

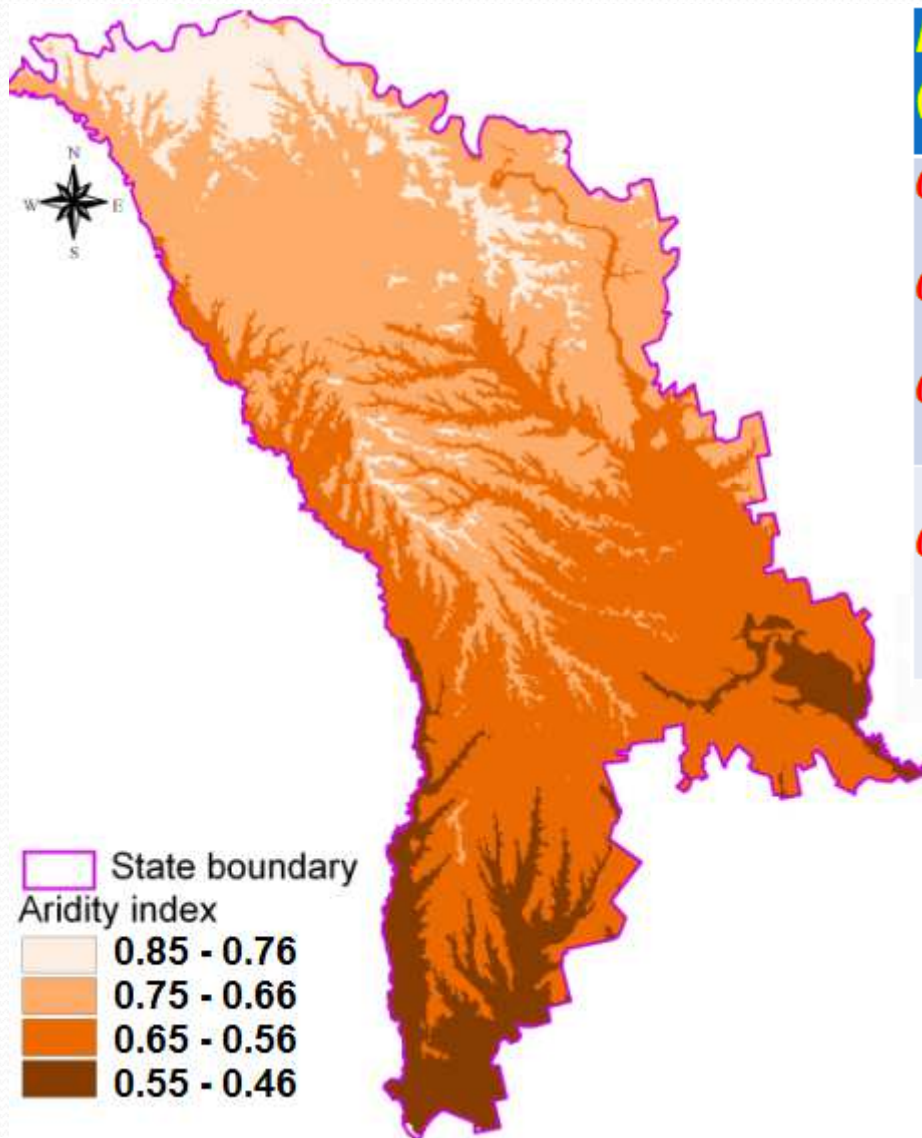
Recent Droughts in the Republic of Moldova

V. Cazac

State Hydrometeorological Service, Chisinau, Republic of
Moldova

(valeriucazac@hotmail.com)

Severe drought probability and risk assessment (Republic of Moldova)



Index aridity (AI)	Probability %	Risk estimates
0.46 – 0.55	>20% probability in next year	Very high (more than one chance in 5 years)
0.56 – 0.65		
0.66 – 0.75		
0.76 – 0.85	10 - 20% probability in next year	High (at least one chance in 10 years)

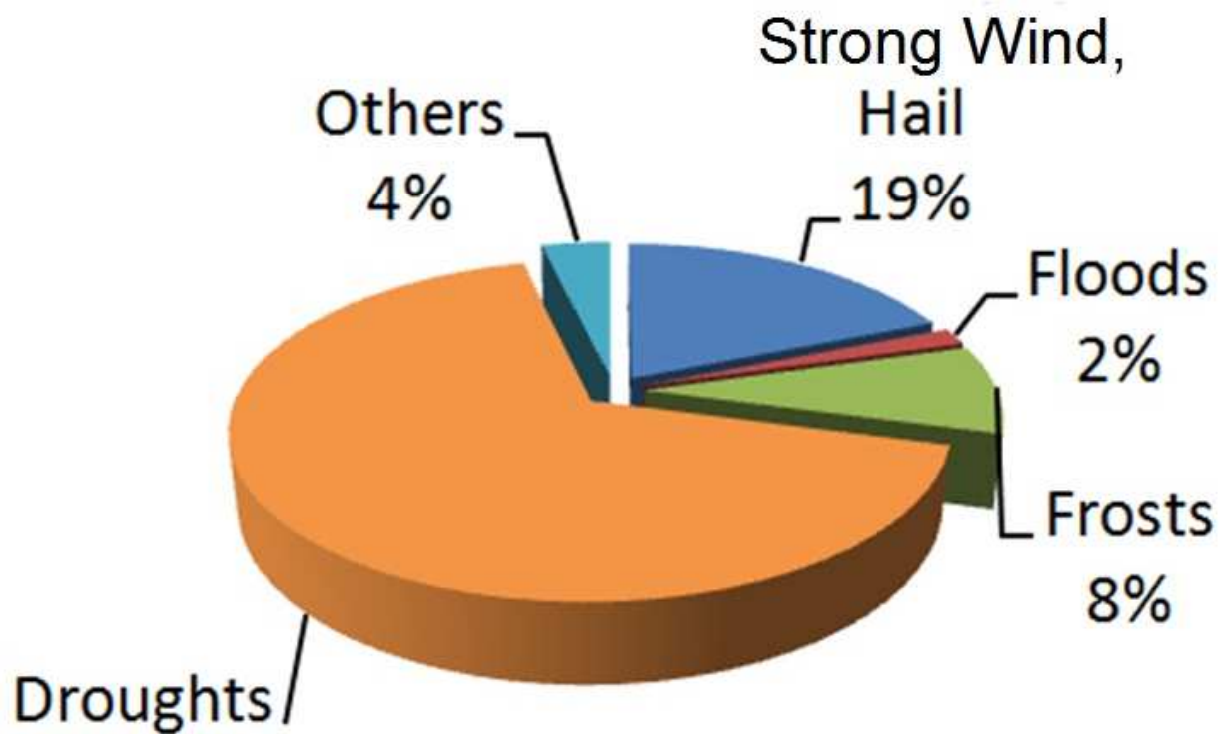
Impact area (%), duration and economic losses from recent droughts (Republic of Moldova 2000-2012) *

Drought of year	Affected area,%	Duration, seasons	Economic Losses	
			MLD lei mln.	\$ USA mln.
2000	75	spring-autumn	2098, 1	169,7
2003**	86	summer-autumn	-	-
2007	78	summer-autumn	11970,0	987,0
2012	80	summer-autumn	2500,0	200,5

*** Adapted from: Ministerul Agriculturii și Industriei Alimentare, 2007, 2012;
Daradur et al., 2007; UN, 2012; World Bank & FAO, 2007.**

**** No data on the economic losses**

Attribution (%) of the economic losses* to weather and climate related hazards (Republic of Moldova, 1998-2005).



*** Adapted from Daradur et al., 2007; World Bank & FAO, 2007**

Top 5

The most severe 6 – month (April – September) droughts identified by different indices*, Republic of Moldova (1891-2012)

Rank	<i>year</i>	SPI	<i>year</i>	HTC	<i>year</i>	STPI	<i>year</i>	DAI
1	2007	-1,64	2007	0,40	2007	4,32	2007	0,32
2	1938	-1,55	1951	0,45	1946	3,50	1892	0,35
3	1951	-1,55	1892	0,46	1951	3,40	1951	0,35
4	1892	-1,53	1938	0,48	2012	3,23	1939	0,37
5	1939	-1,55	1939	0,49	1892	3,20	1938	0,39

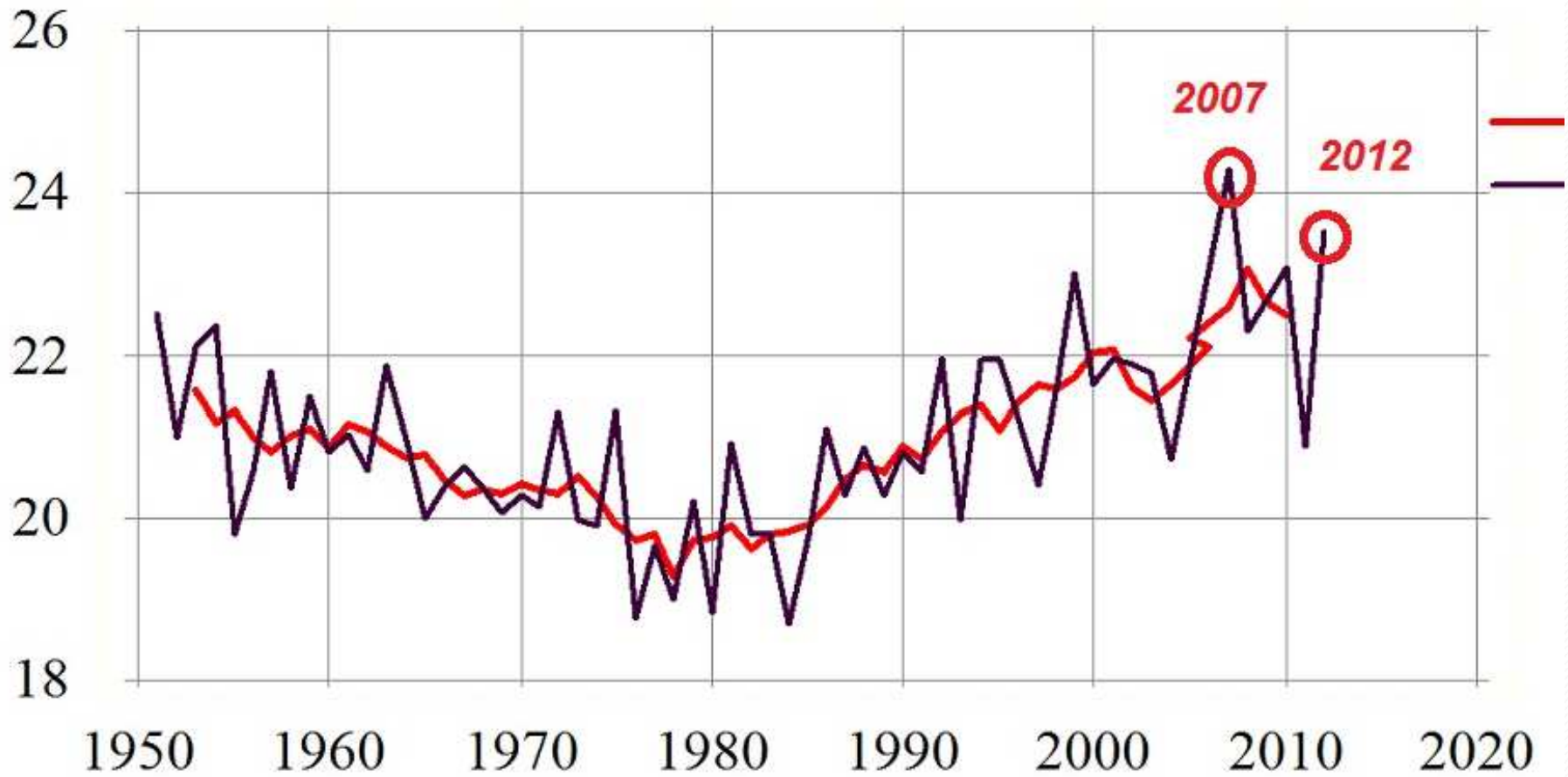
****SPI - Standardized Precipitation Index***

HTC – Hydrothermal Coefficient

STPI - Standardized Temperature and Precipitation Index

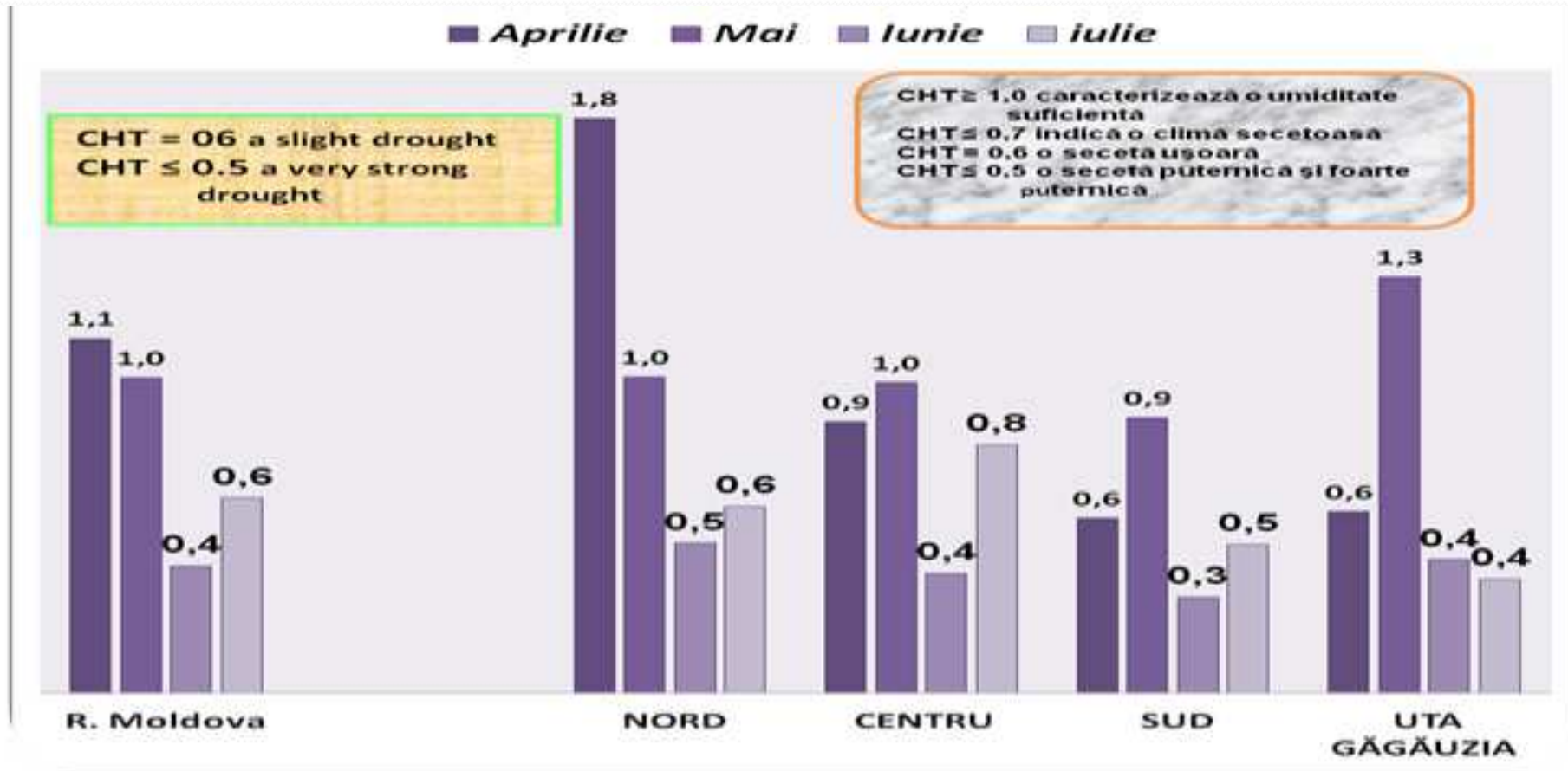
DAI – Daradur Aridity Index

Interannual variability and 5 - years moving average of summer temperatures



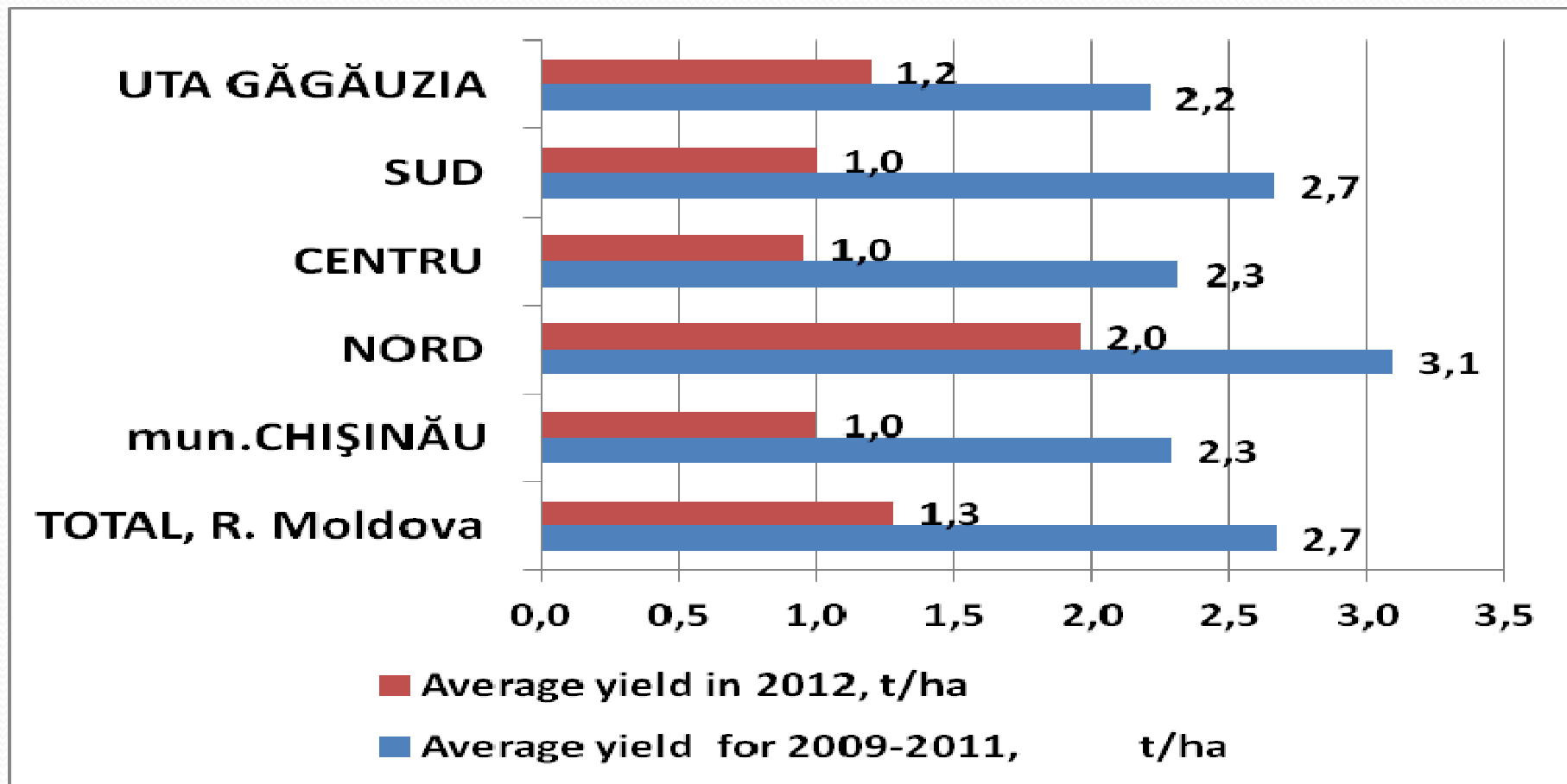
Drought 2012

Hydrothermal coefficient (HTC)



2012 Drought impact

Corn average yield (t/ha) in 2012 compared to the 2009-2011 average

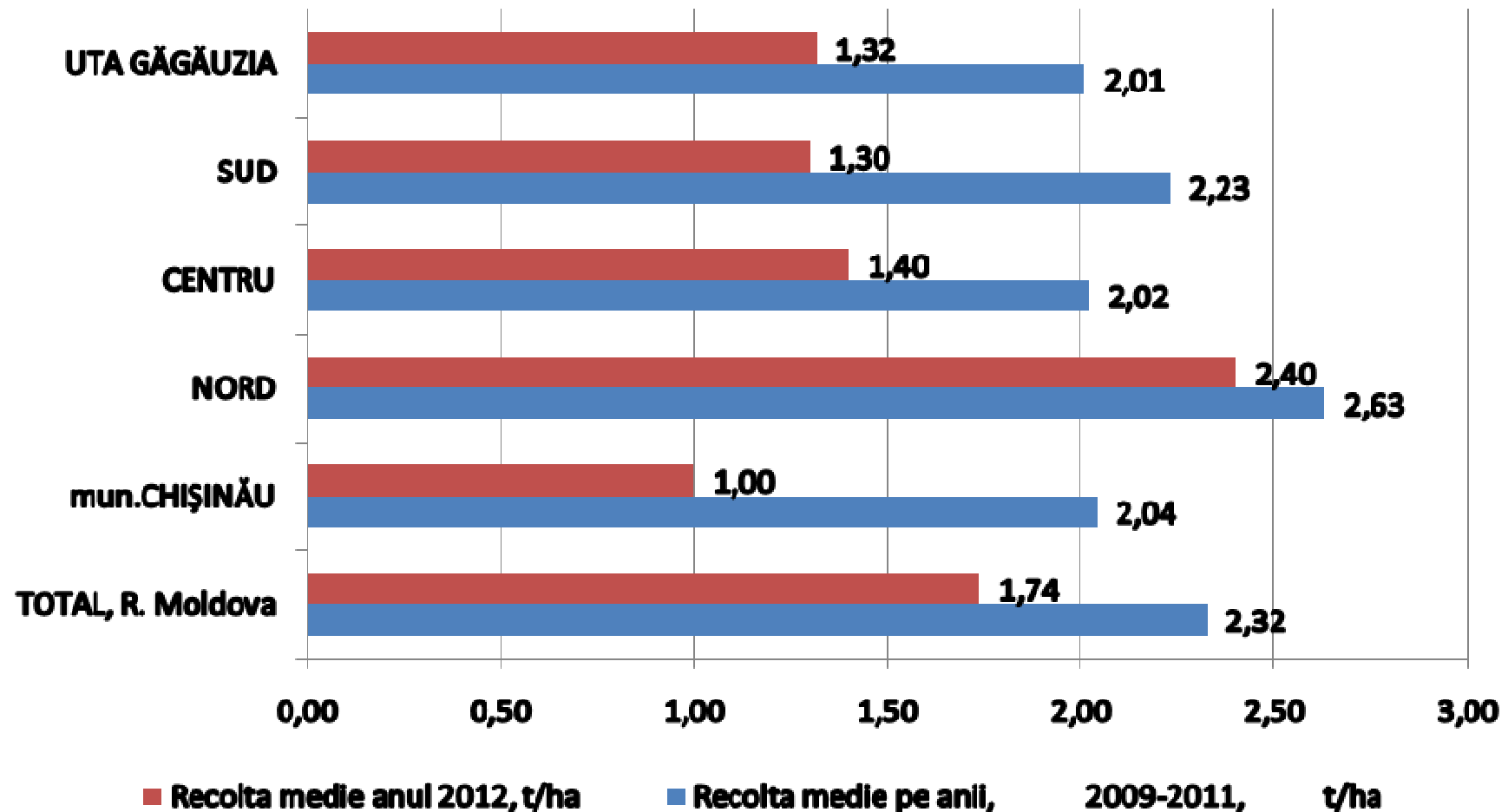


Estimările timpurii MAIA reducerea recoltei medii de porumb pe țară - 52%

Evaluarea MAIA/FAO – reducerea recoltei medii de porumb pe țară - 59%

2012 Drought impact

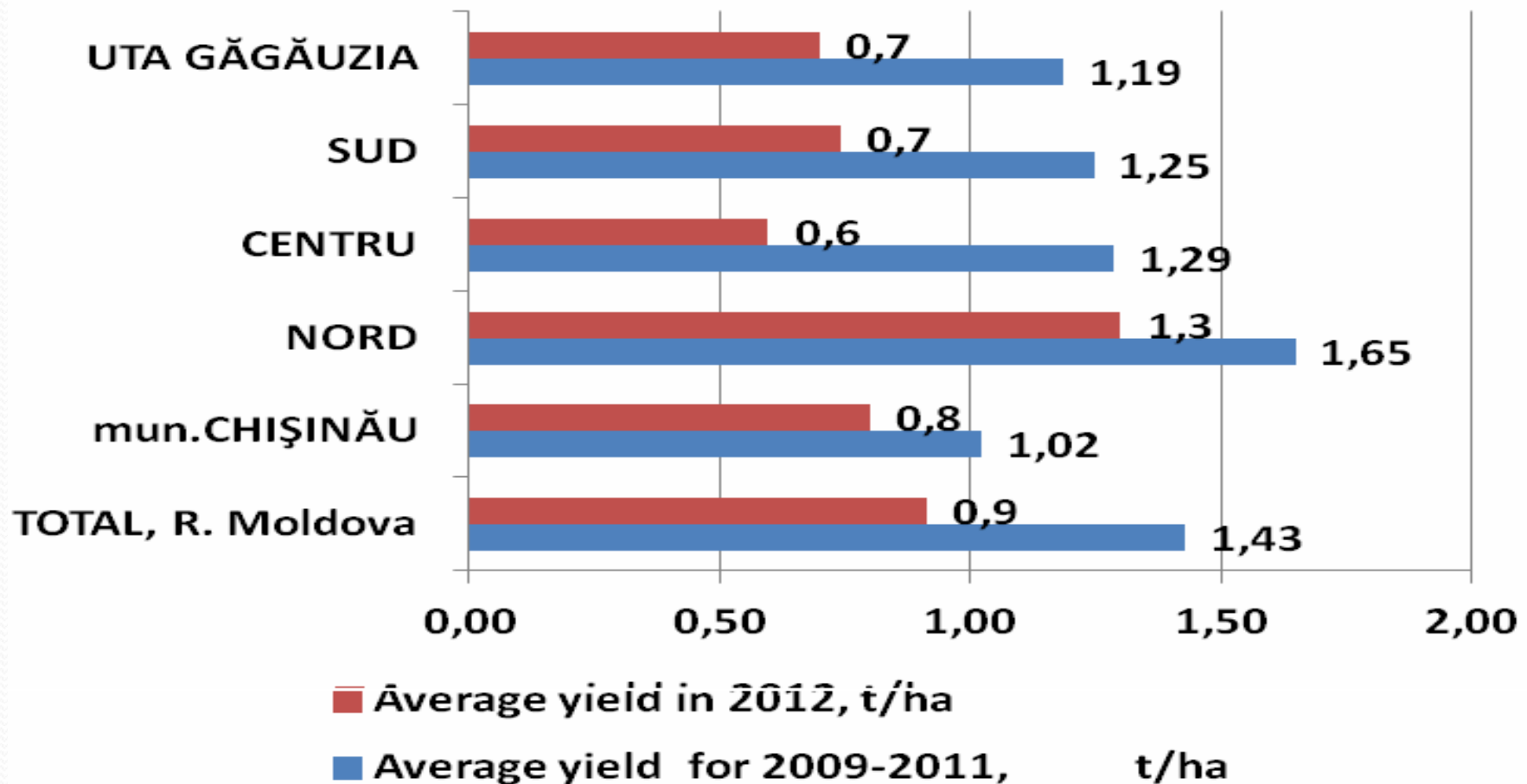
Winter wheat average yield (t/ha) in 2012 compared to the 2009-2011 average.



MAIA – recolta de grâu pe țară s-a redus în mediu cu 25%

2012 Drought impact

Sunflower average yield (t/ha) in 2012 compared to the 2009-2011 average



Estimările timpurii MAIA – reducerea recoltei medii pe țară - 37%

Evaluarea MAIA/FAO – reducerea recoltei medii pe țară - 53%





29/07/2007





**Thank you
for your kind attention**