

# **Summer 2015 in Ukraine**

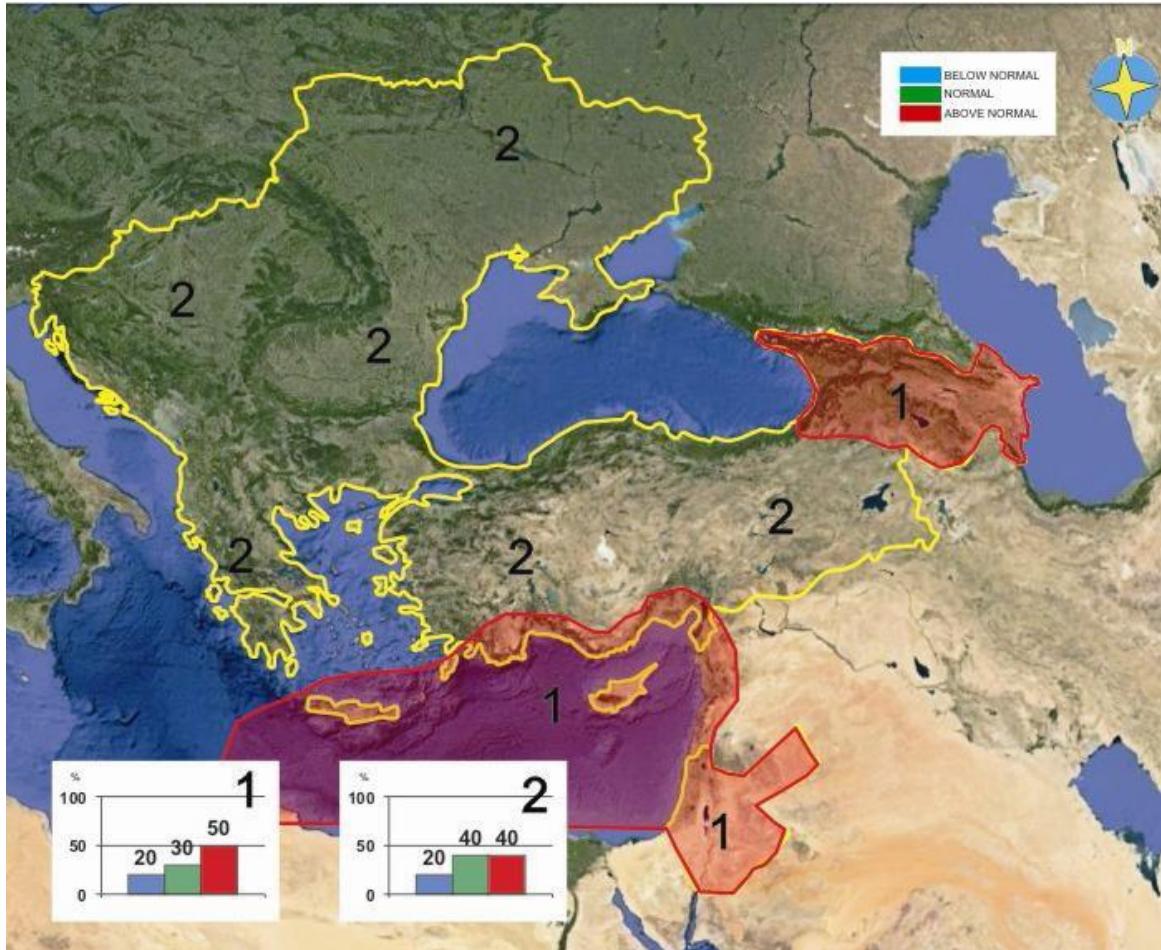
## **(assessment and overview)**

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**Marrakech**  
**November 23-26**

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*Ukrainian Hydrometeorological Center*

# Temperature (forecast)



According to the Consensus statement of SEECOF-13, summer seasonal temperature was expected to be:

warmer than average (upper tercile) with 40% probability,

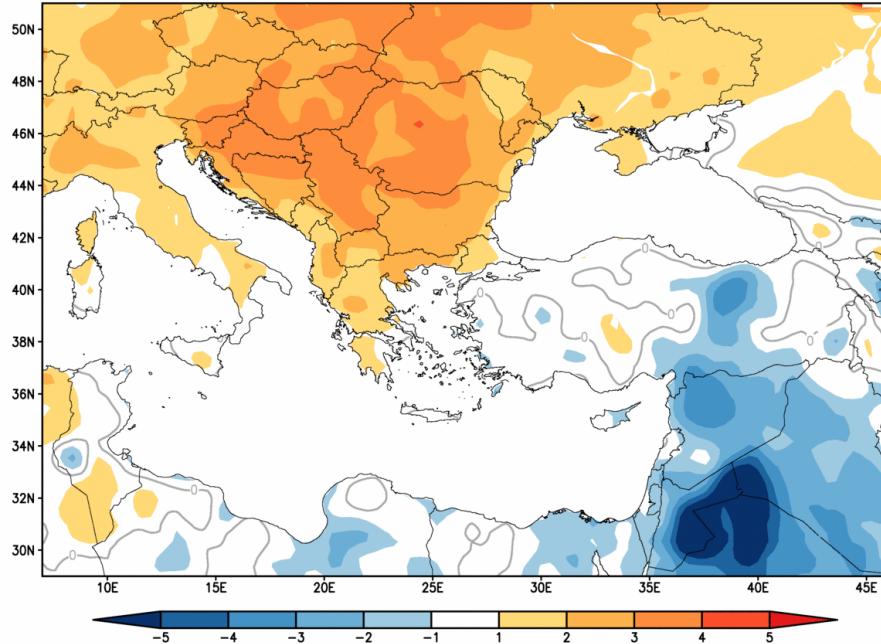
average - with 40% probability

and below average (lower tercile) with 20% probability,

to the 1981–2010 base period.

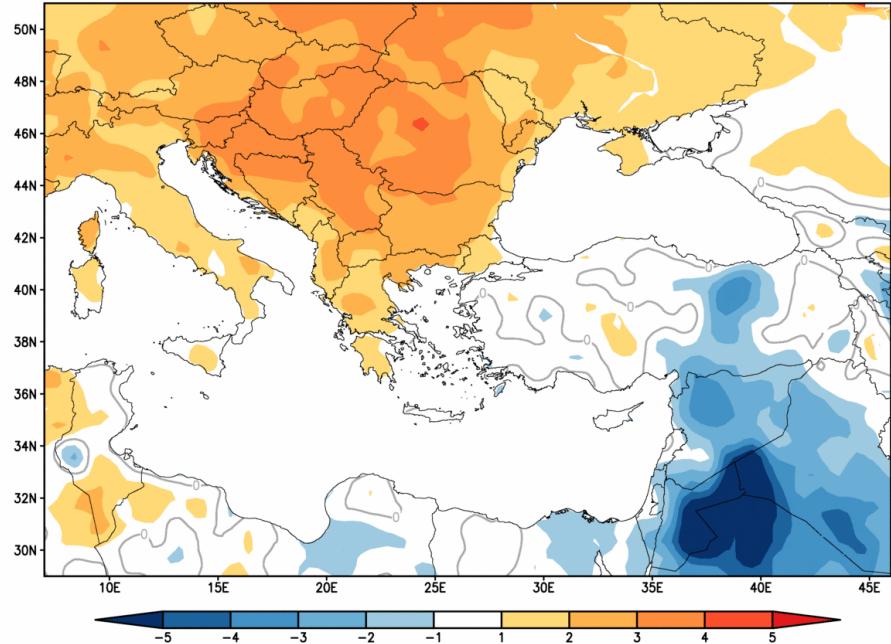
# Seasonal (JJA) forecasts RCM-SEEVCCC (temperature anomalies)

RCM-SEEVCCC: Mean 2m temp. anom. ( $^{\circ}\text{C}$ ) for season JUN–JUL–AUG 2015  
Forecast start: 00Z01APR2015



In April for JJA

RCM-SEEVCCC: Mean 2m temp. anom. ( $^{\circ}\text{C}$ ) for season JUN–JUL–AUG 2015  
Forecast start: 00Z01MAY2015



In May for JJA

- Vector increasing anomalies of heat directed from the southeast to the northwest Ukraine from 1 to 3  $^{\circ}\text{C}$

# Terciles for 25 stations (regional centers)

Summer 2015		Air Temperature (°C)			
Station	Rank	33	50	66	Observed
Kyiv	<b>2</b>	19,2	19,5	19,8	<b>21,6</b>
Luts'k	<b>2</b>	17,7	18,0	18,5	<b>20,1</b>
Rivne	<b>2</b>	17,5	17,8	18,3	<b>19,9</b>
L'viv	<b>1</b>	17,0	17,4	18,0	<b>19,5</b>
Ternopil'	<b>2</b>	17,2	17,6	18,1	<b>19,6</b>
Khmel'nits'ki	<b>2</b>	17,6	17,9	18,2	<b>20,2</b>
Uzhgorod	<b>1</b>	19,5	19,8	20,2	<b>22,1</b>
Ivano-Frankivs'k	<b>3</b>	17,6	18,1	18,3	<b>19,6</b>
Chernivtsi	<b>2</b>	18,6	18,9	19,4	<b>21,1</b>
Zhutomur	<b>2</b>	17,9	18,2	18,9	<b>20,7</b>
Chernihiv	<b>11</b>	18,4	18,8	19,0	<b>19,8</b>
Symu	<b>12</b>	18,4	19,0	19,4	<b>19,8</b>
Vinnuts'a	<b>4</b>	18,0	18,3	16,6	<b>20,5</b>
Cherkasy	<b>14</b>	19,1	19,7	20,0	<b>20,5</b>
Poltava	<b>11</b>	19,3	20,1	20,6	<b>21,1</b>
Kirovograd	<b>12</b>	19,5	20,2	20,4	<b>20,9</b>
Dnipropetrovs'k	<b>9</b>	20,1	21,2	21,8	<b>22,2</b>
Kharkiv	<b>9</b>	19,4	20,2	20,7	<b>21,5</b>
Svatove	<b>7</b>	19,7	20,3	21,0	<b>21,8</b>
Volnovaha	<b>8</b>	19,8	20,8	21,5	<b>22,3</b>
Odesa	<b>7</b>	21,3	21,6	21,8	<b>22,9</b>
Mykolayiv	<b>14</b>	21,7	22,3	22,6	<b>22,8</b>
Kherson	<b>11</b>	21,6	21,9	22,3	<b>22,8</b>
Zaporizh'a	<b>7</b>	20,8	21,6	22,0	<b>22,6</b>
Simferopol'	<b>16</b>	20,6	21,4	21,6	<b>21,7</b>

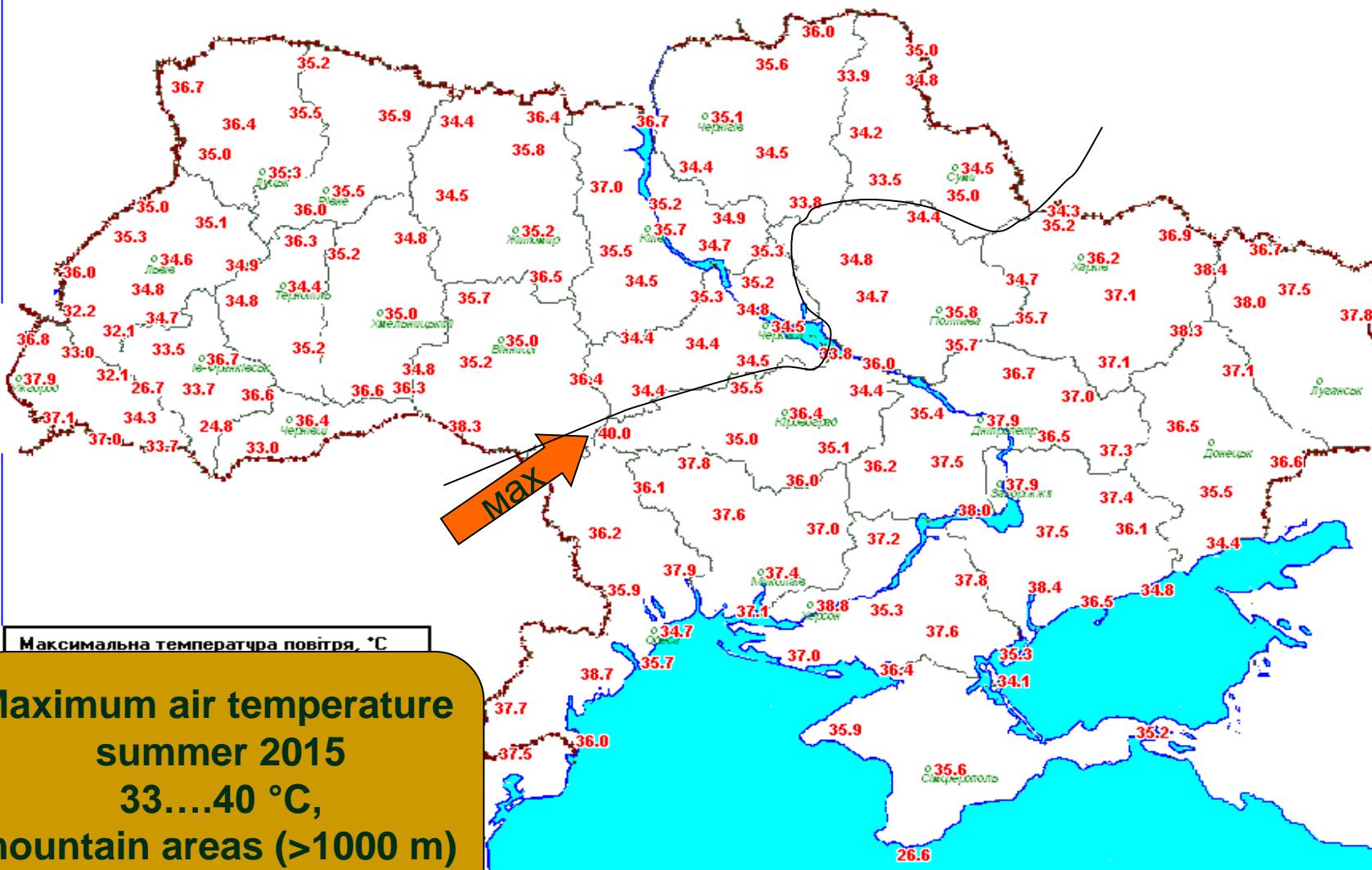
Rank – 1961 – 2015 (warmest season)

Climatological reference period 1981 – 2010

# Actual average temperature summer 2015 (all stations)



# Maximum temperature of summer 2015

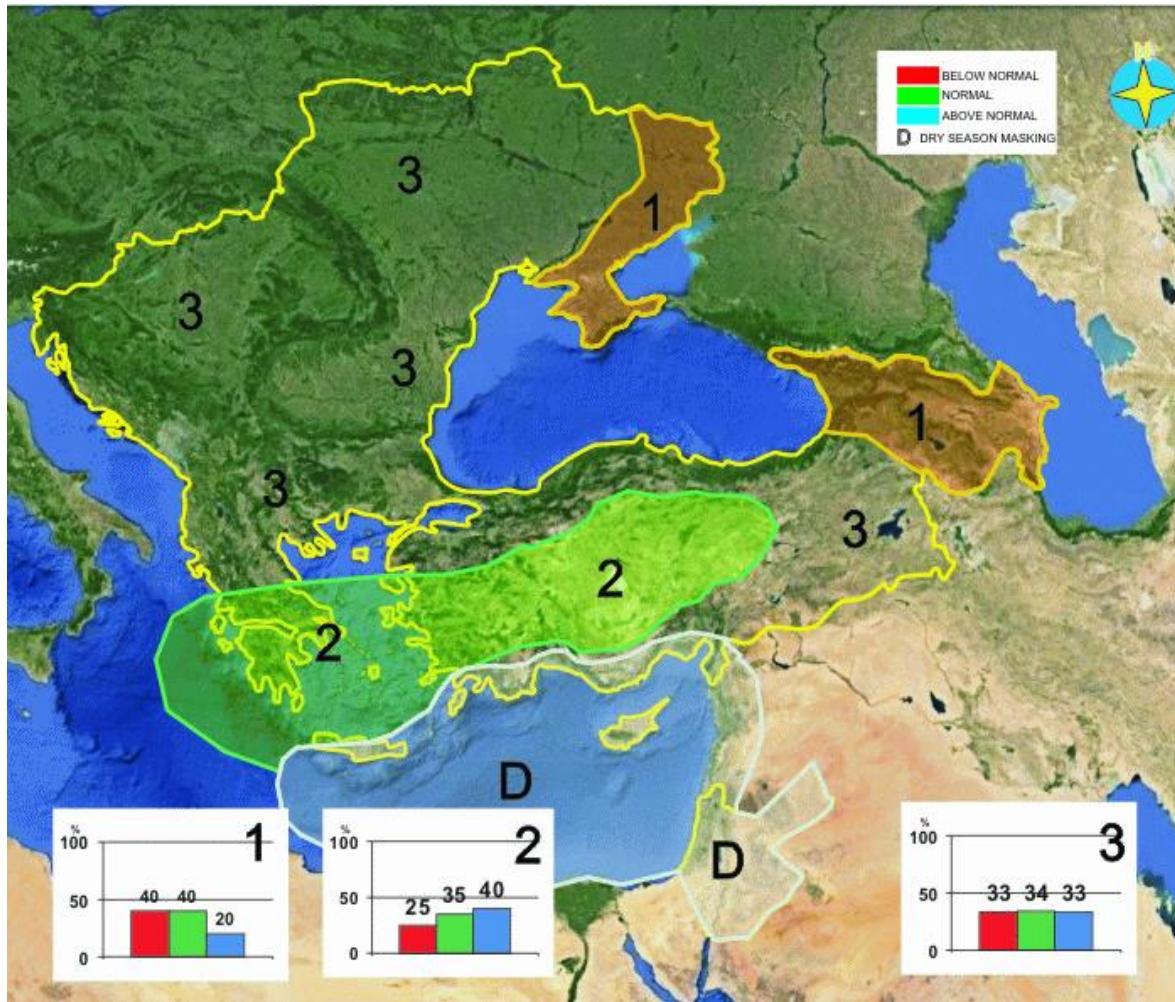


# Temperature 30 °C and above (regional centers)

Number of days with temperatures 30 and above and uninterrupted period in Ukraine  
summer 2015 (June-August)



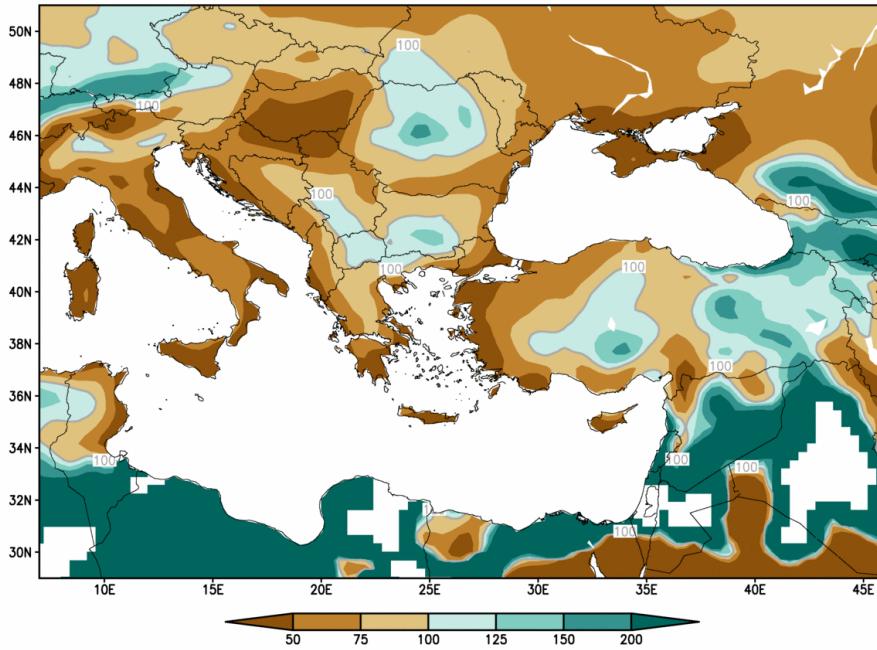
# Precipitation (forecast)



The SEECOF–13 climate outlook indicated the probabilities for below, near or above average conditions were expected to be approximately equal to the most territory of Ukraine, only in the east, southeast and in Crimea regions greater probability for below and normal conditions (40%) and less (20 %) for the wet season.

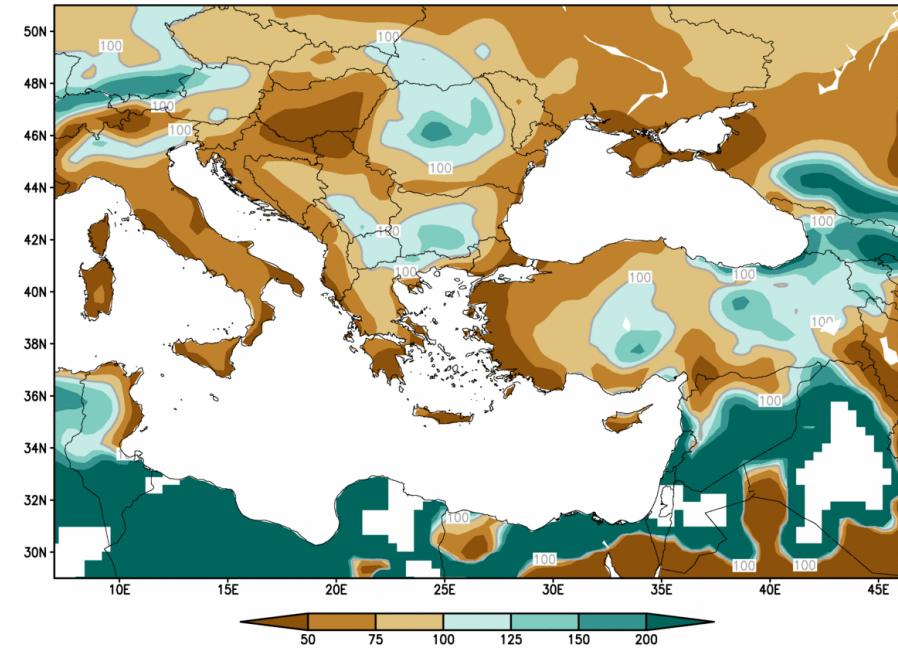
# Seasonal (JJA) forecasts RCM-SEEVCCC (anomalies precipitation)

RCM-SEEVCCC: Precipitation anom. (%) for season JUN–JUL–AUG 2015  
Forecast start: 00Z01APR2015



In April for JJA

RCM-SEEVCCC: Precipitation anom. (%) for season JUN–JUL–AUG 2015  
Forecast start: 00Z01MAY2015



In May for JJA

- In most of the Ukraine expected 50..75%, on the south less 50% rainfall compared to the average values of the base period 1981-2010  
Only in the east and west 75..100%, in the Carpathian region more 100%

# Terciles for 25 stations (regional centers)

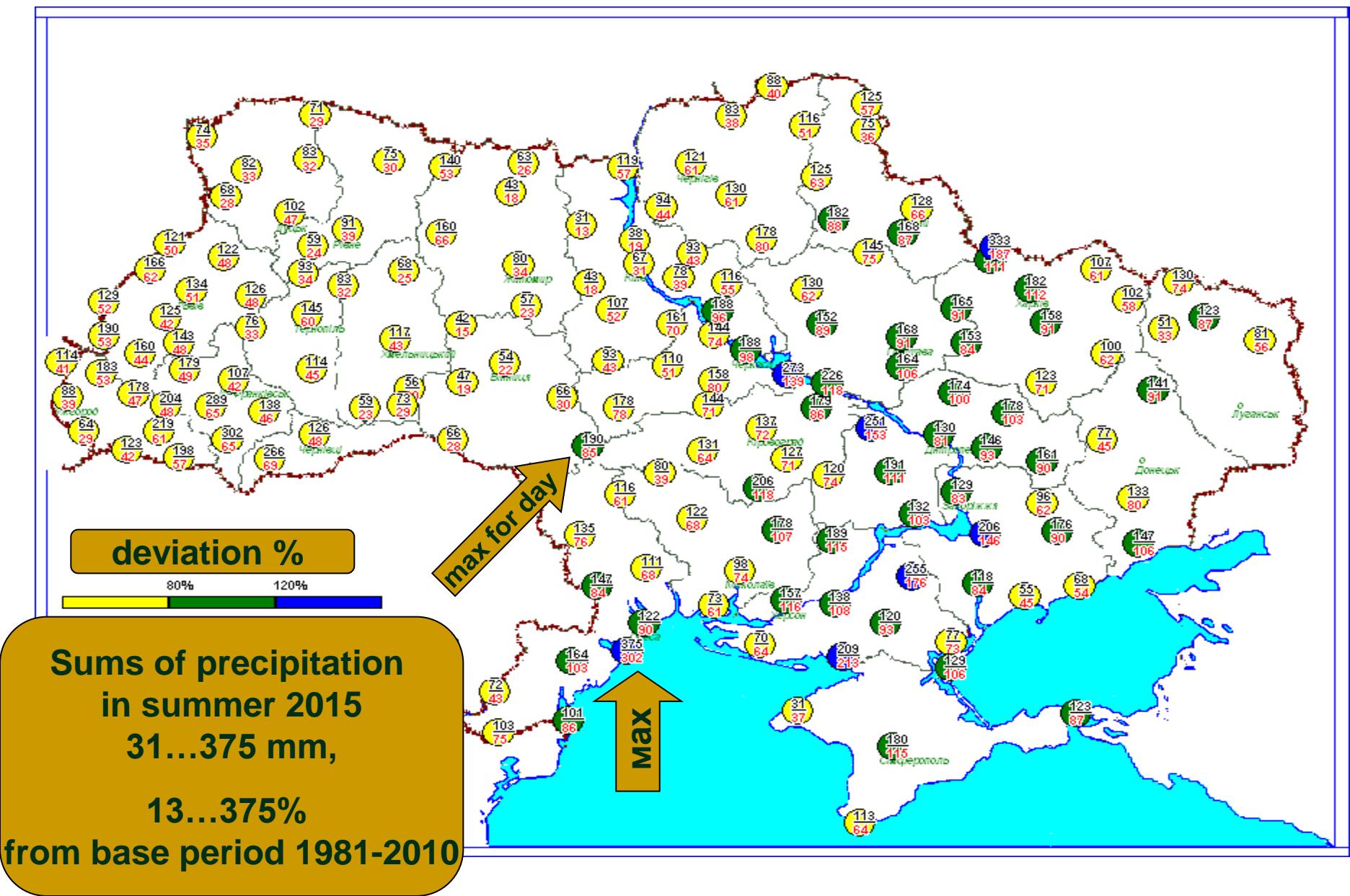
Summer 2015	Station	Precipitation sums (mm)				
		Rank	33	50	66	
	Kyiv	<b>1</b>	199	215	231	<b>67</b>
	Luts'k	<b>2</b>	171	199	236	<b>102</b>
	Rivne	<b>1</b>	194	236	256	<b>91</b>
	L'viv	<b>2</b>	221	251	284	<b>134</b>
	Ternopil'	<b>5</b>	204	242	268	<b>145</b>
	Khmel'nits'ki	<b>1</b>	241	263	313	<b>117</b>
	Uzhgorod	<b>1</b>	185	203	264	<b>88</b>
	Ivano-Frankivs'k	<b>1</b>	215	235	283	<b>107</b>
	Chernivtsi	<b>1</b>	300	263	275	<b>126</b>
	Zhutomur	<b>1</b>	196	246	277	<b>80</b>
	Chernihiv	<b>8</b>	170	197	210	<b>121</b>
	Symu	<b>5</b>	161	189	213	<b>128</b>
	Vinnuts'a	<b>1</b>	201	221	273	<b>54</b>
	Cherkasy	<b>29</b>	169	193	206	<b>188</b>
	Poltava	<b>26</b>	154	170	199	<b>168</b>
	Kirovograd	<b>16</b>	152	174	200	<b>137</b>
	Dnipropetrovs'k	<b>18</b>	130	146	159	<b>130</b>
	Kharkiv	<b>35</b>	128	143	170	<b>182</b>
	Svatove	<b>1</b>	133	151	168	<b>51</b>
	Volnovaha	<b>20</b>	121	142	175	<b>133</b>
	Odesa	<b>25</b>	98	127	164	<b>122</b>
	Mykolayiv	<b>14</b>	105	114	131	<b>98</b>
	Kherson	<b>45</b>	90	105	128	<b>157</b>
	Zaporizh'a	<b>24</b>	119	147	158	<b>129</b>
	Simferopol'	<b>41</b>	100	135	179	<b>180</b>

Rank – 1961 – 2015 (driest season)

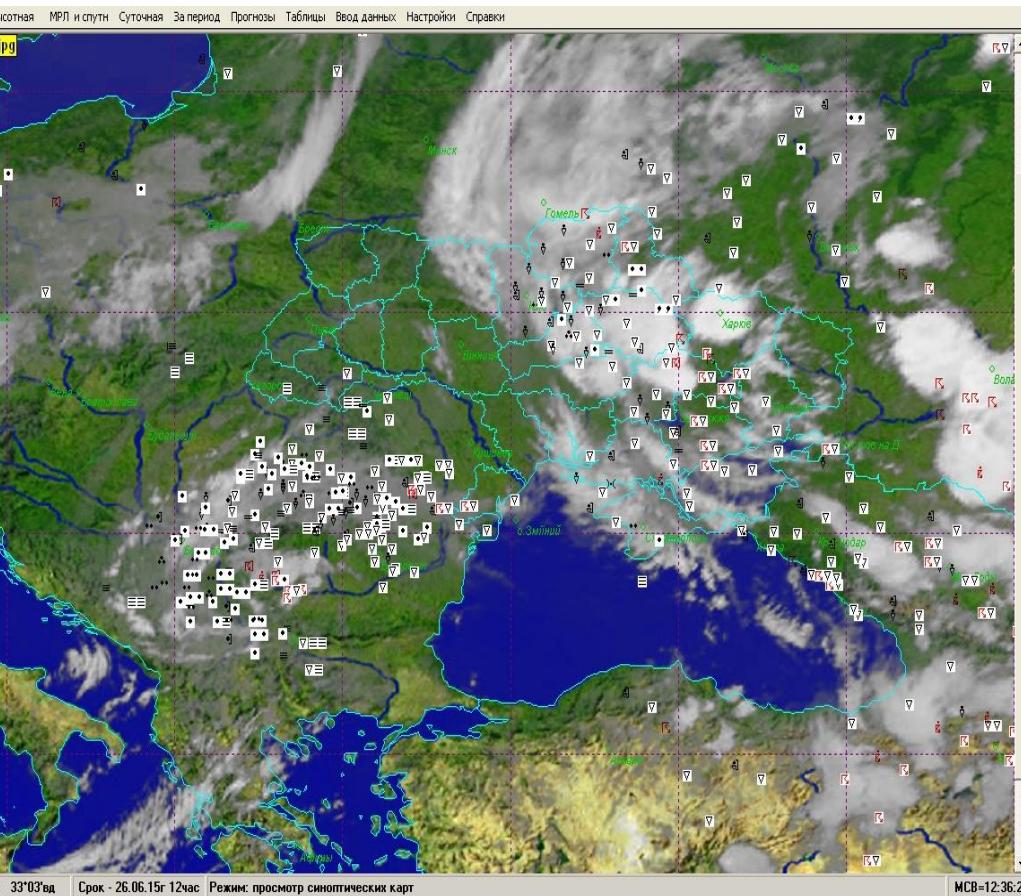
Climatological reference period 1981 – 2010

# Actual precipitation of Summer 2015

(all stations)



# One active cyclone for the whole summer 2015



During the summer season, meteorological extraordinary phenomena in the form of heavy and very heavy rain were observed on June 25-27 in the northern, central, southern and eastern parts of Ukraine.

From 15 to 80 mm of precipitation fell in 5...12 hours. Rainfalls were accompanied by thunderstorms and increased wind speeds up to 15 - 20 m/s, in Kharkiv regions squally wind 25 m/c and in Dnipropetrovsk was observed a tornado.

Unfavorable weather conditions caused loss power, utilities, telecommunications and transport.

***Thank you for your attention !***