

SIMULATED TREND OF WET AND DRY CLIMATIC CONDITIONS IN CENTRAL/EASTERN EUROPE USING PRECIS OUTPUTS

Model PRECIS: Providing REgional Climates for Impact Studies

Applicable for all region of the world Aim: nationalizegional impacts of global change Description of PRECIE: Jones et al., 2004, Wilson et al., 2007 Priving KIZGE: ERA-40 (ECMWF, Uppals et al., 2005) HadCAS) (UK MetOffice, Gorden et al., 2000)

SAL index

B2 scenario

▲HUN = -0.1

Target region:
123 x 95 gridpoint (Central Europe)
Region of Interests:
55 x 30 gridpoint (Carpathian Basin)
Hortzontal resolution: 25 km

A1B scenario

≜HUN = +0.6

Reference period: 1961-1990 Target periods: 2021-2050 (A1B), 2071-2100 (A2, B2, A1B) Integration period: 1950-2100 Applied scenarios: SRES A2, SRES A1B, SRES B2 856 ppm, 717 ppm, 621 ppm, respectively (Nakicenovic and Swart, 2000)

PROJECTED SEASONAL CHANGE OF DROUGHT INDICES

Spatial structure of the projected changes is shown for the 4 seasons. The projected change is calculated as the difference between the scenario and the reference period. The spatial average is shown above the map for the gridpoints within Hungary.

AHUN = +0.2

Precipitation index (Kare et al., 1986) d formula: P = m(P) where $P, \ \, \text{precipitation sum} \\ m(P); \ \, \text{precipitation average for 1961-1990}$ A1B scenario 4HUN = +4.7 mm AHUN = -2.1 mm ▲HUN = +14.7 mm AHUN = -18.7 mm ≜HUN = -7.5 mm ≜HUN = -1.8 mm

thes scoraria.

For a formation, and the scorary which is projected to be smaller than in some in the case of A2 and 82. The projected drying for thoughy in case of A2 is larger in the case of A2 and 82. The projected drying for thoughy in case of A2 is larger in the case of A2 and 82. The projected drying for thoughy in case of A2 and 82. The scoraria project is larger in the case of A5 and 64. The case of A5

De Martonne aridity index A1B scenario AHUN = -7.3 mm/ AHUN = -11.3 mm/°C AHUN = -14.7 mm⁻C

country.

The projected decreases in larger in absolution value in cases of AA2 has delived in cases of RA2 has delived in the case of RA2 has delived in cases of RA2 has delived in the case of RA2 has delived in the cases of RA2 has delived in the case of RA2 has delived in the case of RA2 has delived in the CA2 has delived in the C

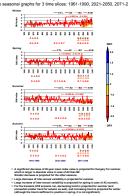
SIMULATED SEASONAL TIME SERIES OF DROUGHT INDICES

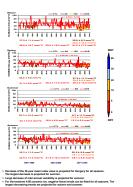
Spatial average values for the 229 grid points located within Hungary are shown in the graphs The equation included in the graph indicates the fitted linear trend in case of A1B scenario experiments

30-year average ± standard deviation values are shown under the seasonal graphs for 3 time slices: 1961-1990, 2021-2050, 2071-2100

ALL PROPERTY AND A STATE OF THE Andrew Andrew Andrew 0 ± 24.8 mm -37.4 ± 12.8 mm -27.7 ± 12.0 mm -0.0 ± 19.3 mm -4.7 ± 17.4 -19.0 ± 18.8 mm Approximate the second 3.6 ± 16.6 mm 3.6 ± 16.6 mm 3.6 ± 16.7 mm 3.6 ± 16.7 mm

A decrease of 30-year mean index value is projected for Hangary for all season, the largest decrease in in sources.
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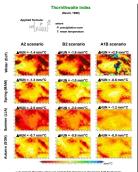
Judit BARTHOLY, Rita PONGRÁCZ, Ildikó PIECZKA, Brigitta HOLLÓSI, Orsolya TÖRÉK

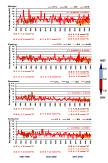
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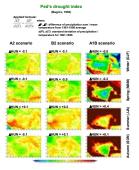


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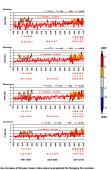




Decrease of the 30-year mean index value is projected for Hungary for all seasons. The largest decrease is projected for summer. Large decrease of inter-annual variability is projected for summer. For the translated ATB accentral-run, decreasing yeards are projected for all the four seasons the largest two confeditions is a behavior who are projected for summer and automatic.



In case of A1E scenario, the projected changes are considerab case of either A2 or E2. The transient run of A1E could be a po



An increase of 30-year mean index value is projected for Hungary for summer.

A decrease of inter-annual variability is projected for winter.

A startil increase of inter-annual variability is projected for pring in case of A2 scenario.

For the transient A18 scenario run, increasing tunds are projected for each season, making the projected for each season, and the projected for winter and