Statistiek van de extreme neerslag voor de Belgische gemeenten

Namur (NIS 92094)

1. Geschatte neerslaghoeveelheid voor een neerslagduur van 10 minuten tot 30 dagen (rijen) en een terugkeerperiode van 2 tot 200 jaar (kolommen). Eenheid: mm.

	Terugkeerperiode (jaren)											
Duur	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**200**
10 min	7.6	11.0	13.5	15.0	16.1	17.0	17.7	19.0	19.9	21.8	23.1	26.6
20 min	11.0	15.9	19.5	21.7	23.3	24.6	25.7	27.4	28.8	31.4	33.4	38.4
30 min	13.0	19.0	23.4	26.1	28.0	29.6	30.9	33.0	34.7	38.0	40.3	46.4
1 u	16.2	22.7	27.6	30.5	32.7	34.4	35.8	38.1	40.0	43.5	46.1	52.7
2 u	19.4	26.8	32.2	35.5	38.0	39.9	41.5	44.1	46.2	50.1	53.0	60.4
3 u	21.5	29.6	35.6	39.2	41.9	44.0	45.8	48.6	50.9	55.2	58.3	66.4
6 u	26.0	34.3	40.5	44.2	46.9	49.0	50.8	53.7	56.0	60.4	63.6	71.7
12 u	31.7	41.7	49.0	53.4	56.6	59.2	61.3	64.8	67.5	72.7	76.5	86.1
1 d	39.0	50.5	58.7	63.6	67.1	69.9	72.2	76.0	78.9	84.4	88.4	98.4
2 d	49.6	63.4	73.0	78.7	82.8	85.9	88.5	92.7	96.0	102.1	106.5	117.4
3 d	52.9	67.5	77.7	83.6	87.8	91.1	93.8	98.1	101.4	107.6	112.0	123.0
4 d	57.5	73.2	83.9	90.1	94.5	97.9	100.7	105.2	108.6	115.0	119.6	130.7
5 d	65.3	82.2	93.8	100.4	105.1	108.8	111.7	116.5	120.1	126.8	131.6	143.4
7 d	75.2	93.6	106.0	113.1	118.1	121.9	125.0	130.0	133.8	140.8	145.8	157.9
10 d	89.6	110.5	124.3	132.2	137.7	141.9	145.3	150.8	154.9	162.5	167.9	180.9
15 d	108.6	132.9	148.8	157.8	164.0	168.7	172.6	178.7	183.4	191.8	197.8	212.0
20 d	126.5	154.9	173.3	183.5	190.6	196.1	200.5	207.4	212.7	222.2	228.9	244.8
25 d	135.0	165.2	184.6	195.3	202.8	208.4	213.0	220.2	225.7	235.6	242.5	258.8
30 d	157.6	190.0	210.6	222.0	229.9	235.9	240.7	248.3	254.1	264.4	271.6	288.7

2. Geschatte neerslaghoeveelheid en standaardafwijking van deze schatting voor een neerslagduur van 10 minuten tot 30 dagen (rijen) en een terugkeerperiode van 2 tot 200 jaar (kolommen). Eenheid: mm.

	Terugkeerperiode (jaren)											
Duur	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**200**
10 min	7.6	11.0	13.5	15.0	16.1	17.0	17.7	19.0	19.9	21.8	23.1	26.6
	0.2	0.3	0.5	0.7	0.8	0.9	1.0	1.2	1.4	1.7	1.9	2.7
20 min	11.0	15.9	19.5	21.7	23.3	24.6	25.7	27.4	28.8	31.4	33.4	38.4
	0.3	0.5	0.8	1.0	1.1	1.3	1.4	1.7	1.9	2.3	2.7	3.7
30 min	13.0	19.0	23.4	26.1	28.0	29.6	30.9	33.0	34.7	38.0	40.3	46.4
	0.4	0.6	0.8	1.0	1.1	1.3	1.4	1.6	1.8	2.1	2.4	3.2
1 u	16.2	22.7	27.6	30.5	32.7	34.4	35.8	38.1	40.0	43.5	46.1	52.7
	0.4	0.7	1.0	1.3	1.5	1.7	1.8	2.1	2.4	2.9	3.3	4.5
2 u	19.4	26.8	32.2	35.5	38.0	39.9	41.5	44.1	46.2	50.1	53.0	60.4
	0.5	0.8	1.2	1.5	1.7	1.9	2.1	2.4	2.7	3.3	3.8	5.1
3 u	21.5	29.6	35.6	39.2	41.9	44.0	45.8	48.6	50.9	55.2	58.3	66.4
	0.6	0.9	1.2	1.5	1.7	1.9	2.1	2.4	2.6	3.1	3.6	4.8
6 u	26.0	34.3	40.5	44.2	46.9	49.0	50.8	53.7	56.0	60.4	63.6	71.7
	0.7	1.0	1.3	1.7	1.9	2.2	2.4	2.8	3.2	3.9	4.5	6.3
12 u	31.7	41.7	49.0	53.4	56.6	59.2	61.3	64.8	67.5	72.7	76.5	86.1
	1.0	1.3	1.8	2.3	2.6	3.0	3.3	3.8	4.3	5.2	6.0	8.2
1 d	39.0	50.5	58.7	63.6	67.1	69.9	72.2	76.0	78.9	84.4	88.4	98.4
	1.0	1.3	1.6	1.8	2.0	2.2	2.4	2.7	2.9	3.4	3.8	4.9
2 d	49.6	63.4	73.0	78.7	82.8	85.9	88.5	92.7	96.0	102.1	106.5	117.4
	1.5	2.1	2.7	3.2	3.6	3.9	4.2	4.7	5.2	6.0	6.7	8.5
3 d	52.9	67.5	77.7	83.6	87.8	91.1	93.8	98.1	101.4	107.6	112.0	123.0
	1.9	2.5	3.2	3.7	4.1	4.4	4.7	5.3	5.7	6.5	7.2	8.9
4 d	57.5	73.2	83.9	90.1	94.5	97.9	100.7	105.2	108.6	115.0	119.6	130.7
	2.2	2.7	3.3	3.7	4.0	4.3	4.5	4.9	5.3	6.0	6.5	7.9
5 d	65.3	82.2	93.8	100.4	105.1	108.8	111.7	116.5	120.1	126.8	131.6	143.4
	2.5	3.1	3.7	4.0	4.3	4.6	4.8	5.2	5.5	6.2	6.7	8.0
7 d	75.2	93.6	106.0	113.1	118.1	121.9	125.0	130.0	133.8	140.8	145.8	157.9
	3.0	3.6	4.1	4.4	4.7	4.9	5.1	5.4	5.7	6.2	6.6	7.8
10 d	89.6	110.5	124.3	132.2	137.7	141.9	145.3	150.8	154.9	162.5	167.9	180.9
	3.7	4.6	5.2	5.6	6.0	6.2	6.5	6.8	7.1	7.7	8.2	9.5
15 d	108.6	132.9	148.8	157.8	164.0	168.7	172.6	178.7	183.4	191.8	197.8	212.0
	4.5	5.5	6.2	6.5	6.8	7.0	7.2	7.5	7.7	8.1	8.4	9.2
20 d	126.5	154.9	173.3	183.5	190.6	196.1	200.5	207.4	212.7	222.2	228.9	244.8
	5.4	6.6	7.4	7.9	8.2	8.5	8.7	9.0	9.3	9.9	10.3	11.4
25 d	135.0	165.2	184.6	195.3	202.8	208.4	213.0	220.2	225.7	235.6	242.5	258.8
	6.0	7.4	8.5	9.2	9.7	10.2	10.5	11.1	11.6	12.5	13.2	15.1
30 d	157.6	190.0	210.6	222.0	229.9	235.9	240.7	248.3	254.1	264.4	271.6	288.7
	6.6	8.2	9.5	10.4	11.0	11.6	12.1	12.8	13.5	14.7	15.7	18.2

3. 95%-betrouwbaarheidsinterval van de geschatte neerslaghoeveelheid voor een neerslagduur van 10 minuten tot 30 dagen (rijen) en een terugkeerperiode van 2 tot 200 jaar (kolommen). Eenheid: mm.

	Terugkeerperiode (jaren)											
Duur	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**200**
10 min	7.3	10.3	12.4	13.6	14.5	15.2	15.7	16.6	17.2	18.5	19.3	21.4
	8.0	11.6	14.5	16.3	17.7	18.8	19.8	21.3	22.6	25.1	26.9	31.9
20 min	10.4	14.8	18.0	19.8	21.0	22.0	22.8	24.1	25.1	26.9	28.2	31.3
	11.7	16.9	21.0	23.6	25.5	27.1	28.5	30.7	32.5	36.0	38.6	45.6
30 min	12.3	17.8	21.8	24.1	25.8	27.1	28.2	29.9	31.3	33.8	35.6	40.2
	13.8	20.1	25.0	28.0	30.3	32.1	33.6	36.2	38.2	42.1	45.0	52.7
1 u	15.3	21.3	25.6	28.0	29.7	31.1	32.2	33.9	35.3	37.8	39.5	43.8
	17.1	24.1	29.6	33.0	35.6	37.7	39.4	42.3	44.7	49.2	52.6	61.6
2 u	18.4	25.2	29.9	32.7	34.6	36.2	37.4	39.4	40.9	43.6	45.6	50.4
	20.4	28.4	34.5	38.4	41.3	43.6	45.6	48.9	51.5	56.6	60.4	70.4
3 u	20.3	27.8	33.2	36.3	38.5	40.3	41.7	44.0	45.7	49.0	51.3	57.1
	22.8	31.4	38.0	42.2	45.2	47.7	49.8	53.3	56.0	61.3	65.3	75.7
6 u	24.6	32.4	37.8	40.9	43.1	44.7	46.1	48.1	49.8	52.7	54.7	59.5
	27.4	36.2	43.1	47.4	50.7	53.3	55.6	59.3	62.3	68.1	72.5	84.0
12 u	29.8	39.1	45.4	49.0	51.5	53.4	54.9	57.3	59.1	62.4	64.7	70.0
	33.7	44.3	52.6	57.8	61.8	65.0	67.8	72.3	75.9	83.0	88.3	102.3
1 d	37.0	47.9	55.6	60.0	63.1	65.6	67.5	70.7	73.2	77.7	80.9	88.8
	41.0	53.0	61.8	67.2	71.2	74.3	76.9	81.2	84.6	91.1	95.8	108.0
2 d	46.6	59.3	67.7	72.4	75.7	78.2	80.3	83.4	85.9	90.3	93.3	100.6
	52.6	67.4	78.3	84.9	89.8	93.6	96.8	102.0	106.1	113.9	119.6	134.1
3 d	49.2	62.6	71.4	76.4	79.8	82.4	84.5	87.8	90.3	94.8	98.0	105.5
	56.5	72.5	84.0	90.9	95.9	99.8	103.1	108.4	112.6	120.4	126.1	140.4
4 d	53.3	67.8	77.5	82.9	86.6	89.5	91.8	95.5	98.3	103.3	106.8	115.2
	61.7	78.5	90.4	97.3	102.4	106.3	109.6	114.9	119.0	126.7	132.3	146.3
5 d	60.4	76.1	86.6	92.5	96.6	99.7	102.3	106.3	109.3	114.8	118.6	127.7
	70.1	88.3	101.0	108.3	113.6	117.8	121.2	126.7	131.0	138.9	144.7	159.0
7 d	69.4	86.7	98.1	104.5	108.9	112.3	115.1	119.4	122.7	128.7	132.8	142.7
	81.0	100.6	114.0	121.7	127.2	131.5	135.0	140.6	144.9	153.0	158.8	173.1
10 d	82.4	101.5	114.1	121.1	126.0	129.7	132.7	137.4	141.0	147.4	151.9	162.4
	96.8	119.4	134.6	143.2	149.4	154.1	158.0	164.1	168.9	177.7	184.0	199.4
15 d	99.7	122.1	136.7	144.9	150.6	155.0	158.5	164.1	168.3	175.9	181.3	193.9
	117.5	143.7	160.9	170.6	177.3	182.5	186.7	193.3	198.4	207.7	214.3	230.1
20 d	116.0	142.0	158.8	168.1	174.5	179.5	183.4	189.6	194.4	202.8	208.7	222.5
	137.0	167.8	187.8	198.9	206.7	212.7	217.5	225.1	231.0	241.6	249.0	267.1
25 d	123.3	150.6	167.8	177.2	183.7	188.5	192.4	198.4	203.0	211.0	216.5	229.2
	146.7	179.7	201.3	213.4	221.8	228.3	233.6	242.0	248.4	260.1	268.4	288.5
30 d	144.8	173.9	192.0	201.7	208.2	213.2	217.1	223.1	227.6	235.5	240.9	253.1
	170.5	206.0	229.2	242.3	251.5	258.6	264.4	273.5	280.5	293.3	302.4	324.3

4. Schatting van de coefficienten van Montana.
Formule van Montana : intensiteit[mm/h] = a . duur[min]$^{-b}$ voor verschillende tijdsduren
a_1, b_1 : duur $<$ 25 min
a_2, b_2 : duur tussen 25 min en 6000 min (= 100 h)
a_3, b_3 : duur $>$ 6000 min (= 100 h)

Terugkeerperiode (jaren)	a_1	b_1	a_2	b_2	a_3	b_3
2	136.3	0.4727	298.6	0.7163	52.1	0.5155
5	194.8	0.4712	463.5	0.7404	77.4	0.5347
10	237.3	0.4680	595.8	0.7540	100.2	0.5490
15	262.6	0.4656	679.7	0.7611	115.7	0.5575
20	281.0	0.4638	743.0	0.7659	127.8	0.5635
25	295.5	0.4623	794.3	0.7695	137.9	0.5683
30	307.5	0.4611	837.8	0.7724	146.7	0.5721
40	326.8	0.4590	909.5	0.7769	161.5	0.5783
50	342.2	0.4573	967.9	0.7803	174.0	0.5831
75	370.8	0.4541	1080.5	0.7864	198.8	0.5919
100	391.7	0.4518	1166.0	0.7907	218.4	0.5981
200	444.5	0.4459	1392.5	0.8007	273.1	0.6134

Referenties

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