



Statistiek van de extreme neerslag voor de Belgische gemeenten

Dilbeek (NIS 23016)

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

| Duur | Terugkeerperiode (jaren) | | | | | | | | | | | |
|--------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2 | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 75 | 100 | 200 |
| 10 min | 7.6 | 10.9 | 13.3 | 14.8 | 16.0 | 16.8 | 17.6 | 18.8 | 19.7 | 21.6 | 22.9 | 26.4 |
| 20 min | 10.9 | 15.6 | 19.1 | 21.3 | 22.9 | 24.1 | 25.2 | 26.9 | 28.3 | 30.9 | 32.8 | 37.7 |
| 30 min | 12.9 | 18.7 | 23.0 | 25.7 | 27.6 | 29.2 | 30.5 | 32.6 | 34.3 | 37.4 | 39.8 | 45.8 |
| 1 u | 16.0 | 22.3 | 27.0 | 29.9 | 32.0 | 33.7 | 35.1 | 37.4 | 39.2 | 42.6 | 45.1 | 51.6 |
| 2 u | 19.1 | 26.3 | 31.6 | 34.8 | 37.2 | 39.1 | 40.6 | 43.2 | 45.2 | 49.0 | 51.8 | 59.0 |
| 3 u | 21.2 | 29.1 | 35.0 | 38.6 | 41.2 | 43.3 | 45.0 | 47.8 | 50.0 | 54.2 | 57.3 | 65.2 |
| 6 u | 25.5 | 33.8 | 39.9 | 43.6 | 46.3 | 48.4 | 50.2 | 53.1 | 55.4 | 59.7 | 62.9 | 71.0 |
| 12 u | 31.1 | 41.0 | 48.3 | 52.7 | 55.9 | 58.5 | 60.6 | 64.0 | 66.8 | 71.9 | 75.7 | 85.3 |
| 1 d | 37.7 | 49.1 | 57.3 | 62.2 | 65.7 | 68.5 | 70.8 | 74.5 | 77.4 | 82.8 | 86.8 | 96.8 |
| 2 d | 47.5 | 61.0 | 70.5 | 76.1 | 80.0 | 83.2 | 85.7 | 89.8 | 93.0 | 99.0 | 103.3 | 114.0 |
| 3 d | 50.4 | 64.6 | 74.5 | 80.3 | 84.4 | 87.6 | 90.2 | 94.4 | 97.6 | 103.6 | 107.9 | 118.6 |
| 4 d | 54.6 | 69.8 | 80.2 | 86.2 | 90.5 | 93.8 | 96.5 | 100.9 | 104.2 | 110.4 | 114.8 | 125.6 |
| 5 d | 62.0 | 78.3 | 89.4 | 95.8 | 100.3 | 103.9 | 106.7 | 111.3 | 114.8 | 121.3 | 125.9 | 137.2 |
| 7 d | 71.2 | 88.9 | 100.8 | 107.6 | 112.4 | 116.1 | 119.1 | 123.9 | 127.6 | 134.3 | 139.1 | 150.8 |
| 10 d | 84.5 | 104.3 | 117.4 | 124.8 | 130.0 | 134.0 | 137.3 | 142.4 | 146.4 | 153.6 | 158.6 | 170.9 |
| 15 d | 102.3 | 125.4 | 140.5 | 149.0 | 154.9 | 159.4 | 163.1 | 168.8 | 173.3 | 181.3 | 186.9 | 200.4 |
| 20 d | 119.2 | 146.0 | 163.4 | 173.1 | 179.8 | 185.0 | 189.1 | 195.7 | 200.7 | 209.7 | 216.0 | 231.0 |
| 25 d | 126.7 | 155.3 | 173.7 | 183.9 | 190.9 | 196.3 | 200.6 | 207.4 | 212.6 | 222.0 | 228.5 | 244.0 |
| 30 d | 148.5 | 179.3 | 199.0 | 209.8 | 217.3 | 223.1 | 227.7 | 234.9 | 240.4 | 250.2 | 257.1 | 273.3 |

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.

| Duur | Terugkeerperiode (jaren) | | | | | | | | | | | |
|--------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2 | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 75 | 100 | 200 |
| 10 min | 7.6 | 10.9 | 13.3 | 14.8 | 16.0 | 16.8 | 17.6 | 18.8 | 19.7 | 21.6 | 22.9 | 26.4 |
| | 0.2 | 0.4 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | 1.4 | 1.7 | 1.9 | 2.7 |
| 20 min | 10.9 | 15.6 | 19.1 | 21.3 | 22.9 | 24.1 | 25.2 | 26.9 | 28.3 | 30.9 | 32.8 | 37.7 |
| | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.3 | 1.5 | 1.7 | 1.9 | 2.3 | 2.6 | 3.6 |
| 30 min | 12.9 | 18.7 | 23.0 | 25.7 | 27.6 | 29.2 | 30.5 | 32.6 | 34.3 | 37.4 | 39.8 | 45.8 |
| | 0.4 | 0.6 | 0.9 | 1.1 | 1.2 | 1.4 | 1.5 | 1.7 | 1.9 | 2.2 | 2.5 | 3.3 |
| 1 u | 16.0 | 22.3 | 27.0 | 29.9 | 32.0 | 33.7 | 35.1 | 37.4 | 39.2 | 42.6 | 45.1 | 51.6 |
| | 0.5 | 0.8 | 1.2 | 1.4 | 1.6 | 1.8 | 2.0 | 2.3 | 2.5 | 3.1 | 3.5 | 4.7 |
| 2 u | 19.1 | 26.3 | 31.6 | 34.8 | 37.2 | 39.1 | 40.6 | 43.2 | 45.2 | 49.0 | 51.8 | 59.0 |
| | 0.6 | 1.0 | 1.4 | 1.6 | 1.9 | 2.1 | 2.3 | 2.6 | 2.9 | 3.5 | 3.9 | 5.3 |
| 3 u | 21.2 | 29.1 | 35.0 | 38.6 | 41.2 | 43.3 | 45.0 | 47.8 | 50.0 | 54.2 | 57.3 | 65.2 |
| | 0.7 | 1.0 | 1.4 | 1.7 | 1.9 | 2.1 | 2.2 | 2.5 | 2.8 | 3.3 | 3.7 | 4.9 |
| 6 u | 25.5 | 33.8 | 39.9 | 43.6 | 46.3 | 48.4 | 50.2 | 53.1 | 55.4 | 59.7 | 62.9 | 71.0 |
| | 0.9 | 1.1 | 1.5 | 1.8 | 2.1 | 2.3 | 2.6 | 3.0 | 3.3 | 4.1 | 4.6 | 6.4 |
| 12 u | 31.1 | 41.0 | 48.3 | 52.7 | 55.9 | 58.5 | 60.6 | 64.0 | 66.8 | 71.9 | 75.7 | 85.3 |
| | 1.2 | 1.5 | 2.0 | 2.4 | 2.8 | 3.1 | 3.4 | 3.9 | 4.4 | 5.3 | 6.1 | 8.3 |
| 1 d | 37.7 | 49.1 | 57.3 | 62.2 | 65.7 | 68.5 | 70.8 | 74.5 | 77.4 | 82.8 | 86.8 | 96.8 |
| | 1.4 | 1.6 | 1.9 | 2.2 | 2.4 | 2.6 | 2.7 | 3.0 | 3.3 | 3.7 | 4.1 | 5.2 |
| 2 d | 47.5 | 61.0 | 70.5 | 76.1 | 80.0 | 83.2 | 85.7 | 89.8 | 93.0 | 99.0 | 103.3 | 114.0 |
| | 2.1 | 2.7 | 3.3 | 3.8 | 4.2 | 4.6 | 4.8 | 5.4 | 5.8 | 6.6 | 7.3 | 9.1 |
| 3 d | 50.4 | 64.6 | 74.5 | 80.3 | 84.4 | 87.6 | 90.2 | 94.4 | 97.6 | 103.6 | 107.9 | 118.6 |
| | 2.6 | 3.3 | 4.0 | 4.5 | 4.9 | 5.3 | 5.6 | 6.1 | 6.5 | 7.3 | 7.9 | 9.7 |
| 4 d | 54.6 | 69.8 | 80.2 | 86.2 | 90.5 | 93.8 | 96.5 | 100.9 | 104.2 | 110.4 | 114.8 | 125.6 |
| | 3.0 | 3.7 | 4.3 | 4.7 | 5.0 | 5.3 | 5.5 | 5.9 | 6.3 | 7.0 | 7.5 | 8.9 |
| 5 d | 62.0 | 78.3 | 89.4 | 95.8 | 100.3 | 103.9 | 106.7 | 111.3 | 114.8 | 121.3 | 125.9 | 137.2 |
| | 3.4 | 4.2 | 4.8 | 5.3 | 5.6 | 5.8 | 6.1 | 6.4 | 6.8 | 7.4 | 7.9 | 9.2 |
| 7 d | 71.2 | 88.9 | 100.8 | 107.6 | 112.4 | 116.1 | 119.1 | 123.9 | 127.6 | 134.3 | 139.1 | 150.8 |
| | 4.2 | 5.0 | 5.6 | 6.0 | 6.2 | 6.5 | 6.7 | 7.0 | 7.3 | 7.9 | 8.3 | 9.5 |
| 10 d | 84.5 | 104.3 | 117.4 | 124.8 | 130.0 | 134.0 | 137.3 | 142.4 | 146.4 | 153.6 | 158.6 | 170.9 |
| | 5.2 | 6.4 | 7.2 | 7.8 | 8.1 | 8.4 | 8.7 | 9.1 | 9.5 | 10.1 | 10.6 | 11.9 |
| 15 d | 102.3 | 125.4 | 140.5 | 149.0 | 154.9 | 159.4 | 163.1 | 168.8 | 173.3 | 181.3 | 186.9 | 200.4 |
| | 6.4 | 7.7 | 8.6 | 9.1 | 9.5 | 9.7 | 10.0 | 10.3 | 10.6 | 11.1 | 11.5 | 12.4 |
| 20 d | 119.2 | 146.0 | 163.4 | 173.1 | 179.8 | 185.0 | 189.1 | 195.7 | 200.7 | 209.7 | 216.0 | 231.0 |
| | 7.5 | 9.2 | 10.3 | 10.9 | 11.3 | 11.7 | 12.0 | 12.4 | 12.8 | 13.4 | 13.9 | 15.1 |
| 25 d | 126.7 | 155.3 | 173.7 | 183.9 | 190.9 | 196.3 | 200.6 | 207.4 | 212.6 | 222.0 | 228.5 | 244.0 |
| | 8.4 | 10.3 | 11.6 | 12.3 | 12.9 | 13.4 | 13.8 | 14.4 | 14.9 | 15.8 | 16.5 | 18.4 |
| 30 d | 148.5 | 179.3 | 199.0 | 209.8 | 217.3 | 223.1 | 227.7 | 234.9 | 240.4 | 250.2 | 257.1 | 273.3 |
| | 9.3 | 11.2 | 12.7 | 13.6 | 14.3 | 14.8 | 15.3 | 16.1 | 16.7 | 17.9 | 18.9 | 21.2 |

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.

| Duur | Terugkeerperiode (jaren) | | | | | | | | | | | |
|--------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2 | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 75 | 100 | 200 |
| 10 min | 7.2 | 10.2 | 12.3 | 13.5 | 14.4 | 15.0 | 15.6 | 16.4 | 17.1 | 18.3 | 19.1 | 21.2 |
| | 8.0 | 11.6 | 14.4 | 16.2 | 17.5 | 18.7 | 19.6 | 21.1 | 22.4 | 24.8 | 26.7 | 31.6 |
| 20 min | 10.2 | 14.5 | 17.5 | 19.3 | 20.6 | 21.5 | 22.3 | 23.6 | 24.6 | 26.4 | 27.6 | 30.7 |
| | 11.6 | 16.7 | 20.7 | 23.3 | 25.2 | 26.7 | 28.0 | 30.2 | 32.0 | 35.4 | 37.9 | 44.7 |
| 30 min | 12.0 | 17.4 | 21.3 | 23.6 | 25.2 | 26.5 | 27.6 | 29.3 | 30.6 | 33.1 | 34.8 | 39.3 |
| | 13.7 | 20.0 | 24.8 | 27.8 | 30.1 | 31.9 | 33.4 | 35.9 | 37.9 | 41.8 | 44.7 | 52.3 |
| 1 u | 15.0 | 20.7 | 24.8 | 27.1 | 28.8 | 30.1 | 31.2 | 32.9 | 34.2 | 36.6 | 38.3 | 42.4 |
| | 16.9 | 23.9 | 29.3 | 32.7 | 35.2 | 37.3 | 39.0 | 41.8 | 44.2 | 48.6 | 51.9 | 60.7 |
| 2 u | 17.9 | 24.4 | 28.9 | 31.6 | 33.5 | 35.0 | 36.2 | 38.0 | 39.5 | 42.2 | 44.1 | 48.7 |
| | 20.3 | 28.2 | 34.2 | 38.0 | 40.9 | 43.2 | 45.1 | 48.3 | 50.9 | 55.8 | 59.5 | 69.3 |
| 3 u | 19.7 | 27.1 | 32.3 | 35.3 | 37.5 | 39.2 | 40.6 | 42.8 | 44.5 | 47.7 | 50.0 | 55.6 |
| | 22.6 | 31.2 | 37.7 | 41.8 | 44.9 | 47.3 | 49.4 | 52.8 | 55.5 | 60.8 | 64.7 | 74.9 |
| 6 u | 23.9 | 31.6 | 37.0 | 40.1 | 42.2 | 43.9 | 45.2 | 47.3 | 48.9 | 51.8 | 53.8 | 58.6 |
| | 27.2 | 36.0 | 42.8 | 47.1 | 50.4 | 53.0 | 55.2 | 58.9 | 61.9 | 67.7 | 72.0 | 83.5 |
| 12 u | 28.7 | 38.0 | 44.4 | 48.0 | 50.5 | 52.4 | 54.0 | 56.4 | 58.2 | 61.5 | 63.8 | 69.1 |
| | 33.4 | 44.0 | 52.2 | 57.4 | 61.3 | 64.5 | 67.2 | 71.7 | 75.3 | 82.3 | 87.6 | 101.5 |
| 1 d | 35.0 | 45.9 | 53.5 | 57.9 | 61.0 | 63.4 | 65.4 | 68.5 | 71.0 | 75.5 | 78.7 | 86.5 |
| | 40.4 | 52.3 | 61.1 | 66.5 | 70.4 | 73.5 | 76.1 | 80.4 | 83.7 | 90.2 | 94.9 | 107.0 |
| 2 d | 43.4 | 55.7 | 64.0 | 68.6 | 71.8 | 74.2 | 76.2 | 79.3 | 81.7 | 86.0 | 89.0 | 96.0 |
| | 51.7 | 66.3 | 77.1 | 83.6 | 88.3 | 92.1 | 95.2 | 100.3 | 104.4 | 112.0 | 117.6 | 131.9 |
| 3 d | 45.2 | 58.1 | 66.7 | 71.4 | 74.7 | 77.2 | 79.3 | 82.5 | 84.9 | 89.3 | 92.4 | 99.6 |
| | 55.5 | 71.2 | 82.4 | 89.1 | 94.0 | 97.9 | 101.1 | 106.2 | 110.3 | 117.9 | 123.5 | 137.5 |
| 4 d | 48.7 | 62.6 | 71.8 | 77.0 | 80.7 | 83.4 | 85.7 | 89.2 | 91.9 | 96.7 | 100.1 | 108.2 |
| | 60.5 | 77.0 | 88.6 | 95.4 | 100.4 | 104.2 | 107.4 | 112.5 | 116.5 | 124.0 | 129.5 | 143.1 |
| 5 d | 55.2 | 70.0 | 80.0 | 85.5 | 89.4 | 92.4 | 94.9 | 98.6 | 101.6 | 106.8 | 110.5 | 119.2 |
| | 68.7 | 86.6 | 98.9 | 106.1 | 111.3 | 115.3 | 118.6 | 123.9 | 128.1 | 135.7 | 141.3 | 155.2 |
| 7 d | 63.0 | 79.2 | 89.9 | 96.0 | 100.2 | 103.4 | 106.0 | 110.1 | 113.2 | 118.9 | 122.9 | 132.2 |
| | 79.3 | 98.6 | 111.7 | 119.3 | 124.7 | 128.8 | 132.3 | 137.7 | 142.0 | 149.8 | 155.4 | 169.3 |
| 10 d | 74.3 | 91.7 | 103.2 | 109.6 | 114.0 | 117.4 | 120.2 | 124.5 | 127.8 | 133.7 | 137.9 | 147.6 |
| | 94.7 | 116.8 | 131.6 | 140.0 | 146.0 | 150.6 | 154.3 | 160.3 | 164.9 | 173.4 | 179.4 | 194.2 |
| 15 d | 89.8 | 110.2 | 123.6 | 131.1 | 136.3 | 140.3 | 143.5 | 148.6 | 152.5 | 159.5 | 164.4 | 176.1 |
| | 114.8 | 140.5 | 157.4 | 166.8 | 173.4 | 178.5 | 182.6 | 189.0 | 194.0 | 203.0 | 209.4 | 224.8 |
| 20 d | 104.4 | 128.0 | 143.3 | 151.7 | 157.6 | 162.1 | 165.7 | 171.3 | 175.6 | 183.4 | 188.7 | 201.4 |
| | 133.9 | 164.0 | 183.5 | 194.5 | 202.0 | 207.9 | 212.6 | 220.0 | 225.7 | 236.0 | 243.3 | 260.7 |
| 25 d | 110.3 | 135.2 | 151.0 | 159.7 | 165.6 | 170.1 | 173.7 | 179.2 | 183.5 | 190.9 | 196.1 | 208.0 |
| | 143.2 | 175.4 | 196.3 | 208.1 | 216.2 | 222.5 | 227.6 | 235.6 | 241.8 | 253.0 | 261.0 | 280.1 |
| 30 d | 130.3 | 157.3 | 174.1 | 183.2 | 189.3 | 194.0 | 197.6 | 203.3 | 207.6 | 215.0 | 220.1 | 231.7 |
| | 166.8 | 201.3 | 223.8 | 236.5 | 245.3 | 252.2 | 257.7 | 266.4 | 273.2 | 285.4 | 294.1 | 315.0 |

4. Schatting van de coëfficiënten van Montana.

Formule van Montana : intensiteit[mm/h] = $a \cdot \text{duur}[\text{min}]^{-b}$ 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 | 132.9 | 0.4669 | 303.9 | 0.7237 | 53.3 | 0.5237 |
| 5 | 191.1 | 0.4678 | 468.9 | 0.7467 | 81.3 | 0.5452 |
| 10 | 233.3 | 0.4657 | 601.1 | 0.7596 | 106.4 | 0.5606 |
| 15 | 258.5 | 0.4638 | 685.0 | 0.7665 | 123.5 | 0.5696 |
| 20 | 276.8 | 0.4623 | 748.1 | 0.7711 | 137.0 | 0.5759 |
| 25 | 291.2 | 0.4610 | 799.3 | 0.7746 | 148.2 | 0.5809 |
| 30 | 303.2 | 0.4599 | 842.7 | 0.7774 | 157.9 | 0.5849 |
| 40 | 322.5 | 0.4580 | 914.3 | 0.7818 | 174.4 | 0.5913 |
| 50 | 337.7 | 0.4565 | 972.6 | 0.7851 | 188.2 | 0.5963 |
| 75 | 366.2 | 0.4536 | 1084.9 | 0.7910 | 215.8 | 0.6054 |
| 100 | 387.1 | 0.4515 | 1170.1 | 0.7952 | 237.6 | 0.6119 |
| 200 | 439.6 | 0.4460 | 1396.1 | 0.8050 | 298.5 | 0.6276 |

Referenties

Van de Vyver, H. (2012). Spatial regression models for extreme precipitation in Belgium, *Water Resour. Res.*, 48, W09549, doi :10.1029/2011WR011707.

Van de Vyver, H. (2013). Practical return level mapping for extreme precipitation in Belgium, RMI scientific and technical publication 062, 30 pages.

Disclaimer

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Zo niet, dan zijn de rechtbanken van het arrondissement Brussel bevoegd.