





Implementation of homogenization and spatial interpolation in DMCSEE project

DMCSEE Training

4th February 2010







Remember!

Drought is essentially defined as departure from "normal situation"









<u>MASH</u>

Software & Manual prepared for you

- + Automatic procedure!
- User Interface







MASH Manual:

- p. 24: Description of data format
 - Temperature, SPI: additive model
 - File format: index (integer, 4 digits), data (real, 6 digits, 2 decimal places)
 - Precipitation: multiplicative model
 - File format: index (integer, 4 digits), data (integer! Mm*10, 6 digits)







MASH Manual:

- p. 34: Description of format of auxiliary files
 - Station coordinates!
 - Reference series
 - Meta data

Run MAUTOPAR.BAT and MASHAUTO.BAT







Alternatives:

- AnClim (P. Stepanek; Workshop, September 2009)
- Other software? Your solution?







DMCSEE project workplan

Among deliverables: georeferenced maps

- Act. 3.1: Climatological maps (contribution to regional climate atlas initiative)
- Act. 3.2.1 and 3.2.2: Maps of drought indices

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2.5 Final conference	_			-		_		_	 -		GEORAMA	all	veek, croatian and slovenian. 29.2.2012 to pre	/sent the project 20
WP3: Climatology and drought monitoring and mapping system											OMSZ			
3.1 Preparation of climate data and maps											OMSZ	all	27 prepared regional climatological maps 30.6.2011	
3.1.1 Overview of available data and quality control procedures											OMSZ	all	Overview of climatological databases 31.5.2010	
3.1.2 Overview of data homogenization procedures											omsz	all	Du view of procedures, used for data county and homogenisation 31.5.2010	nplemented and mented procedures
3.1.3 Overview of data mapping procedures											OMSZ	all	Overview of mapping procedures in operation 31.5.2010 droug	orological data for Noveml ght monitoring 20
3.2 Implementation of drought monitoring system														
3.2.1 Implementation of drought SPI index											EARS	omsz	Report on implementation of drought SPI index 31.5.2010 simple	implemented Je drought indices in
3.2.2 Calculation and evaluation of PDSI, Palfai and other drought related indices											ATIKOVIZIG	EARS	Report on calculation and evaluation of PDSI, all pair Palfai and other drought related indices 31.5.2011	rticipating counties lapped simple
3.2.3 Establishment of irrigation sheduling system											ISSNP	all	Report on developement and implementation of R4-Di irrigation scheduling system by project participants 31.12.2011 sched	ht indices for the e project area eveloped and emented irrigation Juling
													Panort on development of coftware for detaching BR - D.	m by project cipants leveloped coftware Decemi







Regional climatological maps and regional drought monitoring products require <u>standardization</u>

"Hard" standardization – use the same software!

"Medium" standardization – use of same algorithms

"Soft" standardization – provide maps with similar characteristics.







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"Bad" maps – "Bull eyes"

(normal consequence of IDW methods)

"Better" maps -

Local extremes are supported by neighboring stations





Jointly







SPI Maps

Sample SPI maps are expected from you this spring!

Example: SPI3 over Slovenia, July 2006









SPI Maps

Our goal:

Web GIS interface for regional drought indicators

Our model:

Joint Research Centre –

European Drought Observatory

http://edo.jrc.ec.europa.eu



JRC, 2008

Mar Ro









Web GIS interface for regional drought indicators

- Composite of your maps
 - MISH
 - Kriging (SAGA, other software (GSTAT, Idrisi,)

- We expect to have system available for testing in June