone report	Milestone 3 (Output 2) Elaboration of maps for current climate, 2050 and 2070 in Bulgaria, Lithuania, Slovenia and Ukraine (pilot area) and determination of vulnerability zones of forest ecosystems
Activity leader	Galia Bardarska
Participating partners	Lithuania: Gintautas Stankūnavičius – leader, Vidas Stakėnas Slovenia: Primož Simončič – leader, Urša Vilhar, Lado Kutnar, Andrej Kobler Bulgaria: Vesselin Alexandrov – leader, Ivan Raev, Galia Bardarska Ukraine: Igor Buksha – leader, Tatiana Pyvovar, Maksym Buksha, Volodymyr Pasternak
Duration	April – September 2014
Chairman of the CWP	Ivan Raev (bwp@dir.bg) Bernardas Paukstys (bernardas@iti.lt) Martina Zupan (martina.zupan@siol.net) Anna Tsvietkova (Atsvet@mama-86.org.ua)

**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)?

The main objective of this demonstration project is identification of measures for the forests to adapt to negative effects of drought, based on the expert investigations in four GWP CEE countries: Bulgaria, Lithuania, Slovenia and Ukraine. The total forested area in those countries is about 35% of forest areas in the GWP CEE region. The vulnerability zones of the forest vegetation are to be defined for the current climate (1950-2000), as well as for the year 2050 and the year 2070. The project is to define good drought management practices for application to the forested areas of the GWP CEE region. In the previous reporting period the following work has been accomplished: (i) Milestone 1 – Joint report on Topic a. Kick-off-meeting and Topic b. Forest policy at UN, EU and national level, and (ii) Milestone 2 – Topic c Establishment of methodology for assessment of drought impact on forest ecosystems in 2050 and 2070.

The main activities of Milestone 3 which have been done:

- Elaboration of maps for current climate (1950-2000) and future (2050 and 2070) climate conditions in Bulgaria, Lithuania, Slovenia and pilot area in Ukraine;
- Determination of vulnerability zones of forests for future climate conditions on the base of De Martonne index.

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

On the base of the WorldClim dataset <http://www.worldclim.org/node/1> more than 100 maps (air temperature, precipitation and De Martonne index) were created for Bulgaria, Lithuania, Slovenia and Ukraine and CEE region:

- [Current](#) (1950-2000) climate conditions and De Martonne index;
- [Future](#) (2050 and 2070) climate conditions and De Martonne index.

At country level, for the first time the temperature, precipitation and IDM maps have been established on the base of the four IPCC AR5 pathways (RCP2.6, RCP4.5, RCP6, and RCP8.5). For the determination of the vulnerability zones A, B,...,G, the experts decided to use the vulnerability level: very high, high, medium, low, from medium to very high, suitable for CEE region:

IDM	Climate classification	Vulnerability zones		
		Name	Color	Vulnerability level
10-25	Semiarid	A	Red	Very high
25-30	Moderately arid	B	Orange	High
30-35	Slightly humid	C	Yellow	Medium
35-40	Moderately humid	D	Green	
40-50	Humid	E	Light blue	Low
50-60	Very humid	F	Blue	
> 60	Excessively humid	G	Dark blue	from Medium to Very high

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

Discussions on Output 2 (maps of different scenarios and determination of vulnerability forests zones) in each country. The Act.5.2- Milestone 3 will be presented at NCDs in October/December 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.*

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

The contemporary climate period (1961-1990) and future period 2100 were changed with current climate (1950-2000) and 2070 according to IPCC AR5.

2.5. Identify links with other IDMP CEE activities

There is a link with Act. 2.1: Guidelines for Drought Management Plans.

De Martonne aridity index (IDM) could be part of national drought indicators used in CEE countries – Table 3 of DMPs guidelines.

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

There are some problems with actual forests data.

Production of more than 100 maps, using the WorldClim dataset, and its checking took much more time than planned before – lack of good computer facilities.

2.7. List if National Reports have been used, and if so, provide details on the National Reports (title, authors, publication data and location)

The implementation of the four climate pathways of IPCC AR5 for determination of vulnerability forests zones is new investigation in 4 GWP CEE countries. The output will be compared with previous investigations.

Example, Programme of measures for adaptation of the forests in the Republic of Bulgaria and mitigation the negative effect of climate change on them. FUTUREforest, EU INTERREG IV C, Sofia, 2011, p. 194

3. Attachments

