



Statistiek van de extreme neerslag voor de Belgische gemeenten

Fontaine-l'Évêque (NIS 52022)

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 | 7.7 | 11.1 | 13.6 | 15.1 | 16.2 | 17.1 | 17.9 | 19.1 | 20.1 | 21.9 | 23.3 | 26.8 |
| 20 min | 11.2 | 16.1 | 19.8 | 22.0 | 23.6 | 24.9 | 26.0 | 27.8 | 29.2 | 31.9 | 33.9 | 39.0 |
| 30 min | 13.2 | 19.2 | 23.6 | 26.4 | 28.3 | 29.9 | 31.3 | 33.4 | 35.1 | 38.4 | 40.8 | 47.0 |
| 1 u | 16.4 | 23.0 | 28.0 | 31.0 | 33.2 | 34.9 | 36.4 | 38.8 | 40.7 | 44.2 | 46.9 | 53.6 |
| 2 u | 19.7 | 27.2 | 32.8 | 36.1 | 38.6 | 40.6 | 42.2 | 44.9 | 47.0 | 51.0 | 53.9 | 61.5 |
| 3 u | 21.8 | 30.0 | 36.1 | 39.8 | 42.5 | 44.6 | 46.4 | 49.3 | 51.6 | 55.9 | 59.1 | 67.3 |
| 6 u | 26.4 | 34.7 | 40.9 | 44.6 | 47.3 | 49.5 | 51.3 | 54.2 | 56.5 | 60.9 | 64.1 | 72.3 |
| 12 u | 32.2 | 42.2 | 49.6 | 54.0 | 57.2 | 59.8 | 61.9 | 65.4 | 68.1 | 73.3 | 77.1 | 86.8 |
| 1 d | 39.6 | 51.1 | 59.3 | 64.3 | 67.8 | 70.6 | 72.9 | 76.7 | 79.6 | 85.1 | 89.1 | 99.2 |
| 2 d | 50.5 | 64.4 | 74.2 | 79.9 | 84.0 | 87.2 | 89.9 | 94.1 | 97.4 | 103.5 | 107.9 | 118.9 |
| 3 d | 54.0 | 68.9 | 79.2 | 85.2 | 89.4 | 92.7 | 95.5 | 99.8 | 103.2 | 109.4 | 113.9 | 125.0 |
| 4 d | 58.8 | 74.7 | 85.6 | 91.9 | 96.3 | 99.8 | 102.7 | 107.2 | 110.7 | 117.1 | 121.8 | 133.1 |
| 5 d | 66.8 | 84.0 | 95.8 | 102.5 | 107.3 | 111.0 | 114.0 | 118.8 | 122.6 | 129.4 | 134.3 | 146.2 |
| 7 d | 77.1 | 95.8 | 108.4 | 115.6 | 120.7 | 124.6 | 127.8 | 132.8 | 136.7 | 143.8 | 148.9 | 161.2 |
| 10 d | 92.0 | 113.3 | 127.5 | 135.6 | 141.2 | 145.5 | 149.1 | 154.6 | 158.9 | 166.7 | 172.2 | 185.5 |
| 15 d | 111.5 | 136.4 | 152.7 | 161.8 | 168.2 | 173.1 | 177.0 | 183.2 | 188.0 | 196.7 | 202.8 | 217.3 |
| 20 d | 129.9 | 159.0 | 177.8 | 188.3 | 195.6 | 201.2 | 205.7 | 212.8 | 218.2 | 228.0 | 234.8 | 251.1 |
| 25 d | 138.8 | 169.7 | 189.6 | 200.6 | 208.2 | 214.0 | 218.7 | 226.1 | 231.7 | 241.8 | 248.9 | 265.7 |
| 30 d | 161.8 | 194.9 | 216.0 | 227.6 | 235.7 | 241.8 | 246.7 | 254.5 | 260.4 | 270.9 | 278.3 | 295.7 |

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.

| Duur | Terugkeerperiode (jaren) | | | | | | | | | | | |
|--------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2 | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 75 | 100 | 200 |
| 10 min | 7.7 | 11.1 | 13.6 | 15.1 | 16.2 | 17.1 | 17.9 | 19.1 | 20.1 | 21.9 | 23.3 | 26.8 |
| | 0.2 | 0.4 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.2 | 1.4 | 1.7 | 2.0 | 2.7 |
| 20 min | 11.2 | 16.1 | 19.8 | 22.0 | 23.6 | 24.9 | 26.0 | 27.8 | 29.2 | 31.9 | 33.9 | 39.0 |
| | 0.3 | 0.6 | 0.8 | 1.0 | 1.2 | 1.4 | 1.5 | 1.8 | 2.0 | 2.4 | 2.8 | 3.8 |
| 30 min | 13.2 | 19.2 | 23.6 | 26.4 | 28.3 | 29.9 | 31.3 | 33.4 | 35.1 | 38.4 | 40.8 | 47.0 |
| | 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 | 16.4 | 23.0 | 28.0 | 31.0 | 33.2 | 34.9 | 36.4 | 38.8 | 40.7 | 44.2 | 46.9 | 53.6 |
| | 0.5 | 0.7 | 1.1 | 1.3 | 1.5 | 1.7 | 1.9 | 2.2 | 2.4 | 3.0 | 3.4 | 4.6 |
| 2 u | 19.7 | 27.2 | 32.8 | 36.1 | 38.6 | 40.6 | 42.2 | 44.9 | 47.0 | 51.0 | 53.9 | 61.5 |
| | 0.6 | 0.9 | 1.2 | 1.5 | 1.7 | 2.0 | 2.1 | 2.5 | 2.8 | 3.4 | 3.8 | 5.2 |
| 3 u | 21.8 | 30.0 | 36.1 | 39.8 | 42.5 | 44.6 | 46.4 | 49.3 | 51.6 | 55.9 | 59.1 | 67.3 |
| | 0.7 | 0.9 | 1.3 | 1.5 | 1.7 | 1.9 | 2.1 | 2.4 | 2.6 | 3.2 | 3.6 | 4.8 |
| 6 u | 26.4 | 34.7 | 40.9 | 44.6 | 47.3 | 49.5 | 51.3 | 54.2 | 56.5 | 60.9 | 64.1 | 72.3 |
| | 0.8 | 1.0 | 1.3 | 1.6 | 1.9 | 2.2 | 2.4 | 2.8 | 3.2 | 3.9 | 4.5 | 6.2 |
| 12 u | 32.2 | 42.2 | 49.6 | 54.0 | 57.2 | 59.8 | 61.9 | 65.4 | 68.1 | 73.3 | 77.1 | 86.8 |
| | 1.0 | 1.4 | 1.8 | 2.3 | 2.6 | 3.0 | 3.3 | 3.8 | 4.3 | 5.3 | 6.0 | 8.3 |
| 1 d | 39.6 | 51.1 | 59.3 | 64.3 | 67.8 | 70.6 | 72.9 | 76.7 | 79.6 | 85.1 | 89.1 | 99.2 |
| | 1.2 | 1.5 | 1.7 | 2.0 | 2.2 | 2.3 | 2.5 | 2.8 | 3.0 | 3.5 | 3.8 | 4.9 |
| 2 d | 50.5 | 64.4 | 74.2 | 79.9 | 84.0 | 87.2 | 89.9 | 94.1 | 97.4 | 103.5 | 107.9 | 118.9 |
| | 1.9 | 2.4 | 3.0 | 3.4 | 3.8 | 4.1 | 4.4 | 4.9 | 5.3 | 6.2 | 6.8 | 8.6 |
| 3 d | 54.0 | 68.9 | 79.2 | 85.2 | 89.4 | 92.7 | 95.5 | 99.8 | 103.2 | 109.4 | 113.9 | 125.0 |
| | 2.4 | 3.0 | 3.6 | 4.1 | 4.5 | 4.8 | 5.1 | 5.6 | 6.0 | 6.8 | 7.5 | 9.2 |
| 4 d | 58.8 | 74.7 | 85.6 | 91.9 | 96.3 | 99.8 | 102.7 | 107.2 | 110.7 | 117.1 | 121.8 | 133.1 |
| | 2.7 | 3.3 | 3.9 | 4.3 | 4.6 | 4.9 | 5.1 | 5.5 | 5.8 | 6.5 | 7.0 | 8.4 |
| 5 d | 66.8 | 84.0 | 95.8 | 102.5 | 107.3 | 111.0 | 114.0 | 118.8 | 122.6 | 129.4 | 134.3 | 146.2 |
| | 3.1 | 3.8 | 4.4 | 4.8 | 5.1 | 5.4 | 5.6 | 6.0 | 6.3 | 6.9 | 7.4 | 8.8 |
| 7 d | 77.1 | 95.8 | 108.4 | 115.6 | 120.7 | 124.6 | 127.8 | 132.8 | 136.7 | 143.8 | 148.9 | 161.2 |
| | 3.8 | 4.5 | 5.0 | 5.4 | 5.7 | 5.9 | 6.1 | 6.4 | 6.7 | 7.2 | 7.6 | 8.7 |
| 10 d | 92.0 | 113.3 | 127.5 | 135.6 | 141.2 | 145.5 | 149.1 | 154.6 | 158.9 | 166.7 | 172.2 | 185.5 |
| | 4.7 | 5.8 | 6.6 | 7.1 | 7.4 | 7.7 | 8.0 | 8.4 | 8.7 | 9.3 | 9.8 | 11.1 |
| 15 d | 111.5 | 136.4 | 152.7 | 161.8 | 168.2 | 173.1 | 177.0 | 183.2 | 188.0 | 196.7 | 202.8 | 217.3 |
| | 5.8 | 7.0 | 7.8 | 8.3 | 8.6 | 8.9 | 9.1 | 9.4 | 9.7 | 10.2 | 10.5 | 11.4 |
| 20 d | 129.9 | 159.0 | 177.8 | 188.3 | 195.6 | 201.2 | 205.7 | 212.8 | 218.2 | 228.0 | 234.8 | 251.1 |
| | 6.8 | 8.4 | 9.3 | 9.9 | 10.3 | 10.6 | 10.9 | 11.3 | 11.6 | 12.2 | 12.7 | 13.9 |
| 25 d | 138.8 | 169.7 | 189.6 | 200.6 | 208.2 | 214.0 | 218.7 | 226.1 | 231.7 | 241.8 | 248.9 | 265.7 |
| | 7.6 | 9.4 | 10.6 | 11.4 | 11.9 | 12.4 | 12.7 | 13.4 | 13.9 | 14.8 | 15.6 | 17.4 |
| 30 d | 161.8 | 194.9 | 216.0 | 227.6 | 235.7 | 241.8 | 246.7 | 254.5 | 260.4 | 270.9 | 278.3 | 295.7 |
| | 8.4 | 10.2 | 11.6 | 12.5 | 13.2 | 13.7 | 14.2 | 15.0 | 15.6 | 16.8 | 17.8 | 20.2 |

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 | 7.3 | 10.4 | 12.5 | 13.7 | 14.6 | 15.3 | 15.8 | 16.7 | 17.4 | 18.6 | 19.4 | 21.5 |
| | 8.1 | 11.7 | 14.6 | 16.5 | 17.9 | 19.0 | 19.9 | 21.5 | 22.8 | 25.3 | 27.2 | 32.2 |
| 20 min | 10.5 | 15.0 | 18.2 | 20.0 | 21.3 | 22.3 | 23.1 | 24.4 | 25.4 | 27.2 | 28.5 | 31.6 |
| | 11.8 | 17.2 | 21.4 | 24.0 | 26.0 | 27.6 | 29.0 | 31.3 | 33.1 | 36.7 | 39.3 | 46.4 |
| 30 min | 12.4 | 18.0 | 22.0 | 24.4 | 26.1 | 27.4 | 28.5 | 30.3 | 31.7 | 34.3 | 36.1 | 40.8 |
| | 14.0 | 20.3 | 25.2 | 28.3 | 30.6 | 32.4 | 34.0 | 36.5 | 38.6 | 42.5 | 45.4 | 53.1 |
| 1 u | 15.5 | 21.6 | 25.9 | 28.4 | 30.2 | 31.6 | 32.7 | 34.5 | 35.9 | 38.4 | 40.2 | 44.6 |
| | 17.3 | 24.5 | 30.0 | 33.5 | 36.2 | 38.3 | 40.1 | 43.0 | 45.4 | 50.0 | 53.5 | 62.6 |
| 2 u | 18.6 | 25.5 | 30.4 | 33.2 | 35.2 | 36.7 | 38.0 | 40.0 | 41.6 | 44.4 | 46.4 | 51.3 |
| | 20.8 | 28.9 | 35.2 | 39.1 | 42.0 | 44.4 | 46.4 | 49.7 | 52.4 | 57.6 | 61.5 | 71.7 |
| 3 u | 20.5 | 28.2 | 33.6 | 36.8 | 39.1 | 40.8 | 42.3 | 44.6 | 46.4 | 49.7 | 52.1 | 58.0 |
| | 23.1 | 31.9 | 38.6 | 42.8 | 45.9 | 48.4 | 50.5 | 54.0 | 56.8 | 62.1 | 66.1 | 76.6 |
| 6 u | 24.9 | 32.8 | 38.3 | 41.4 | 43.6 | 45.2 | 46.6 | 48.7 | 50.3 | 53.2 | 55.3 | 60.1 |
| | 27.9 | 36.7 | 43.5 | 47.8 | 51.1 | 53.8 | 56.0 | 59.8 | 62.8 | 68.6 | 73.0 | 84.5 |
| 12 u | 30.2 | 39.6 | 46.0 | 49.6 | 52.0 | 54.0 | 55.5 | 57.9 | 59.7 | 63.0 | 65.3 | 70.6 |
| | 34.3 | 44.9 | 53.2 | 58.5 | 62.4 | 65.7 | 68.4 | 72.9 | 76.6 | 83.6 | 88.9 | 103.0 |
| 1 d | 37.1 | 48.2 | 55.9 | 60.4 | 63.6 | 66.0 | 68.1 | 71.3 | 73.7 | 78.3 | 81.6 | 89.5 |
| | 42.0 | 54.0 | 62.8 | 68.1 | 72.0 | 75.2 | 77.8 | 82.1 | 85.5 | 91.9 | 96.6 | 108.8 |
| 2 d | 46.8 | 59.7 | 68.3 | 73.2 | 76.5 | 79.1 | 81.2 | 84.4 | 86.9 | 91.4 | 94.6 | 102.0 |
| | 54.2 | 69.1 | 80.1 | 86.7 | 91.5 | 95.3 | 98.5 | 103.7 | 107.8 | 115.6 | 121.3 | 135.8 |
| 3 d | 49.4 | 63.0 | 72.0 | 77.1 | 80.6 | 83.3 | 85.4 | 88.8 | 91.4 | 96.1 | 99.3 | 107.0 |
| | 58.6 | 74.7 | 86.3 | 93.2 | 98.2 | 102.2 | 105.5 | 110.8 | 115.0 | 122.8 | 128.5 | 143.0 |
| 4 d | 53.5 | 68.2 | 78.0 | 83.5 | 87.3 | 90.3 | 92.7 | 96.4 | 99.3 | 104.4 | 108.0 | 116.6 |
| | 64.1 | 81.2 | 93.2 | 100.3 | 105.4 | 109.4 | 112.7 | 117.9 | 122.1 | 129.9 | 135.5 | 149.6 |
| 5 d | 60.7 | 76.5 | 87.1 | 93.1 | 97.2 | 100.4 | 103.0 | 107.1 | 110.2 | 115.8 | 119.7 | 129.0 |
| | 72.9 | 91.6 | 104.5 | 112.0 | 117.4 | 121.6 | 125.1 | 130.6 | 135.0 | 143.0 | 148.9 | 163.4 |
| 7 d | 69.7 | 87.1 | 98.6 | 105.0 | 109.6 | 113.0 | 115.8 | 120.2 | 123.6 | 129.7 | 134.0 | 144.0 |
| | 84.5 | 104.6 | 118.3 | 126.2 | 131.7 | 136.1 | 139.7 | 145.3 | 149.8 | 157.9 | 163.8 | 178.3 |
| 10 d | 82.7 | 101.9 | 114.6 | 121.7 | 126.6 | 130.4 | 133.4 | 138.2 | 141.9 | 148.4 | 153.0 | 163.8 |
| | 101.2 | 124.7 | 140.5 | 149.4 | 155.8 | 160.6 | 164.7 | 171.0 | 175.9 | 185.0 | 191.4 | 207.2 |
| 15 d | 100.1 | 122.6 | 137.3 | 145.5 | 151.3 | 155.7 | 159.2 | 164.8 | 169.1 | 176.8 | 182.2 | 194.9 |
| | 122.8 | 150.2 | 168.0 | 178.1 | 185.1 | 190.4 | 194.8 | 201.7 | 207.0 | 216.6 | 223.4 | 239.7 |
| 20 d | 116.5 | 142.6 | 159.5 | 168.9 | 175.4 | 180.4 | 184.4 | 190.6 | 195.4 | 204.0 | 210.0 | 224.0 |
| | 143.3 | 175.3 | 196.1 | 207.7 | 215.8 | 222.0 | 227.0 | 234.9 | 241.0 | 251.9 | 259.7 | 278.3 |
| 25 d | 123.8 | 151.3 | 168.8 | 178.3 | 184.8 | 189.8 | 193.8 | 199.9 | 204.5 | 212.8 | 218.4 | 231.5 |
| | 153.8 | 188.1 | 210.4 | 222.9 | 231.6 | 238.3 | 243.7 | 252.3 | 258.9 | 270.9 | 279.4 | 299.9 |
| 30 d | 145.4 | 174.8 | 193.2 | 203.1 | 209.8 | 214.9 | 218.9 | 225.1 | 229.7 | 237.9 | 243.5 | 256.1 |
| | 178.3 | 214.9 | 238.7 | 252.1 | 261.5 | 268.7 | 274.6 | 283.8 | 291.0 | 304.0 | 313.2 | 335.3 |

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 | 136.9 | 0.4709 | 299.6 | 0.7142 | 51.7 | 0.5123 |
| 5 | 195.1 | 0.4681 | 466.6 | 0.7390 | 75.9 | 0.5303 |
| 10 | 237.2 | 0.4643 | 600.7 | 0.7529 | 97.6 | 0.5440 |
| 15 | 262.4 | 0.4616 | 685.8 | 0.7601 | 112.4 | 0.5522 |
| 20 | 280.6 | 0.4596 | 749.9 | 0.7650 | 124.0 | 0.5581 |
| 25 | 295.0 | 0.4580 | 801.9 | 0.7687 | 133.6 | 0.5627 |
| 30 | 306.9 | 0.4567 | 846.0 | 0.7716 | 142.0 | 0.5665 |
| 40 | 326.1 | 0.4545 | 918.8 | 0.7762 | 156.1 | 0.5725 |
| 50 | 341.4 | 0.4527 | 978.0 | 0.7797 | 168.0 | 0.5772 |
| 75 | 369.8 | 0.4494 | 1092.2 | 0.7859 | 191.6 | 0.5858 |
| 100 | 390.6 | 0.4469 | 1178.9 | 0.7901 | 210.3 | 0.5920 |
| 200 | 442.9 | 0.4408 | 1408.8 | 0.8003 | 262.2 | 0.6070 |

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.

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