Snow cover duration (NW)

60
ERA5-Land: -4 -4 -6
ERA5-Crocus: -3 -5 -6
ERA5: -15

50
ERA5-Land: -3 -4 -6 -6 -7
ERA5-Crocus: -2 -4 -6 -7 -7
ERA5: -16 -15 -15
MESCAN-SURFEX: -5

40
ERA5-Land: -1 -3 -6 -7 -7 -7 -7
ERA5-Crocus: -0 -3 -6 -7 -7 -7 -7
ERA5: -16 -17 -17 -14 -12
MESCAN-SURFEX: -5 -5 -5
OBS: -4 -5

30
CNRM-AROME: -1
ERA5-Land: 6 3 -6 -9 -8 -9 -6 -3 -6
ERA5-Crocus: 5 3 -6 -8 -8 -9 -6 -4 -6
ERA5: -18 -21 -20 -17 -13 -9 -12
CERRA-Land: -6
MESCAN-SURFEX: -6 -5 -6 -4 -4
OBS: -6 -9 -5 -1

20
CNRM-AROME: -2 0 2
ERA5-Land: 7 11 4 -1 -14 -15 -9 -3 -3 -3 -7
ERA5-Crocus: 7 10 3 -1 -11 -13 -10 -3 -3 -6 -8
ERA5: 0 -17 -34 -31 -12 -7 -15 -9 -9
CERRA-Land: -6 -5 -7
MESCAN-SURFEX: -3 -10 -9 -3 -4 -4 -8
MTMSI: -2 -5
OBS: -6 -13 -12 -0 6 -1

10
CNRM-AROME: -11 2 7 18 -7
ERA5-Land: -4 30 -5 19 27 -18 -50 -8 -3 4 14 -5 -11
ERA5-Crocus: 1 27 13 17 15 -8 -40 -16 -2 -3 2 -10 -9
ERA5: -12 21 9 -53 -41 -13 -7 -13 -17 12 -14
CERRA-Land: -18 -7 -8 4 -15
MESCAN-SURFEX: 1 4 -10 -27 -18 6 -16 6 -10
MTMSI: -6 14 -14 -1
OBS: 13 7 -66 -26 23 17 52 -20

1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015
Central year of the window trend

Snow cover duration trends (days/dec): 15 10 5 0 −5 −10 −15

Snow cover duration (NE)

60
ERA5-Land: -3 -5 -8
ERA5-Crocus: -3 -5 -7
ERA5: -17

50
ERA5-Land: -2 -4 -6 -8 -8
ERA5-Crocus: -3 -4 -5 -7 -8
ERA5: -16 -19 -20
MESCAN-SURFEX: -6

40
ERA5-Land: -0 -3 -6 -8 -6 -8 -9
ERA5-Crocus: -1 -4 -5 -7 -6 -8 -9
ERA5: -12 -18 -20 -23 -20
MESCAN-SURFEX: -4 -4 -7
OBS: -1 -5

30
CNRM-AROME: -3
ERA5-Land: 4 3 -6 -10 -6 -9 -4 -6 -10
ERA5-Crocus: 3 3 -4 -8 -5 -7 -6 -6 -11
ERA5: -12 -17 -15 -23 -19 -21 -22
CERRA-Land: -7
MESCAN-SURFEX: -5 -3 -5 -6 -9
OBS: 0 -4 -4 -3

20
CNRM-AROME: -2 1 -7
ERA5-Land: 8 8 1 -2 -10 -14 -4 -3 0 -14 -12
ERA5-Crocus: 7 8 4 -0 -6 -11 -6 -5 1 -15 -12
ERA5: 7 -9 -21 -33 -11 -20 -23 -29 -11
CERRA-Land: -3 0 -14
MESCAN-SURFEX: -2 -4 -7 -2 -4 -6 -13
MTMSI: -6 -8
OBS: -0 -9 -6 3 2 -12

10
CNRM-AROME: -24 16 -25 28 -38
ERA5-Land: -25 31 29 1 16 -4 -53 -12 12 -22 26 -50 -28
ERA5-Crocus: -21 14 21 5 14 7 -36 -15 20 -16 15 -35 -16
ERA5: 14 6 27 -58 -54 -37 -11 -60 -4 -43 -11
CERRA-Land: -21 16 -14 15 -41
MESCAN-SURFEX: -1 3 -1 -31 -17 13 -17 14 -35
MTMSI: -14 3 -16 6
OBS: 15 5 -65 -21 20 -16 22 -39

1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015
Central year of the window trend

Snow cover duration trends (days/dec): 15 10 5 0 −5 −10 −15

Snow cover duration (SW)

60
ERA5-Land: -4 -4 -6
ERA5-Crocus: -3 -4 -6
ERA5: -13

50
ERA5-Land: -4 -5 -6 -6 -7
ERA5-Crocus: -3 -5 -5 -6 -7
ERA5: -14 -14 -15
MESCAN-SURFEX: -7

40
ERA5-Land: 0 -4 -7 -8 -8 -6 -5
ERA5-Crocus: 1 -3 -6 -7 -7 -7 -6
ERA5: -15 -15 -17 -14 -10
MESCAN-SURFEX: -9 -8 -7
OBS: -8 -8

30
CNRM-AROME: 3
ERA5-Land: 7 2 -6 -9 -10 -13 -4 2 -4
ERA5-Crocus: 5 3 -2 -7 -9 -10 -4 -1 -5
ERA5: -15 -20 -19 -17 -10 -7 -10
CERRA-Land: -1
MESCAN-SURFEX: -10 -11 -11 -5 1
OBS: -12 -13 -4 2

20
CNRM-AROME: -3 2 2
ERA5-Land: 7 5 5 1 -13 -23 -11 -3 5 2 -9
ERA5-Crocus: 6 5 4 2 -7 -18 -11 -4 2 -1 -9
ERA5: 1 -8 -32 -35 -11 -4 -8 -11 -12
CERRA-Land: -3 3 0
MESCAN-SURFEX: -5 -12 -20 -9 -0 5 1
MTMSI: -6 -1
OBS: -13 -26 -11 -7 7 7

10
CNRM-AROME: -27 -20 -19 30 10
ERA5-Land: 10 19 2 6 14 -11 -43 -23 -1 -14 32 9 -28
ERA5-Crocus: 1 10 11 6 9 -5 -38 -29 -3 -7 14 -22 -13
ERA5: -4 17 11 -41 -50 -25 1 -11 -3 17 -11
CERRA-Land: -39 9 -5 13 -6
MESCAN-SURFEX: -2 1 -17 -34 -40 11 1 13 -15
MTMSI: -35 4 -11 7
OBS: 27 -26 -33 -36 -9 -10 29 6

1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015
Central year of the window trend

Snow cover duration trends (days/dec): 15 10 5 0 −5 −10 −15

Snow cover duration (SE)

60
ERA5-Land: -5 -6 -9
ERA5-Crocus: -4 -5 -8
ERA5: -18

50
ERA5-Land: -3 -6 -7 -8 -9
ERA5-Crocus: -3 -5 -6 -8 -9
ERA5: -16 -20 -22
MESCAN-SURFEX: -7

40
ERA5-Land: 1 -5 -7 -10 -7 -10 -11
ERA5-Crocus: 1 -3 -6 -9 -8 -10 -11
ERA5: -15 -19 -20 -25 -22
MESCAN-SURFEX: -7 -8 -11
OBS: -8 -9

30
CNRM-AROME: -0
ERA5-Land: 8 5 -7 -11 -8 -15 -8 -4 -11
ERA5-Crocus: 4 6 -1 -9 -10 -13 -10 -5 -8
ERA5: -9 -17 -20 -28 -20 -22 -22
CERRA-Land: -1
MESCAN-SURFEX: -6 -5 -14 -12 -8
OBS: -9 -14 -9 -2

20
CNRM-AROME: -5 -0 -6
ERA5-Land: 18 5 3 -0 -6 -27 -13 -10 1 -5 -14
ERA5-Crocus: 10 6 4 3 -2 -20 -19 -6 4 -3 -13
ERA5: 5 -6 -14 -36 -22 -24 -18 -22 -16
CERRA-Land: -7 5 -3
MESCAN-SURFEX: 8 6 -20 -17 -9 -5 -8
MTMSI: -11 -7
OBS: -11 -23 -18 -5 2 -8

10
CNRM-AROME: -29 4 -36 52 -1
ERA5-Land: -20 41 21 -35 39 -8 -75 -46 8 -13 46 -33 -39
ERA5-Crocus: -26 17 26 -24 26 2 -64 -36 12 9 34 -43 -28
ERA5: 11 -10 25 -35 -33 -72 -19 -16 16 -76 -11
CERRA-Land: -42 25 -6 38 -25
MESCAN-SURFEX: -10 23 8 -50 -44 19 -17 20 -22
MTMSI: -27 11 -13 8
OBS: 2 10 -86 -53 25 -24 37 -60

1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015
Central year of the window trend

Snow cover duration trends (days/dec): 15 10 5 0 −5 −10 −15