egusphere-2026-351 - response

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Contents

1 Response to reviewer comment #1

1.1 Major comment

Thank you for your comments.

I respond to the comments though an R-markdown script in which I also can provide both R-code and provide some demonstrations.

1.1.1 General GMD requirements

Reviewer #1 is apparently not fully convinced about the performance of the weather generator (WG), recommends a more robust performance evaluation at several other locations, and cites the requirements of the journal - *"Development and technical papers usually include a significant amount of evaluation against standard benchmarks, observations, and/or other model output as appropriate"*.

It's a good comment, but to the best of my knowledge, there is no standard benchmarking for weather generators (WGs) as in this case. This may be because WGs are a fancy type of Monte-Carlo simulations which only roll out time series according to specified statistical properties. Furthermore, the evaluation needs to be fit-for purpose and must depend on its intended use.

I asked Gemini the following question: "Can you provide me with information about what standard benchmarks would be for a weather generator?" Gemini cited the VALUE Project, which I was a part of, and I was a coauthor of Gutiérrez et al. (2018) that provides an overview of evaluation and benchmarks relevant for downscaling. However, the evaluation therein doesn't really apply to this case. Gemini mentions the Marginal Performance, which is indeed addressed through a quantile-quantile (qq-plot) plot. Such qq-plots are fairly standard in statistics.

This paper aims to provide a technical description of a class of *very simple* WGs (verging on being trivial) as well as a fit-for-purpose evaluation of these WGs designed for its specific use: translating downscaled precipitation/temperature statistical information to realistic daily outcomes with the said downscaled characteristics.

Specifically, the WG for precipitation needs to reproduce the rainy seasons and a *realistic climatology* for both the *wet-day frequency* f_w, the *wet-day mean precipitation* μ as well as mean precipitation $\overline{x} \approx f_w \mu$. Moreover, it's designed to translate downscaled rainfall statistics to daily time series that is suitable as input to impact models such as a hydrological model (e.g. the SWAT model).

Other WGs are based on a first-order Markov chain to describe the occurrence of wet and dry days, but they are constructed in a way that they don't describe rainy seasons that well (Semenov and Barrow (1997)), and this is an important requirement in this case.

See the last section for a higher amount of evaluation against observations.

1.1.2 Figures

The text inside the figures, the axis labels, and the legends are too small and often extremely difficult to read. It seems that the figures were prepared in a rush. I recommend the author to improve the figure quality. The revised paper will have increased font size. The figures were not prepared in a rush, but are a simple output of a test protocol for the WG embedded in the R-package `esd` where simplicity has been prioritised over fanciness.

1.2 Minor comments

L1: If possible, simplify this sentence. This sentence will be revised in the next version.

L3: Mention how many stations are used. There were only three stations in this example (and this is stated in the revised abstract), but it's trivial to expand it to a larger set of stations. This is done at the end of this R-markdown script. Here, the three chosen stations merely serve as a demonstration that the WG works for very different climates relevant for the SPRINGS project.

L4, L6: Explain 'close approximation' and 'reasonable skill level' with a number or error metric. The sentence has been updated for revised version.

L6: Consider removing this sentence. The sentence has been revised in the new version.

L1-7: The abstract seems more like a plain language summary. I recommend the author to think carefully about the abstract. The abstract has been revised in the new version.

L20: Please add a couple of citations. Citations have been added in the revised version: Fowler et al. (2007) Semenov (2007).

L23: Please add a couple of relevant citations, to which a new reader can refer to if they want more information about downscaling. Citations have been added in the revised version: Takayabu et al. (2015), Fowler et al. (2025) and Benestad et al. (2008).

L39: Please provide a sentence describing why previous weather generators were not designed to connect with ESD. The revised version will include more information on this. It's because no other ESD methods in the past have been designed to downscale the key parameters f_w and μ in order to provide information about the shape of the probability curve for daily precipitation to the best of my knowledge. The advantage with f_w and μ is that they are easy to estimate and an easy choice when it comes to downscaling daily precipitation properies.

L40: Provide full name of the SPRINGS project. Additionally, the relevance of the SPRINGS project is not clear. SPRINGS is not an acronym, but it's actual full name. The relevance is provided in the revised paper. The WG facilitates a link that passes information from downscaling of GCMs on to hydrological models by generating daily sequences of rainfall with downscaled statistical properties as input data.

L45: Mentioning names of a couple of relevant and popular hydrological models might be useful. The revised paper will cite the SWAT model (Gassman et al. (2014)) and the HBV-model developed by Bergström (1976) and Lindström et al. (1997) as two hydrological models which use daily rainfall as input and for which the WG can translate the rainfall statistics to daily sequences.

L55: I recommend adding one sentence better describing the cut-off threshold. The sentence is revised in the new version.

L69: A sentence or two describing the equation would be helpful. More explanation is added in the revised version.

L75: The choice of default smudge factor should be explained. Some more information is provided in the revised version. Basically, the choice was based on trial and error during the development of the model, using Bjørnholt rain gauge data from north of Oslo. Also see the additional section with further demonstrations below.

L93, 94, 102: 'good agreement', 'modest deviations', 'comparable to the observations' - These qualitative descriptions should be avoided and the author must provide quantitative metrics for evaluation of the Weather Generator. All quantitative metrics need to be interpreted in the end, whether they are in good agreement, a modest match, or comparable to the observations. The same applies to statistical tests. The figures speak for themselves. Again, there is, as far as I now, no standard metric for evaluating weather generators nor Monte-Carlo simulations.

Figure1: The schematic could be improved. In my opinion, the description provided in the caption is not properly reflected in the figure. The figure caption is revised in the new version. The histogram in the schematic reflects the mean intensities characterised by μ and the blue curve refers to a climatological profile that can refer to either f_w of μ.

Figure2: It is not clear what the colors represent. There are only two colours - black and red. The red dashed lines show the diagonal, on which perfect results would lie for a qq-plot. The red curves in the lower left panel and in Fig 3,5,7 show the WG results, as the legend indicates in that panel. This is also expressed in the figure caption of the revised version.

1.3 Demonstrations involving a grater amount of evaluation against observations

In order to satisfy the cited criteria *"Development and technical papers usually include a significant amount of evaluation against standard benchmarks, observations, and/or other model output as appropriate"*, this section shows a larger number of tests with the WG for precipitation.

It also demonstrates that it's trivial to apply a test to evaluate a large number of rain gauge stations. In this case, a number with a good temporal coverage from open data from Norway was selected for the demonstration purpose. It is recommended to use similar lines of codes to test the WG for the specific case for which it's used - it only takes a minute or two on a laptop.

```
library(esd)
```

```
## Loading required package: ncdf4
```

```
## Loading required package: zoo
```

```
##
## Attaching package: 'zoo'
```

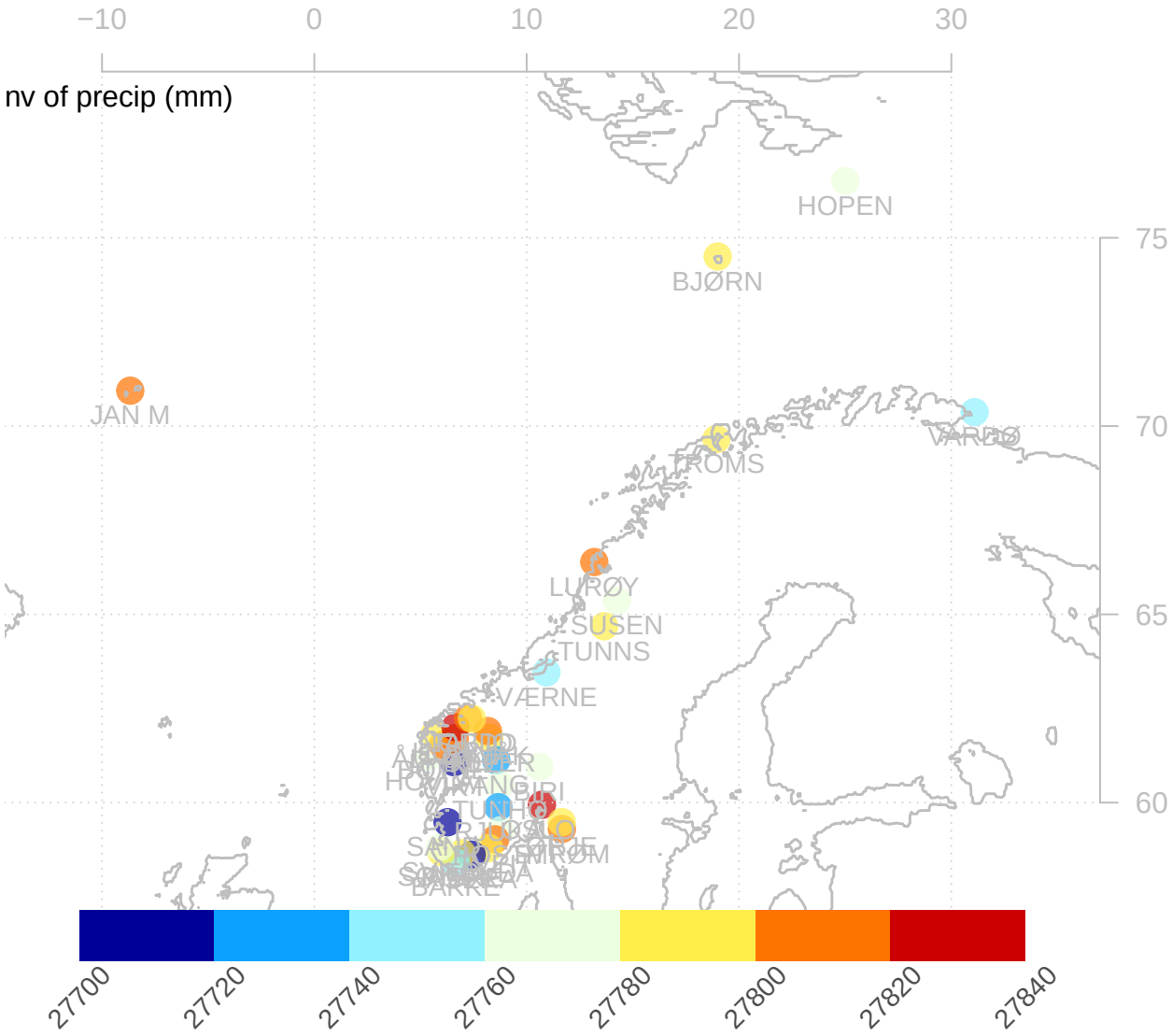
```
## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric
```

```
## Registered S3 methods overwritten by 'esd':
##   method        from
##   subset.matrix base
##   subset.zoo    zoo
```

```
## Fetch open Norwegian daily rain gauge data from thredds
Y <- station(param='precip',src='metnod.thredds')
## Only keep the stations number of valid (nv) data points exceeding 26000
nv <- apply(Y,2,'nv')
summary(nv)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    2904   13059   17240   17571   21420   27822
```

```
Y <- subset(Y,is=nv >= 27700)
map(Y,FUN='nv',add.text = TRUE,new=FALSE)
```




```
dim(Y)
```

```
## [1] 27822    35
```

The sites are spread geographically and represent diverse local climes.

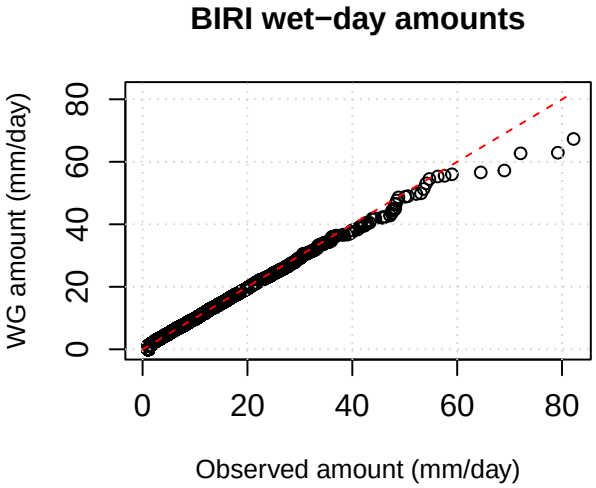
```
## Apply the test to all of the stations
par(cex=1.25,cex.axis=1.25)
ns <- dim(Y)[2] ## The number of stations
for (is in 1:ns) {
  ## Select one single station per turn
  y <- subset(Y,is=is)
  ## Apply the test to this station
  test.WG.fwmu.day.precip(y)
}
```

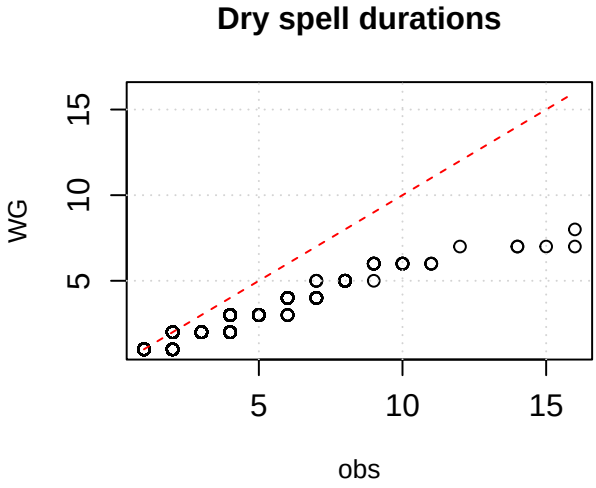
```
## [1] "test.WG.fwmu.day.precip"
```

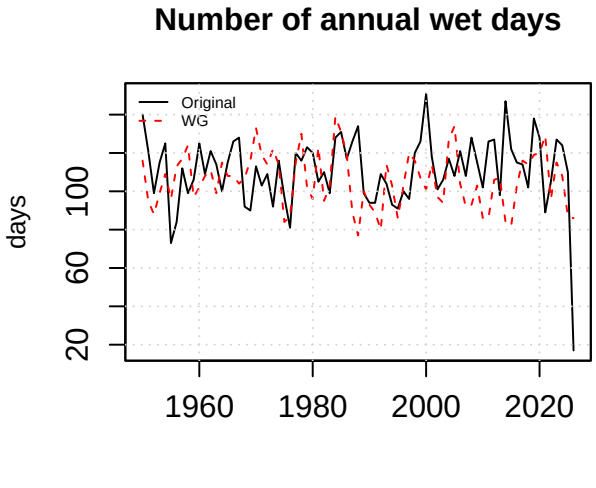
```
## [1] "test.WG.fwmu.day.precip for BIRI"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: BIRI"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2309
##  1st Qu.:1969   1st Qu.:0.2725
##  Median :1988   Median :0.3064
##  Mean   :1988   Mean   :0.3042
##  3rd Qu.:2007   3rd Qu.:0.3297
##  Max.   :2026   Max.   :0.4066
##      Index          c(mu)
##  Min.   :1950   Min.   :4.666
##  1st Qu.:1969   1st Qu.:6.603
##  Median :1988   Median :6.939
##  Mean   :1988   Mean   :6.938
##  3rd Qu.:2007   3rd Qu.:7.351
##  Max.   :2026   Max.   :8.470
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3236899 n.wet= 118 = 118 mu= 7.8 = 7.8
## 2 1951 fw= 0.2756928 n.wet= 101 = 101 mu= 7.9 = 7.9
## 3 1952 fw= 0.2540744 n.wet= 93 = 93 mu= 7.7 = 7.7
## 4 1953 fw= 0.2870179 n.wet= 105 = 105 mu= 7.2 = 7.2
## 5 1954 fw= 0.3169864 n.wet= 116 = 116 mu= 7.1 = 7.1
## 6 1955 fw= 0.2725315 n.wet= 100 = 100 mu= 7.7 = 7.7
## 7 1956 fw= 0.322066 n.wet= 118 = 118 mu= 7.9 = 7.9
## 8 1957 fw= 0.3310876 n.wet= 121 = 121 mu= 7.3 = 7.3
## 9 1958 fw= 0.3546437 n.wet= 130 = 130 mu= 7.9 = 7.9
## 10 1959 fw= 0.2841669 n.wet= 104 = 104 mu= 7.2 = 7.2
## 11 1960 fw= 0.2887868 n.wet= 105 = 105 mu= 7.9 = 7.9
## 12 1961 fw= 0.3014934 n.wet= 110 = 110 mu= 8.5 = 8.5
## 13 1962 fw= 0.3129784 n.wet= 114 = 114 mu= 7.9 = 7.9
## 14 1963 fw= 0.2758304 n.wet= 101 = 101 mu= 7.3 = 7.3
## 15 1964 fw= 0.3229221 n.wet= 118 = 118 mu= 7 = 7
## 16 1965 fw= 0.306405 n.wet= 112 = 112 mu= 7.5 = 7.5
## 17 1966 fw= 0.3078935 n.wet= 112 = 112 mu= 6.6 = 6.6
## 18 1967 fw= 0.306758 n.wet= 112 = 112 mu= 6.8 = 6.8
## 19 1968 fw= 0.3211864 n.wet= 117 = 117 mu= 6.2 = 6.2
## 20 1969 fw= 0.3250198 n.wet= 119 = 119 mu= 6.3 = 6.3
## 21 1970 fw= 0.3900067 n.wet= 142 = 142 mu= 6 = 6
## 22 1971 fw= 0.361142 n.wet= 132 = 132 mu= 6 = 6
## 23 1972 fw= 0.3396172 n.wet= 124 = 124 mu= 5.1 = 5.1
## 24 1973 fw= 0.351971 n.wet= 129 = 129 mu= 7.1 = 7.1
## 25 1974 fw= 0.3297112 n.wet= 120 = 120 mu= 6.9 = 6.9
## 26 1975 fw= 0.235949 n.wet= 86 = 86 mu= 7 = 7
## 27 1976 fw= 0.2520664 n.wet= 92 = 92 mu= 7.1 = 7.1
## 28 1977 fw= 0.3260607 n.wet= 119 = 119 mu= 7.5 = 7.5
## 29 1978 fw= 0.3793159 n.wet= 139 = 139 mu= 6.2 = 6.2
## 30 1979 fw= 0.2903457 n.wet= 106 = 106 mu= 6.9 = 6.9
## 31 1980 fw= 0.2893298 n.wet= 106 = 106 mu= 6.9 = 6.9
## 32 1981 fw= 0.3475799 n.wet= 127 = 127 mu= 6.8 = 6.8
## 33 1982 fw= 0.2705711 n.wet= 99 = 99 mu= 7.2 = 7.2
## 34 1983 fw= 0.2935503 n.wet= 107 = 107 mu= 6.6 = 6.7
## 35 1984 fw= 0.4065549 n.wet= 148 = 148 mu= 5.8 = 5.8
## 36 1985 fw= 0.3645344 n.wet= 133 = 133 mu= 7.3 = 7.3
```

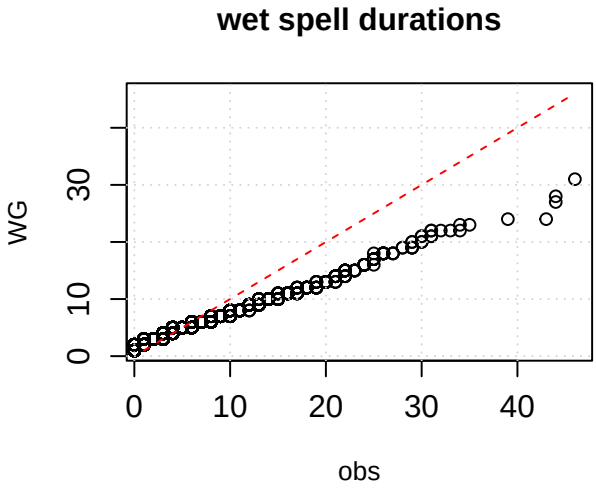
```
## 37 1986 fw= 0.3450991 n.wet= 126 = 126 mu= 6.1 = 6.1
## 38 1987 fw= 0.2517894 n.wet= 92 = 92 mu= 6 = 6
## 39 1988 fw= 0.2308593 n.wet= 84 = 84 mu= 6.5 = 6.5
## 40 1989 fw= 0.2818081 n.wet= 103 = 103 mu= 6.5 = 6.5
## 41 1990 fw= 0.2675758 n.wet= 98 = 98 mu= 6.6 = 6.6
## 42 1991 fw= 0.262368 n.wet= 96 = 96 mu= 6.8 = 6.8
## 43 1992 fw= 0.2398812 n.wet= 88 = 88 mu= 6.2 = 6.2
## 44 1993 fw= 0.3296065 n.wet= 120 = 120 mu= 5.6 = 5.6
## 45 1994 fw= 0.3040623 n.wet= 111 = 111 mu= 6.1 = 6.1
## 46 1995 fw= 0.246488 n.wet= 90 = 90 mu= 6.9 = 6.9
## 47 1996 fw= 0.2951343 n.wet= 108 = 108 mu= 6.8 = 6.8
## 48 1997 fw= 0.3349063 n.wet= 122 = 122 mu= 6.2 = 6.2
## 49 1998 fw= 0.3384117 n.wet= 124 = 124 mu= 5.9 = 5.9
## 50 1999 fw= 0.3211354 n.wet= 117 = 117 mu= 6.7 = 6.7
## 51 2000 fw= 0.2815221 n.wet= 103 = 103 mu= 7.1 = 7.1
## 52 2001 fw= 0.3337038 n.wet= 122 = 122 mu= 4.7 = 4.7
## 53 2002 fw= 0.2790338 n.wet= 102 = 102 mu= 7.2 = 7.2
## 54 2003 fw= 0.2678248 n.wet= 98 = 98 mu= 6.9 = 6.9
## 55 2004 fw= 0.3704667 n.wet= 135 = 135 mu= 7.1 = 7.1
## 56 2005 fw= 0.3805156 n.wet= 139 = 139 mu= 6.7 = 6.7
## 57 2006 fw= 0.3068627 n.wet= 112 = 112 mu= 6.8 = 6.8
## 58 2007 fw= 0.2781517 n.wet= 102 = 102 mu= 6.6 = 6.6
## 59 2008 fw= 0.2701515 n.wet= 99 = 99 mu= 7.2 = 7.2
## 60 2009 fw= 0.2808894 n.wet= 103 = 103 mu= 7.4 = 7.4
## 61 2010 fw= 0.2472604 n.wet= 90 = 90 mu= 7 = 7
## 62 2011 fw= 0.2419006 n.wet= 88 = 88 mu= 6.7 = 6.7
## 63 2012 fw= 0.2976476 n.wet= 109 = 109 mu= 8.3 = 8.3
## 64 2013 fw= 0.3149472 n.wet= 115 = 115 mu= 6.9 = 6.9
## 65 2014 fw= 0.2448971 n.wet= 89 = 89 mu= 7 = 7
## 66 2015 fw= 0.2393869 n.wet= 87 = 87 mu= 7.5 = 7.5
## 67 2016 fw= 0.2845057 n.wet= 104 = 104 mu= 7.5 = 7.5
## 68 2017 fw= 0.3286882 n.wet= 120 = 120 mu= 6.7 = 6.7
## 69 2018 fw= 0.324358 n.wet= 118 = 118 mu= 7.2 = 7.2
## 70 2019 fw= 0.3421065 n.wet= 125 = 125 mu= 7.4 = 7.3
## 71 2020 fw= 0.3512555 n.wet= 128 = 128 mu= 6.6 = 6.6
## 72 2021 fw= 0.3679689 n.wet= 134 = 134 mu= 7.6 = 7.6
## 73 2022 fw= 0.2723994 n.wet= 99 = 99 mu= 7.4 = 7.4
## 74 2023 fw= 0.3213201 n.wet= 117 = 117 mu= 8 = 8
## 75 2024 fw= 0.3220536 n.wet= 118 = 118 mu= 6.9 = 6.9
## 76 2025 fw= 0.2512408 n.wet= 92 = 92 mu= 8.2 = 8.2
## 77 2026 fw= 0.2523078 n.wet= 92 = 92 mu= 6.9 = 6.9
## [1] "Sort precipitation magnitudes"
## [1] "8524 observed wet days and 8138 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.0   1.723     1.6    28.4      10
## Feb       0       0     0.0   1.321     1.0    33.4       6
## Mar       0       0     0.0   1.171     0.4    24.7       2
## Apr       0       0     0.0   1.339     0.5    30.6       1
## May       0       0     0.0   1.968     1.5    53.1       2
## Jun       0       0     0.0   2.581     2.3    50.1       7
## Jul       0       0     0.1   3.009     3.2    82.2       2
## Aug       0       0     0.1   3.319     3.4    69.0       2
## Sep       0       0     0.0   2.786     2.3    79.2       7
```

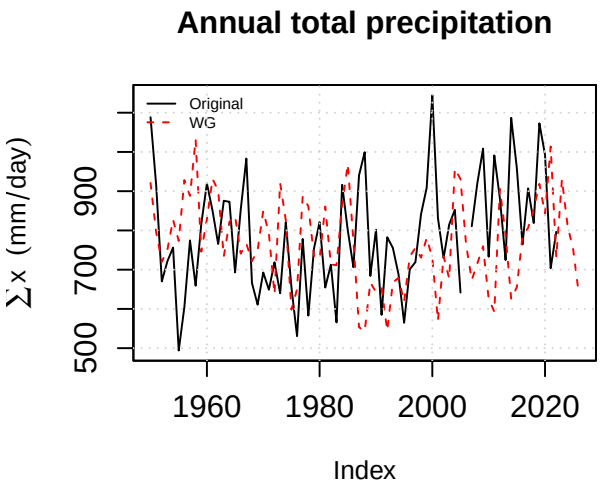
```
## Oct       0       0     0.0   2.720     2.3    57.6       3
## Nov       0       0     0.0   2.495     2.5    53.6       4
## Dec       0       0     0.0   1.789     1.8    36.2       4
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.328    1.00 57.2   NA
## Feb    0       0      0 1.063    0.00 26.2   NA
## Mar    0       0      0 1.086    0.00 37.6   NA
## Apr    0       0      0 1.426    0.00 46.5   NA
## May    0       0      0 1.825    1.40 67.3   NA
## Jun    0       0      0 2.369    2.50 44.6   NA
## Jul    0       0      0 2.820    3.10 54.5   NA
## Aug    0       0      0 3.327    4.40 53.1   NA
## Sep    0       0      0 3.093    3.90 62.9   NA
## Oct    0       0      0 2.555    2.95 62.7   NA
## Nov    0       0      0 2.340    2.70 51.3   NA
## Dec    0       0      0 1.943    2.00 47.6   NA
```

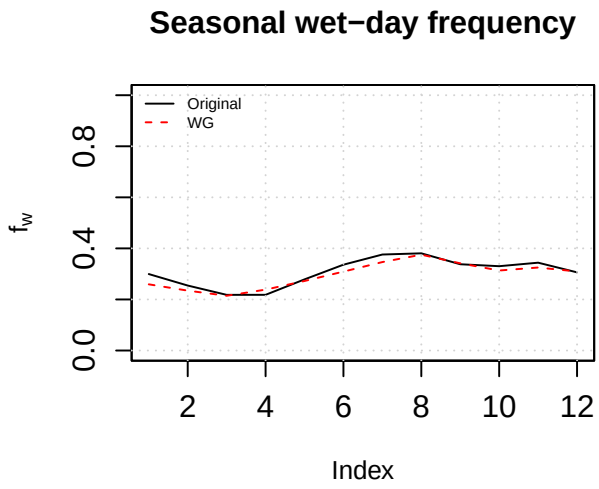


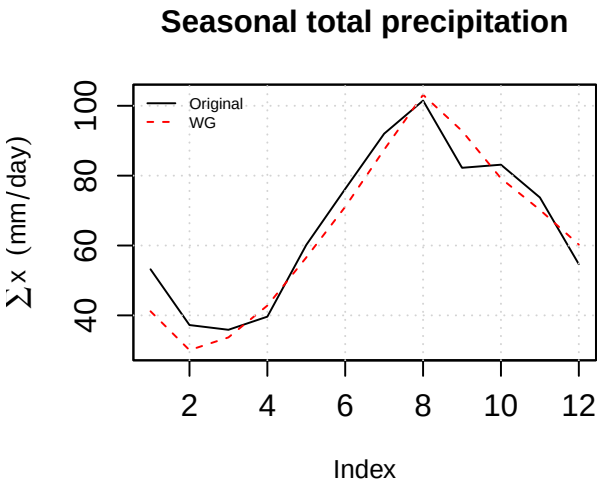


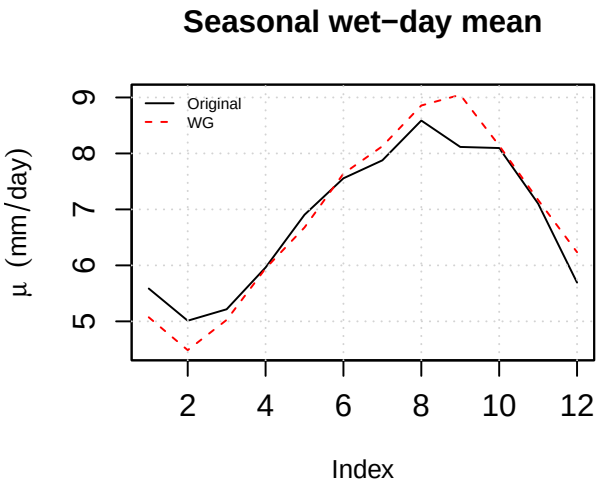








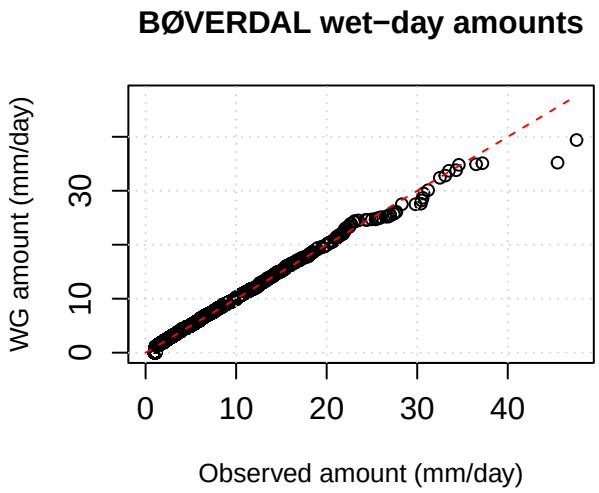


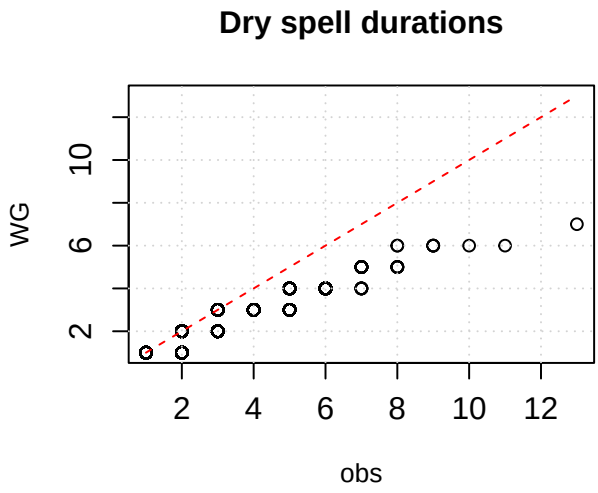


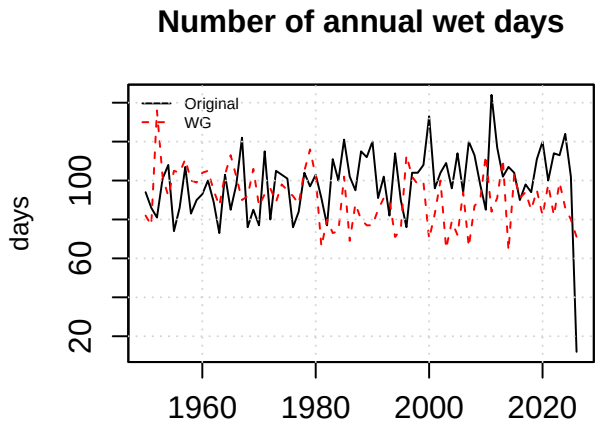

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for BØVERDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: BØVERDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.1849
##  1st Qu.:1969   1st Qu.:0.2479
##  Median :1988   Median :0.2756
##  Mean   :1988   Mean   :0.2744
##  3rd Qu.:2007   3rd Qu.:0.3055
##  Max.   :2026   Max.   :0.3940
##      Index          c(mu)
##  Min.   :1950   Min.   :3.593
##  1st Qu.:1969   1st Qu.:4.070
##  Median :1988   Median :4.414
##  Mean   :1988   Mean   :4.407
##  3rd Qu.:2007   3rd Qu.:4.730
##  Max.   :2026   Max.   :5.385
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.2443691 n.wet= 89 = 89 mu= 4.5 = 4.5
## 2 1951 fw= 0.2308781 n.wet= 84 = 84 mu= 4 = 4
```

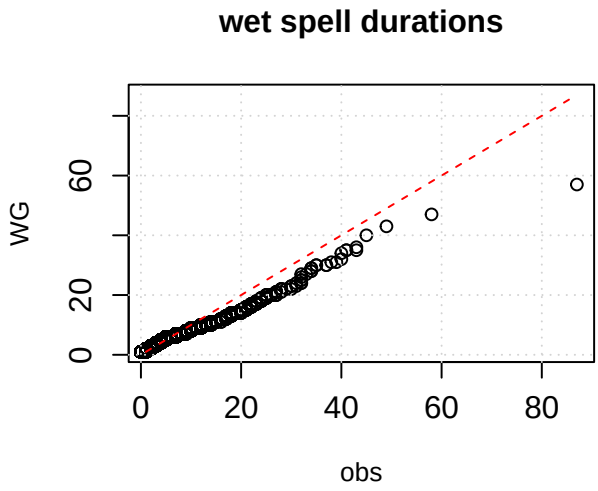
```
## 3 1952 fw= 0.3939975 n.wet= 144 = 144 mu= 4.7 = 4.7
## 4 1953 fw= 0.3117292 n.wet= 114 = 114 mu= 4.7 = 4.7
## 5 1954 fw= 0.2742806 n.wet= 100 = 100 mu= 4 = 4
## 6 1955 fw= 0.3321493 n.wet= 121 = 121 mu= 4.3 = 4.3
## 7 1956 fw= 0.3087289 n.wet= 113 = 113 mu= 4.5 = 4.5
## 8 1957 fw= 0.3374338 n.wet= 123 = 123 mu= 4.8 = 4.8
## 9 1958 fw= 0.3005079 n.wet= 110 = 110 mu= 3.8 = 3.8
## 10 1959 fw= 0.3141473 n.wet= 115 = 115 mu= 3.7 = 3.7
## 11 1960 fw= 0.3118325 n.wet= 114 = 114 mu= 4.1 = 4.1
## 12 1961 fw= 0.3279192 n.wet= 120 = 120 mu= 4.3 = 4.3
## 13 1962 fw= 0.2860725 n.wet= 104 = 104 mu= 4.4 = 4.4
## 14 1963 fw= 0.2547992 n.wet= 93 = 93 mu= 4.6 = 4.6
## 15 1964 fw= 0.3112904 n.wet= 114 = 114 mu= 4.4 = 4.4
## 16 1965 fw= 0.327299 n.wet= 120 = 120 mu= 4.1 = 4.1
## 17 1966 fw= 0.3122055 n.wet= 114 = 114 mu= 3.8 = 3.8
## 18 1967 fw= 0.2722802 n.wet= 99 = 99 mu= 4.5 = 4.5
## 19 1968 fw= 0.2811396 n.wet= 103 = 103 mu= 4.5 = 4.5
## 20 1969 fw= 0.3335576 n.wet= 122 = 122 mu= 4.7 = 4.7
## 21 1970 fw= 0.2584627 n.wet= 94 = 94 mu= 4.6 = 4.6
## 22 1971 fw= 0.2733406 n.wet= 100 = 100 mu= 4.7 = 4.8
## 23 1972 fw= 0.292215 n.wet= 107 = 107 mu= 4.5 = 4.5
## 24 1973 fw= 0.2722106 n.wet= 99 = 99 mu= 4.7 = 4.7
## 25 1974 fw= 0.2897595 n.wet= 106 = 106 mu= 4.8 = 4.8
## 26 1975 fw= 0.3004897 n.wet= 110 = 110 mu= 4 = 4
## 27 1976 fw= 0.28628 n.wet= 105 = 105 mu= 3.7 = 3.7
## 28 1977 fw= 0.2739415 n.wet= 100 = 100 mu= 4.1 = 4.1
## 29 1978 fw= 0.3345558 n.wet= 122 = 122 mu= 4.1 = 4.1
## 30 1979 fw= 0.3411167 n.wet= 125 = 125 mu= 4.4 = 4.4
## 31 1980 fw= 0.2980875 n.wet= 109 = 109 mu= 4.1 = 4.1
## 32 1981 fw= 0.2028708 n.wet= 74 = 74 mu= 4.7 = 4.7
## 33 1982 fw= 0.2567424 n.wet= 94 = 94 mu= 4.1 = 4.1
## 34 1983 fw= 0.2166282 n.wet= 79 = 79 mu= 4.8 = 4.8
## 35 1984 fw= 0.2186164 n.wet= 80 = 80 mu= 4.4 = 4.4
## 36 1985 fw= 0.3061409 n.wet= 112 = 112 mu= 4 = 4
## 37 1986 fw= 0.2118651 n.wet= 77 = 77 mu= 4 = 4
## 38 1987 fw= 0.2565661 n.wet= 94 = 94 mu= 4.3 = 4.3
## 39 1988 fw= 0.2464321 n.wet= 90 = 90 mu= 4.4 = 4.4
## 40 1989 fw= 0.2372381 n.wet= 87 = 87 mu= 4.1 = 4.1
## 41 1990 fw= 0.2338074 n.wet= 85 = 85 mu= 4.6 = 4.6
## 42 1991 fw= 0.2578109 n.wet= 94 = 94 mu= 4.2 = 4.2
## 43 1992 fw= 0.2626925 n.wet= 96 = 96 mu= 4.4 = 4.4
## 44 1993 fw= 0.2762513 n.wet= 101 = 101 mu= 4.3 = 4.3
## 45 1994 fw= 0.2036475 n.wet= 74 = 74 mu= 5.1 = 5.1
## 46 1995 fw= 0.2350733 n.wet= 86 = 86 mu= 4.2 = 4.2
## 47 1996 fw= 0.326498 n.wet= 119 = 119 mu= 4.9 = 4.9
## 48 1997 fw= 0.2799946 n.wet= 102 = 102 mu= 5.2 = 5.2
## 49 1998 fw= 0.2903915 n.wet= 106 = 106 mu= 5.4 = 5.4
## 50 1999 fw= 0.2817204 n.wet= 103 = 103 mu= 4.7 = 4.7
## 51 2000 fw= 0.2187444 n.wet= 80 = 80 mu= 5.2 = 5.2
## 52 2001 fw= 0.2385195 n.wet= 87 = 87 mu= 4.8 = 4.8
## 53 2002 fw= 0.287659 n.wet= 105 = 105 mu= 5 = 5
## 54 2003 fw= 0.1910889 n.wet= 70 = 70 mu= 4.8 = 4.8
## 55 2004 fw= 0.237047 n.wet= 87 = 87 mu= 4.6 = 4.6
## 56 2005 fw= 0.2127638 n.wet= 78 = 78 mu= 5.2 = 5.2
```

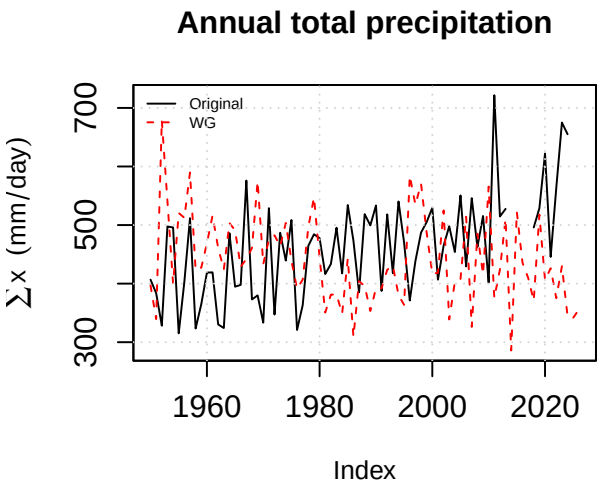
```
## 57 2006 fw= 0.2871626 n.wet= 105 = 105 mu= 4.9 = 4.9
## 58 2007 fw= 0.1848616 n.wet= 68 = 68 mu= 4.8 = 4.8
## 59 2008 fw= 0.2784526 n.wet= 102 = 102 mu= 4.8 = 4.8
## 60 2009 fw= 0.256803 n.wet= 94 = 94 mu= 4.4 = 4.4
## 61 2010 fw= 0.3359279 n.wet= 123 = 123 mu= 4.6 = 4.6
## 62 2011 fw= 0.2556417 n.wet= 93 = 93 mu= 4 = 4
## 63 2012 fw= 0.2755951 n.wet= 101 = 101 mu= 4.2 = 4.2
## 64 2013 fw= 0.3235627 n.wet= 118 = 118 mu= 4.3 = 4.3
## 65 2014 fw= 0.2138756 n.wet= 78 = 78 mu= 3.7 = 3.7
## 66 2015 fw= 0.3072331 n.wet= 112 = 112 mu= 4.7 = 4.7
## 67 2016 fw= 0.2897905 n.wet= 106 = 106 mu= 4.1 = 4.1
## 68 2017 fw= 0.2739494 n.wet= 100 = 100 mu= 4.1 = 4.1
## 69 2018 fw= 0.2653567 n.wet= 97 = 97 mu= 3.8 = 3.8
## 70 2019 fw= 0.2772136 n.wet= 101 = 101 mu= 5.1 = 5.1
## 71 2020 fw= 0.2512929 n.wet= 92 = 92 mu= 4.4 = 4.4
## 72 2021 fw= 0.301525 n.wet= 110 = 110 mu= 3.9 = 3.9
## 73 2022 fw= 0.2479 n.wet= 91 = 91 mu= 4.1 = 4.1
## 74 2023 fw= 0.3055147 n.wet= 112 = 112 mu= 3.8 = 3.8
## 75 2024 fw= 0.2576433 n.wet= 94 = 94 mu= 3.7 = 3.7
## 76 2025 fw= 0.2599779 n.wet= 95 = 95 mu= 3.6 = 3.6
## 77 2026 fw= 0.2087644 n.wet= 76 = 76 mu= 4.7 = 4.7
## [1] "Sort precipitation magnitudes"
## [1] "7608 observed wet days and 7011 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.0  1.3560     1.4    30.7       7
## Feb       0       0     0.0  0.9152     0.6    30.5       1
## Mar       0       0     0.0  0.7744     0.4    22.2       6
## Apr       0       0     0.0  0.5286     0.1    21.1      NA
## May       0       0     0.0  0.7183     0.3    26.0      NA
## Jun       0       0     0.0  1.2310     1.2    33.5      NA
## Jul       0       0     0.1  1.5370     1.7    36.5      NA
## Aug       0       0     0.1  1.7280     2.0    34.3      NA
## Sep       0       0     0.1  1.6790     2.0    37.2       2
## Oct       0       0     0.1  1.6910     1.9    45.5      NA
## Nov       0       0     0.1  1.5870     1.6    47.6       7
## Dec       0       0     0.1  1.4170     1.4    33.1       7
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 0.9655     0.8 25.4   NA
## Feb    0       0      0 0.6395     0.0 21.5   NA
## Mar    0       0      0 0.4332     0.0 14.2   NA
## Apr    0       0      0 0.3612     0.0 15.0   NA
## May    0       0      0 0.5282     0.0 15.5   NA
## Jun    0       0      0 1.0970     1.4 24.4   NA
## Jul    0       0      0 1.4330     1.8 27.5   NA
## Aug    0       0      0 1.8120     2.4 39.4   NA
## Sep    0       0      0 1.6200     2.1 30.1   NA
## Oct    0       0      0 2.0430     2.7 35.2   NA
## Nov    0       0      0 1.9550     2.4 33.8   NA
## Dec    0       0      0 1.5570     1.7 32.8   NA
```

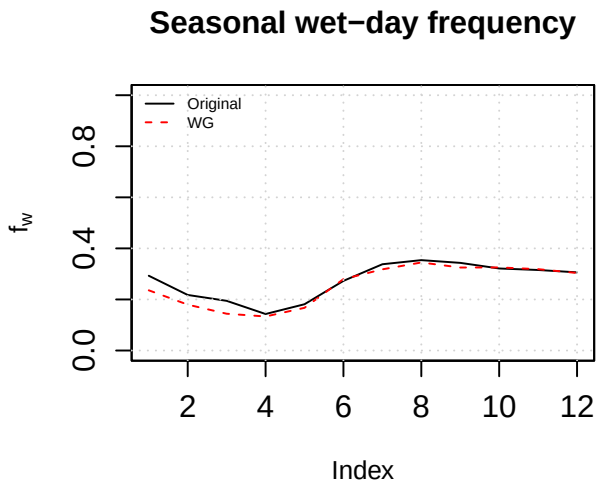

BØVERDAL wet−day amounts
WG amount (mm/day)
0
10
30
0
10
20
30
40
Observed amount (mm/day)

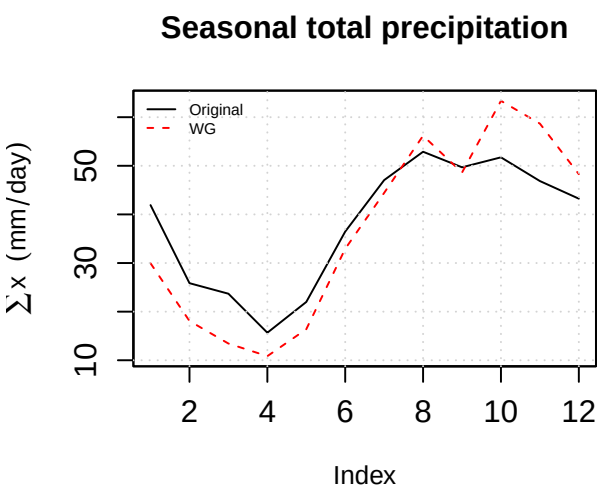

Dry spell durations
WG
2
6
10
2
4
6
8
10
12
obs

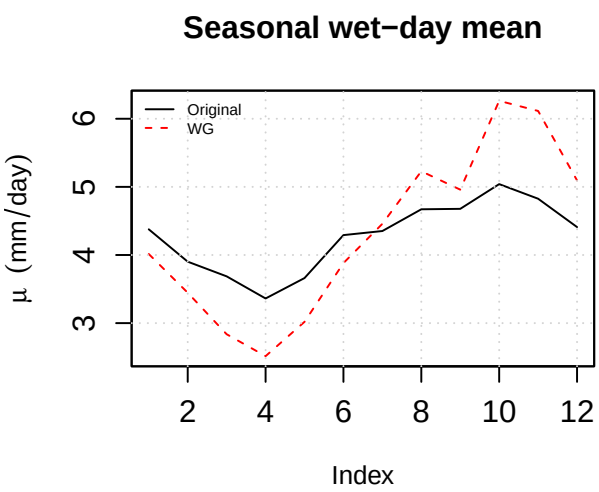

Number of annual wet days
days
20
60
100
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
60
0
20
40
60
80
obs





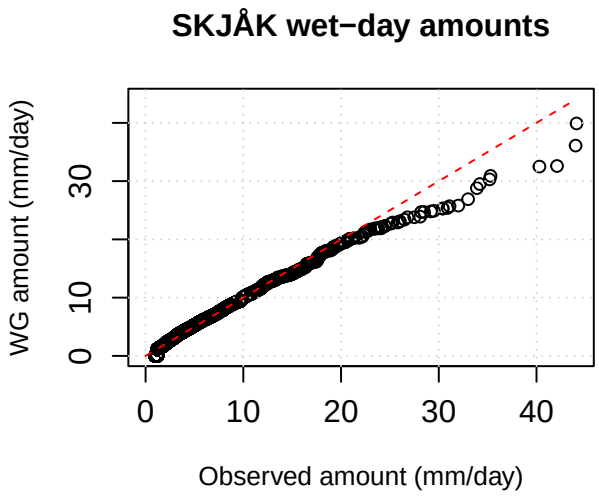


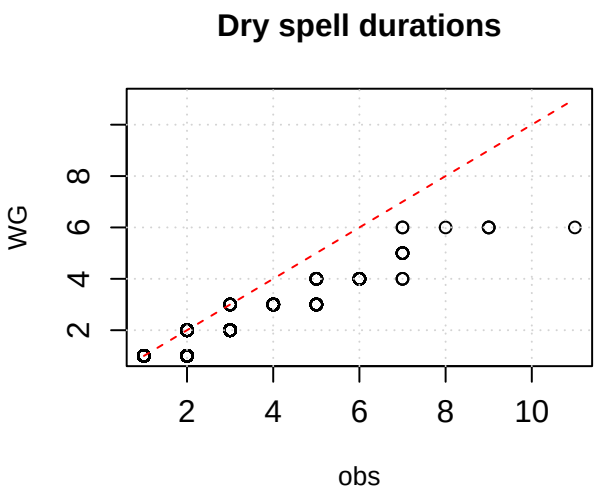


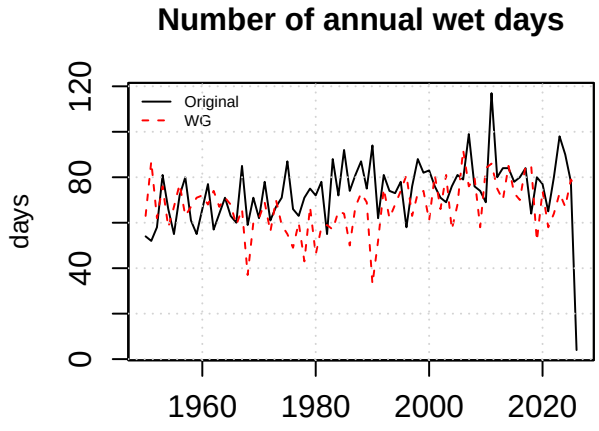

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for SKJÅK"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: SKJÅK"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.1041
##  1st Qu.:1969   1st Qu.:0.1860
##  Median :1988   Median :0.2058
##  Mean   :1988   Mean   :0.2034
##  3rd Qu.:2007   3rd Qu.:0.2226
##  Max.   :2026   Max.   :0.2574
##      Index          c(mu)
##  Min.   :1950   Min.   :2.858
##  1st Qu.:1969   1st Qu.:3.825
##  Median :1988   Median :4.131
##  Mean   :1988   Mean   :4.165
##  3rd Qu.:2007   3rd Qu.:4.509
##  Max.   :2026   Max.   :5.638
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.1845229 n.wet= 67 = 67 mu= 4.8 = 4.8
## 2 1951 fw= 0.2573582 n.wet= 94 = 94 mu= 4.6 = 4.6
```

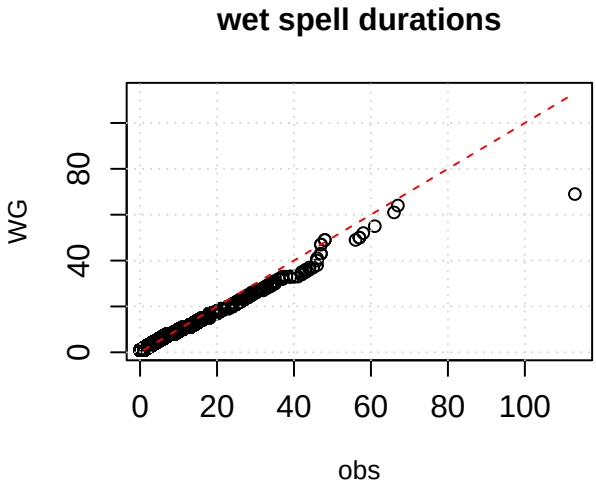
```
## 3 1952 fw= 0.2140462 n.wet= 78 = 78 mu= 3.5 = 3.5
## 4 1953 fw= 0.2345098 n.wet= 86 = 86 mu= 3.5 = 3.5
## 5 1954 fw= 0.1609055 n.wet= 59 = 59 mu= 3.9 = 3.9
## 6 1955 fw= 0.2109245 n.wet= 77 = 77 mu= 3.9 = 3.9
## 7 1956 fw= 0.2195192 n.wet= 80 = 80 mu= 4.3 = 4.3
## 8 1957 fw= 0.1930719 n.wet= 71 = 71 mu= 4 = 4
## 9 1958 fw= 0.2037003 n.wet= 74 = 74 mu= 5 = 5
## 10 1959 fw= 0.2166575 n.wet= 79 = 79 mu= 4.7 = 4.7
## 11 1960 fw= 0.2195446 n.wet= 80 = 80 mu= 4.6 = 4.6
## 12 1961 fw= 0.2020061 n.wet= 74 = 74 mu= 5.1 = 5.1
## 13 1962 fw= 0.2206246 n.wet= 81 = 81 mu= 4.6 = 4.6
## 14 1963 fw= 0.2060577 n.wet= 75 = 75 mu= 4.1 = 4.1
## 15 1964 fw= 0.2037695 n.wet= 74 = 74 mu= 4.3 = 4.3
## 16 1965 fw= 0.2100913 n.wet= 77 = 77 mu= 5.6 = 5.6
## 17 1966 fw= 0.1846478 n.wet= 67 = 67 mu= 4.9 = 4.9
## 18 1967 fw= 0.1950034 n.wet= 71 = 71 mu= 3.8 = 3.8
## 19 1968 fw= 0.1041176 n.wet= 38 = 38 mu= 4.1 = 4.1
## 20 1969 fw= 0.1743861 n.wet= 64 = 64 mu= 4.8 = 4.8
## 21 1970 fw= 0.2003547 n.wet= 73 = 73 mu= 4.1 = 4.1
## 22 1971 fw= 0.2058077 n.wet= 75 = 75 mu= 3.8 = 3.8
## 23 1972 fw= 0.1734615 n.wet= 63 = 63 mu= 4 = 4
## 24 1973 fw= 0.2237264 n.wet= 82 = 82 mu= 4.8 = 4.8
## 25 1974 fw= 0.176985 n.wet= 65 = 65 mu= 3.6 = 3.6
## 26 1975 fw= 0.1661277 n.wet= 61 = 61 mu= 4.3 = 4.3
## 27 1976 fw= 0.1459397 n.wet= 53 = 53 mu= 5 = 5
## 28 1977 fw= 0.1890222 n.wet= 69 = 69 mu= 4.2 = 4.2
## 29 1978 fw= 0.1345621 n.wet= 49 = 49 mu= 3.7 = 3.7
## 30 1979 fw= 0.1902487 n.wet= 69 = 69 mu= 4.4 = 4.4
## 31 1980 fw= 0.1353055 n.wet= 49 = 49 mu= 4 = 4
## 32 1981 fw= 0.1705751 n.wet= 62 = 62 mu= 4.4 = 4.4
## 33 1982 fw= 0.1728186 n.wet= 63 = 63 mu= 4.1 = 4.1
## 34 1983 fw= 0.1649949 n.wet= 60 = 60 mu= 4 = 4.1
## 35 1984 fw= 0.2070023 n.wet= 76 = 76 mu= 3.7 = 3.7
## 36 1985 fw= 0.2007153 n.wet= 73 = 73 mu= 3.8 = 3.8
## 37 1986 fw= 0.1502577 n.wet= 55 = 55 mu= 4.7 = 4.7
## 38 1987 fw= 0.1989245 n.wet= 73 = 73 mu= 4.4 = 4.4
## 39 1988 fw= 0.2157122 n.wet= 79 = 79 mu= 4.1 = 4.1
## 40 1989 fw= 0.2147973 n.wet= 78 = 78 mu= 4.3 = 4.3
## 41 1990 fw= 0.1225294 n.wet= 45 = 45 mu= 3.6 = 3.6
## 42 1991 fw= 0.158276 n.wet= 58 = 58 mu= 4.4 = 4.4
## 43 1992 fw= 0.2160328 n.wet= 79 = 79 mu= 4 = 4
## 44 1993 fw= 0.1952532 n.wet= 71 = 71 mu= 3.5 = 3.5
## 45 1994 fw= 0.2024061 n.wet= 74 = 74 mu= 3.3 = 3.3
## 46 1995 fw= 0.222632 n.wet= 81 = 81 mu= 4.4 = 4.4
## 47 1996 fw= 0.244385 n.wet= 89 = 89 mu= 4.7 = 4.7
## 48 1997 fw= 0.186 n.wet= 68 = 68 mu= 4.7 = 4.7
## 49 1998 fw= 0.2153832 n.wet= 79 = 79 mu= 4.2 = 4.2
## 50 1999 fw= 0.2199726 n.wet= 80 = 80 mu= 3.8 = 3.8
## 51 2000 fw= 0.1932555 n.wet= 71 = 71 mu= 3.5 = 3.5
## 52 2001 fw= 0.2423344 n.wet= 89 = 89 mu= 4.5 = 4.5
## 53 2002 fw= 0.202905 n.wet= 74 = 74 mu= 4.5 = 4.5
## 54 2003 fw= 0.2365871 n.wet= 86 = 86 mu= 4.3 = 4.3
## 55 2004 fw= 0.2056749 n.wet= 75 = 75 mu= 3.3 = 3.3
## 56 2005 fw= 0.193082 n.wet= 71 = 71 mu= 3.9 = 3.9
```

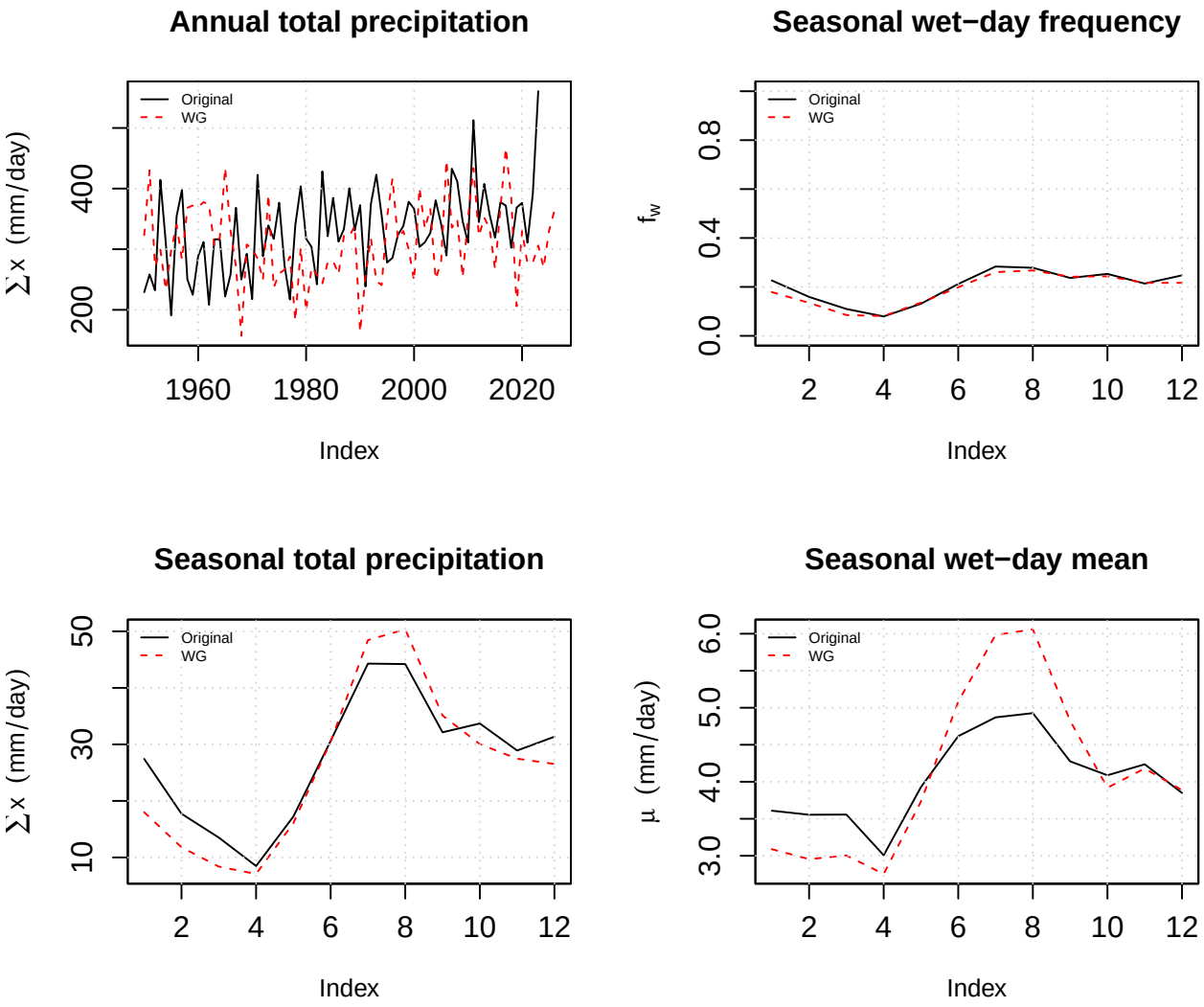
```
## 57 2006 fw= 0.2570413 n.wet= 94 = 94 mu= 4.7 = 4.7
## 58 2007 fw= 0.2396944 n.wet= 88 = 88 mu= 3.8 = 3.8
## 59 2008 fw= 0.2422402 n.wet= 88 = 88 mu= 4 = 4
## 60 2009 fw= 0.1772246 n.wet= 65 = 65 mu= 3.9 = 3.9
## 61 2010 fw= 0.2521194 n.wet= 92 = 92 mu= 3.8 = 3.8
## 62 2011 fw= 0.2572512 n.wet= 94 = 94 mu= 4.6 = 4.6
## 63 2012 fw= 0.2098695 n.wet= 77 = 77 mu= 4.2 = 4.2
## 64 2013 fw= 0.1933145 n.wet= 71 = 71 mu= 5 = 5
## 65 2014 fw= 0.2501462 n.wet= 91 = 91 mu= 3.7 = 3.7
## 66 2015 fw= 0.2136092 n.wet= 78 = 78 mu= 3.4 = 3.4
## 67 2016 fw= 0.2236163 n.wet= 82 = 82 mu= 4.5 = 4.5
## 68 2017 fw= 0.2490119 n.wet= 91 = 91 mu= 5.1 = 5.1
## 69 2018 fw= 0.2531604 n.wet= 92 = 92 mu= 4.2 = 4.2
## 70 2019 fw= 0.1966344 n.wet= 72 = 72 mu= 2.9 = 2.9
## 71 2020 fw= 0.2324867 n.wet= 85 = 85 mu= 3.9 = 3.9
## 72 2021 fw= 0.178421 n.wet= 65 = 65 mu= 4.3 = 4.3
## 73 2022 fw= 0.2148668 n.wet= 78 = 78 mu= 3.6 = 3.6
## 74 2023 fw= 0.2329786 n.wet= 85 = 85 mu= 3.6 = 3.6
## 75 2024 fw= 0.2124198 n.wet= 78 = 78 mu= 3.5 = 3.5
## 76 2025 fw= 0.233817 n.wet= 85 = 85 mu= 3.9 = 3.9
## 77 2026 fw= 0.2338483 n.wet= 85 = 85 mu= 4.3 = 4.3
## [1] "Sort precipitation magnitudes"
## [1] "5644 observed wet days and 5161 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0       0  0.8852   0.700    35.3       2
## Feb       0       0       0  0.6274   0.300    34.2       1
## Mar       0       0       0  0.4407   0.100    16.6      NA
## Apr       0       0       0  0.2862   0.000    20.9       2
## May       0       0       0  0.5630   0.100    32.0       1
## Jun       0       0       0  1.0350   0.500    40.3       2
## Jul       0       0       0  1.4490   1.300    44.0       2
## Aug       0       0       0  1.4460   1.275    44.1       2
## Sep       0       0       0  1.0860   0.800    28.1       3
## Oct       0       0       0  1.1020   1.000    22.2       2
## Nov       0       0       0  0.9770   0.675    24.1       2
## Dec       0       0       0  1.0250   0.900    30.4       2
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 0.5801     0.0 17.8   NA
## Feb    0       0      0 0.4173     0.0 16.5   NA
## Mar    0       0      0 0.2700     0.0 18.1   NA
## Apr    0       0      0 0.2355     0.0 16.3   NA
## May    0       0      0 0.5181     0.0 19.4   NA
## Jun    0       0      0 1.0150     0.0 36.1   NA
## Jul    0       0      0 1.5630     1.3 39.9   NA
## Aug    0       0      0 1.6240     1.4 29.5   NA
## Sep    0       0      0 1.1700     0.0 32.6   NA
## Oct    0       0      0 0.9689     0.9 22.9   NA
## Nov    0       0      0 0.9153     0.0 26.9   NA
## Dec    0       0      0 0.8554     0.0 32.5   NA
```


SKJÅK wet−day amounts
WG amount (mm/day)
0
10
30
0
10
20
30
40
Observed amount (mm/day)


Dry spell durations
WG
2
4
6
8
2
4
6
8
10
obs


Number of annual wet days
days
0
40
80
120
Original
WG
1960
1980
2000
2020

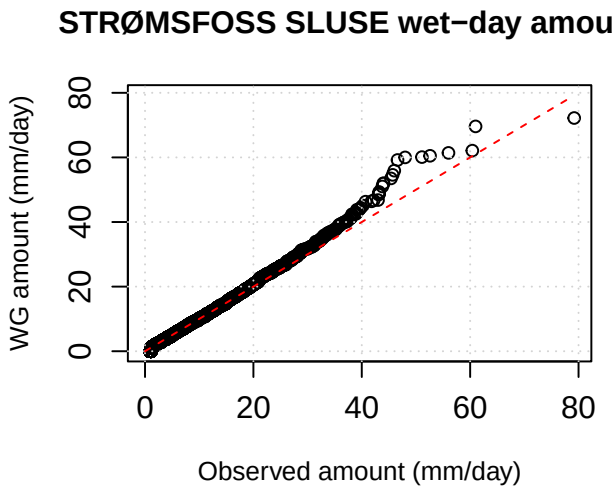

wet spell durations
WG
0
40
80
0
20
40
60
80
100
obs

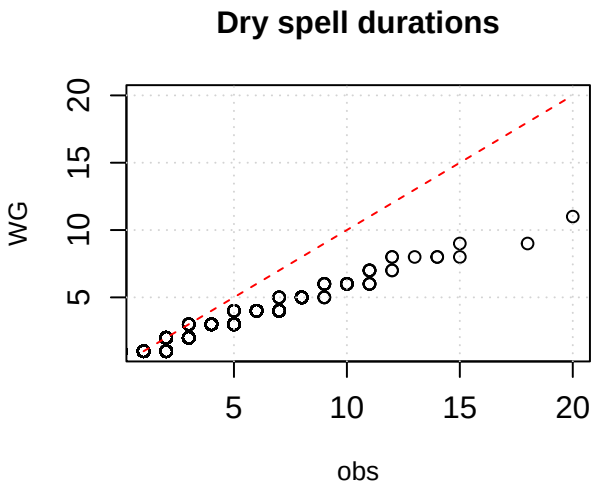


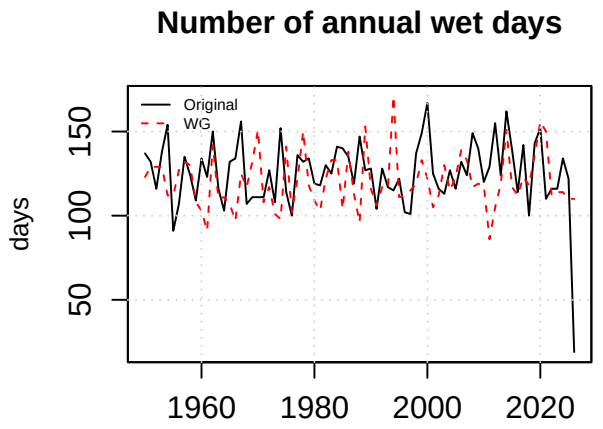

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for STRØMSFOSS SLUSE"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: STRØMSFOSS SLUSE"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2535
##  1st Qu.:1969   1st Qu.:0.3157
##  Median :1988   Median :0.3411
##  Mean   :1988   Mean   :0.3476
##  3rd Qu.:2007   3rd Qu.:0.3709
##  Max.   :2026   Max.   :0.4704
##      Index          c(mu)
##  Min.   :1950   Min.   :5.495
##  1st Qu.:1969   1st Qu.:6.392
##  Median :1988   Median :6.655
##  Mean   :1988   Mean   :6.789
##  3rd Qu.:2007   3rd Qu.:7.287
##  Max.   :2026   Max.   :8.298
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3534189 n.wet= 129 = 129 mu= 6.7 = 6.7
## 2 1951 fw= 0.3695218 n.wet= 135 = 135 mu= 6.5 = 6.5
```

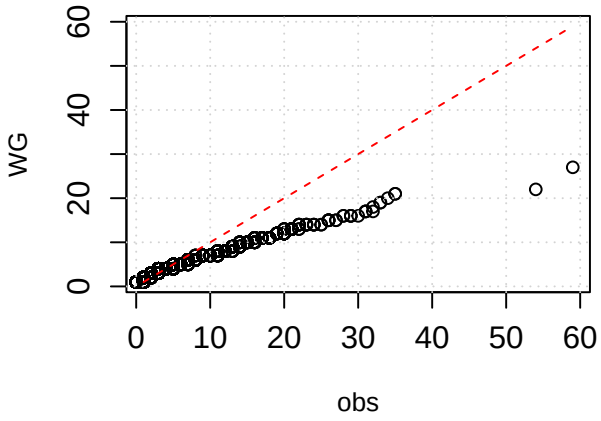
```
## 3 1952 fw= 0.3785105 n.wet= 138 = 138 mu= 5.6 = 5.6
## 4 1953 fw= 0.3645475 n.wet= 133 = 133 mu= 6.4 = 6.4
## 5 1954 fw= 0.3226046 n.wet= 118 = 118 mu= 7.5 = 7.5
## 6 1955 fw= 0.3377447 n.wet= 123 = 123 mu= 6.1 = 6.1
## 7 1956 fw= 0.3498734 n.wet= 128 = 128 mu= 7 = 7
## 8 1957 fw= 0.3829727 n.wet= 140 = 140 mu= 6.6 = 6.6
## 9 1958 fw= 0.3666533 n.wet= 134 = 134 mu= 7.6 = 7.7
## 10 1959 fw= 0.3045089 n.wet= 111 = 111 mu= 6.9 = 6.9
## 11 1960 fw= 0.2890246 n.wet= 106 = 106 mu= 7.5 = 7.5
## 12 1961 fw= 0.2738695 n.wet= 100 = 100 mu= 7.5 = 7.5
## 13 1962 fw= 0.4021016 n.wet= 147 = 147 mu= 8.3 = 8.3
## 14 1963 fw= 0.3226707 n.wet= 118 = 118 mu= 7.9 = 7.9
## 15 1964 fw= 0.3150661 n.wet= 115 = 115 mu= 5.8 = 5.8
## 16 1965 fw= 0.3157065 n.wet= 115 = 115 mu= 6.3 = 6.3
## 17 1966 fw= 0.2691038 n.wet= 98 = 98 mu= 7.3 = 7.3
## 18 1967 fw= 0.3627234 n.wet= 132 = 132 mu= 6.6 = 6.6
## 19 1968 fw= 0.3326358 n.wet= 121 = 121 mu= 6.4 = 6.4
## 20 1969 fw= 0.3676643 n.wet= 134 = 134 mu= 6.3 = 6.3
## 21 1970 fw= 0.4276155 n.wet= 156 = 156 mu= 7.3 = 7.3
## 22 1971 fw= 0.3081984 n.wet= 113 = 113 mu= 7.5 = 7.5
## 23 1972 fw= 0.3422873 n.wet= 125 = 125 mu= 5.5 = 5.5
## 24 1973 fw= 0.2897632 n.wet= 106 = 106 mu= 5.5 = 5.5
## 25 1974 fw= 0.3060249 n.wet= 112 = 112 mu= 6.2 = 6.2
## 26 1975 fw= 0.3981142 n.wet= 145 = 145 mu= 6.6 = 6.6
## 27 1976 fw= 0.2955289 n.wet= 108 = 108 mu= 6.6 = 6.6
## 28 1977 fw= 0.3468671 n.wet= 127 = 127 mu= 6.6 = 6.6
## 29 1978 fw= 0.4236186 n.wet= 155 = 155 mu= 6.9 = 6.9
## 30 1979 fw= 0.3351978 n.wet= 122 = 122 mu= 7.6 = 7.6
## 31 1980 fw= 0.3050488 n.wet= 111 = 111 mu= 6.1 = 6.1
## 32 1981 fw= 0.3023173 n.wet= 110 = 110 mu= 6.2 = 6.2
## 33 1982 fw= 0.348763 n.wet= 127 = 127 mu= 8 = 8
## 34 1983 fw= 0.3852027 n.wet= 141 = 141 mu= 6.6 = 6.6
## 35 1984 fw= 0.3751564 n.wet= 137 = 137 mu= 6.6 = 6.6
## 36 1985 fw= 0.2911861 n.wet= 106 = 106 mu= 7.3 = 7.3
## 37 1986 fw= 0.3912202 n.wet= 143 = 143 mu= 6.4 = 6.4
## 38 1987 fw= 0.3197365 n.wet= 117 = 117 mu= 7.5 = 7.5
## 39 1988 fw= 0.2842077 n.wet= 104 = 104 mu= 6.6 = 6.6
## 40 1989 fw= 0.4638264 n.wet= 169 = 169 mu= 5.9 = 5.9
## 41 1990 fw= 0.3407881 n.wet= 124 = 124 mu= 6.6 = 6.6
## 42 1991 fw= 0.3269127 n.wet= 119 = 119 mu= 6 = 6
## 43 1992 fw= 0.3482526 n.wet= 127 = 127 mu= 5.9 = 5.9
## 44 1993 fw= 0.3375703 n.wet= 123 = 123 mu= 6.4 = 6.4
## 45 1994 fw= 0.4704341 n.wet= 172 = 172 mu= 6.9 = 6.9
## 46 1995 fw= 0.3240235 n.wet= 118 = 118 mu= 6.2 = 6.2
## 47 1996 fw= 0.3133657 n.wet= 114 = 114 mu= 6.6 = 6.6
## 48 1997 fw= 0.3382267 n.wet= 124 = 124 mu= 6.9 = 6.9
## 49 1998 fw= 0.3604958 n.wet= 132 = 132 mu= 6.7 = 6.7
## 50 1999 fw= 0.3744599 n.wet= 137 = 137 mu= 7.7 = 7.7
## 51 2000 fw= 0.3527746 n.wet= 129 = 129 mu= 6.6 = 6.6
## 52 2001 fw= 0.3022898 n.wet= 110 = 110 mu= 6.6 = 6.6
## 53 2002 fw= 0.3273671 n.wet= 120 = 120 mu= 6.7 = 6.7
## 54 2003 fw= 0.3965511 n.wet= 145 = 145 mu= 7.1 = 7.1
## 55 2004 fw= 0.3344858 n.wet= 122 = 122 mu= 7 = 7
## 56 2005 fw= 0.3708964 n.wet= 135 = 135 mu= 7.3 = 7.3
```

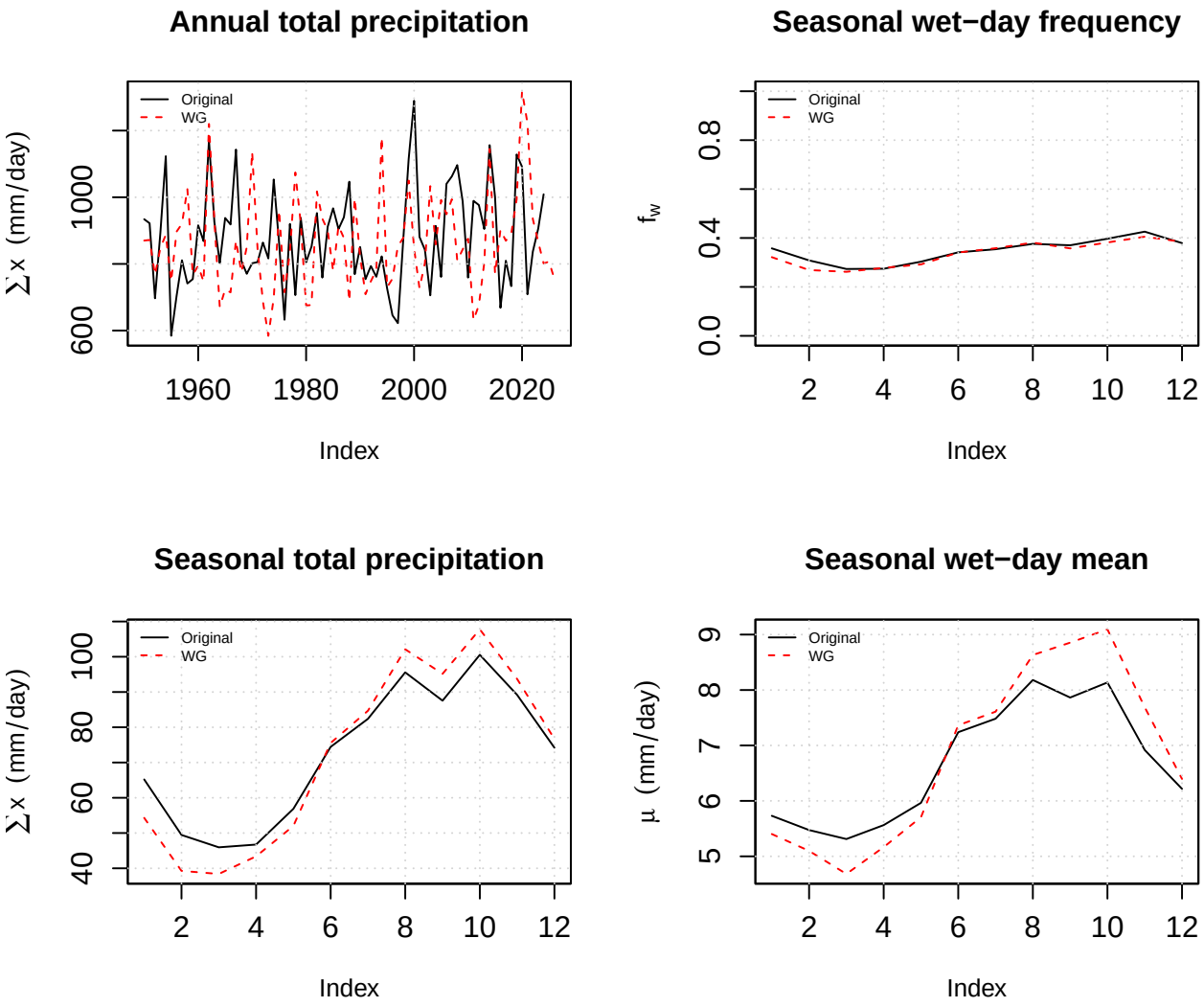
```
## 57 2006 fw= 0.3960741 n.wet= 145 = 145 mu= 6.5 = 6.5
## 58 2007 fw= 0.3928803 n.wet= 143 = 143 mu= 7 = 7
## 59 2008 fw= 0.3410557 n.wet= 125 = 125 mu= 6.5 = 6.5
## 60 2009 fw= 0.352811 n.wet= 129 = 129 mu= 6.5 = 6.5
## 61 2010 fw= 0.3593621 n.wet= 131 = 131 mu= 6.7 = 6.7
## 62 2011 fw= 0.2535317 n.wet= 93 = 93 mu= 6.8 = 6.8
## 63 2012 fw= 0.3089053 n.wet= 113 = 113 mu= 6 = 6
## 64 2013 fw= 0.3543814 n.wet= 129 = 129 mu= 6.2 = 6.2
## 65 2014 fw= 0.429687 n.wet= 157 = 157 mu= 7.3 = 7.3
## 66 2015 fw= 0.3419182 n.wet= 125 = 125 mu= 6.2 = 6.2
## 67 2016 fw= 0.3267368 n.wet= 119 = 119 mu= 7.6 = 7.6
## 68 2017 fw= 0.3562871 n.wet= 130 = 130 mu= 6.7 = 6.7
## 69 2018 fw= 0.3321532 n.wet= 121 = 121 mu= 7.4 = 7.4
## 70 2019 fw= 0.3988229 n.wet= 146 = 146 mu= 6.8 = 6.8
## 71 2020 fw= 0.4452023 n.wet= 163 = 163 mu= 8.1 = 8.1
## 72 2021 fw= 0.426333 n.wet= 156 = 156 mu= 7.8 = 7.8
## 73 2022 fw= 0.3200322 n.wet= 117 = 117 mu= 8 = 8
## 74 2023 fw= 0.3377907 n.wet= 123 = 123 mu= 7 = 7
## 75 2024 fw= 0.3139519 n.wet= 115 = 115 mu= 7 = 7
## 76 2025 fw= 0.323643 n.wet= 118 = 118 mu= 6.8 = 6.8
## 77 2026 fw= 0.3149673 n.wet= 115 = 115 mu= 6.6 = 6.6
## [1] "Sort precipitation magnitudes"
## [1] "9644 observed wet days and 9260 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0    0.10   2.107   2.500    28.0       5
## Feb       0       0    0.00   1.752   1.700    45.7       2
## Mar       0       0    0.00   1.499   1.200    31.3      NA
## Apr       0       0    0.00   1.579   1.200    28.8       2
## May       0       0    0.00   1.859   1.700    38.0       1
## Jun       0       0    0.00   2.514   2.700    43.8       1
## Jul       0       0    0.00   2.693   2.900    56.0       1
## Aug       0       0    0.00   3.126   3.600    79.2       2
## Sep       0       0    0.10   2.960   3.400    51.1       3
## Oct       0       0    0.20   3.290   3.800    46.6       3
## Nov       0       0    0.35   3.011   4.125    40.2      NA
## Dec       0       0    0.20   2.426   3.000    39.6       1
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.751    1.75 46.3   NA
## Feb    0       0      0 1.390    1.20 61.4   NA
## Mar    0       0      0 1.238    1.00 38.5   NA
## Apr    0       0      0 1.446    1.20 46.7   NA
## May    0       0      0 1.677    1.60 44.1   NA
## Jun    0       0      0 2.518    3.00 41.3   NA
## Jul    0       0      0 2.732    3.50 59.2   NA
## Aug    0       0      0 3.294    4.40 60.1   NA
## Sep    0       0      0 3.171    3.80 72.2   NA
## Oct    0       0      0 3.476    4.40 60.5   NA
## Nov    0       0      0 3.122    4.00 49.3   NA
## Dec    0       0      0 2.473    3.20 62.1   NA
```


STRØMSFOSS SLUSE wet−day amounts
WG amount (mm/day)
Observed amount (mm/day)
0
20
40
60
80


Dry spell durations
WG
obs
5
10
15
20


Number of annual wet days
days
Original
WG
50
100
150
1960
1980
2000
2020

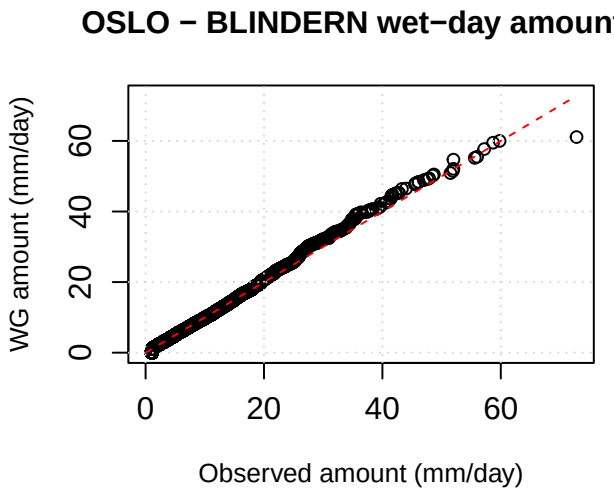

wet spell durations
WG
obs
0
20
40
60

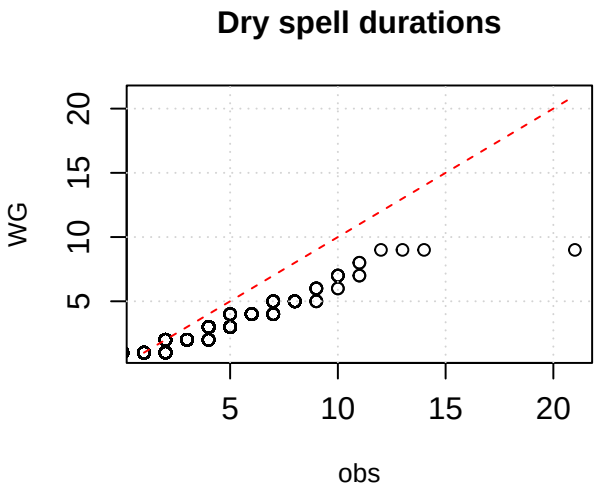


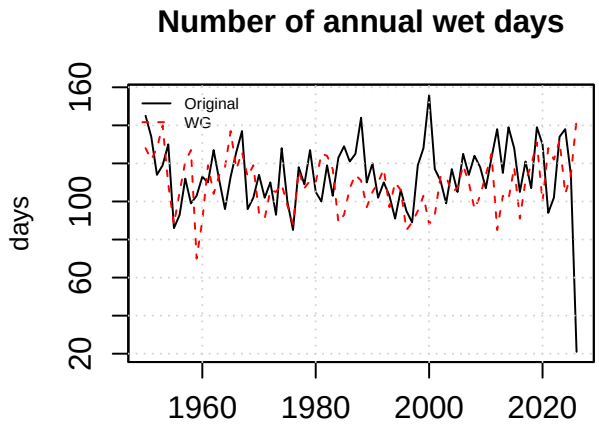

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for OSLO - BLINDERN"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: OSLO - BLINDERN"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2015
##  1st Qu.:1969   1st Qu.:0.2864
##  Median :1988   Median :0.3204
##  Mean   :1988   Mean   :0.3139
##  3rd Qu.:2007   3rd Qu.:0.3436
##  Max.   :2026   Max.   :0.4129
##      Index          c(mu)
##  Min.   :1950   Min.   :5.139
##  1st Qu.:1969   1st Qu.:6.346
##  Median :1988   Median :6.745
##  Mean   :1988   Mean   :6.773
##  3rd Qu.:2007   3rd Qu.:7.161
##  Max.   :2026   Max.   :8.605
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3551435 n.wet= 130 = 130 mu= 7.9 = 7.9
## 2 1951 fw= 0.3455297 n.wet= 126 = 126 mu= 7.4 = 7.4
```

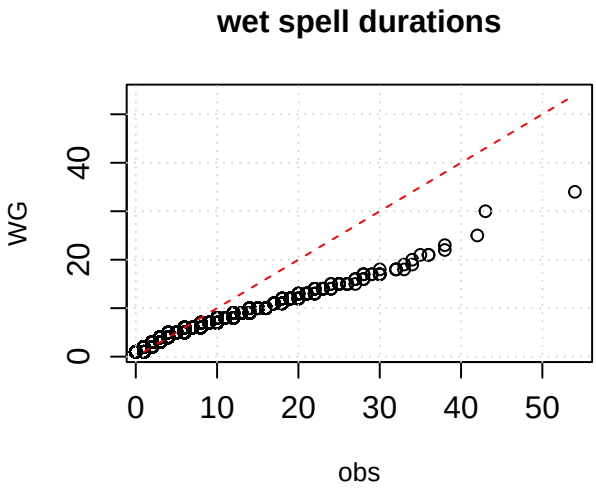
```
## 3 1952 fw= 0.3759657 n.wet= 137 = 137 mu= 7.7 = 7.7
## 4 1953 fw= 0.4128622 n.wet= 151 = 151 mu= 7 = 7
## 5 1954 fw= 0.3281583 n.wet= 120 = 120 mu= 6.5 = 6.5
## 6 1955 fw= 0.2541359 n.wet= 93 = 93 mu= 7 = 7
## 7 1956 fw= 0.3087139 n.wet= 113 = 113 mu= 6.8 = 6.8
## 8 1957 fw= 0.3520123 n.wet= 129 = 129 mu= 6.5 = 6.5
## 9 1958 fw= 0.3607397 n.wet= 132 = 132 mu= 6 = 6
## 10 1959 fw= 0.2014589 n.wet= 74 = 74 mu= 6.7 = 6.7
## 11 1960 fw= 0.254948 n.wet= 93 = 93 mu= 6.5 = 6.5
## 12 1961 fw= 0.3328242 n.wet= 122 = 122 mu= 7.6 = 7.6
## 13 1962 fw= 0.2881399 n.wet= 105 = 105 mu= 7.2 = 7.2
## 14 1963 fw= 0.3370151 n.wet= 123 = 123 mu= 6 = 6
## 15 1964 fw= 0.3417505 n.wet= 125 = 125 mu= 7.1 = 7.1
## 16 1965 fw= 0.3880181 n.wet= 142 = 142 mu= 6.9 = 6.9
## 17 1966 fw= 0.3305141 n.wet= 121 = 121 mu= 7.6 = 7.6
## 18 1967 fw= 0.3512186 n.wet= 128 = 128 mu= 8.6 = 8.6
## 19 1968 fw= 0.3208579 n.wet= 117 = 117 mu= 7.2 = 7.2
## 20 1969 fw= 0.3383586 n.wet= 124 = 124 mu= 7.1 = 7.1
## 21 1970 fw= 0.2708148 n.wet= 99 = 99 mu= 7.9 = 7.9
## 22 1971 fw= 0.2483715 n.wet= 91 = 91 mu= 7.1 = 7.1
## 23 1972 fw= 0.2960345 n.wet= 108 = 108 mu= 7 = 7
## 24 1973 fw= 0.2915263 n.wet= 106 = 106 mu= 7.6 = 7.6
## 25 1974 fw= 0.3154041 n.wet= 115 = 115 mu= 7 = 7
## 26 1975 fw= 0.2730626 n.wet= 100 = 100 mu= 6.8 = 6.8
## 27 1976 fw= 0.2469306 n.wet= 90 = 90 mu= 7.6 = 7.5
## 28 1977 fw= 0.3462024 n.wet= 126 = 126 mu= 6.8 = 6.8
## 29 1978 fw= 0.3179962 n.wet= 116 = 116 mu= 6.1 = 6.1
## 30 1979 fw= 0.3203589 n.wet= 117 = 117 mu= 6.3 = 6.3
## 31 1980 fw= 0.3092366 n.wet= 113 = 113 mu= 6.7 = 6.7
## 32 1981 fw= 0.3537955 n.wet= 129 = 129 mu= 7.8 = 7.8
## 33 1982 fw= 0.3436421 n.wet= 126 = 126 mu= 7.2 = 7.2
## 34 1983 fw= 0.3311078 n.wet= 121 = 121 mu= 5.6 = 5.6
## 35 1984 fw= 0.2618631 n.wet= 96 = 96 mu= 6 = 6
## 36 1985 fw= 0.2716645 n.wet= 99 = 99 mu= 7.3 = 7.3
## 37 1986 fw= 0.3107177 n.wet= 113 = 113 mu= 6.4 = 6.4
## 38 1987 fw= 0.3288791 n.wet= 120 = 120 mu= 6.8 = 6.8
## 39 1988 fw= 0.3304952 n.wet= 121 = 121 mu= 6.8 = 6.8
## 40 1989 fw= 0.275359 n.wet= 101 = 101 mu= 6.8 = 6.8
## 41 1990 fw= 0.2972707 n.wet= 109 = 109 mu= 6.7 = 6.7
## 42 1991 fw= 0.3205317 n.wet= 117 = 117 mu= 6.1 = 6.1
## 43 1992 fw= 0.3435689 n.wet= 125 = 125 mu= 6.3 = 6.3
## 44 1993 fw= 0.2853526 n.wet= 104 = 104 mu= 6.4 = 6.4
## 45 1994 fw= 0.3327804 n.wet= 122 = 122 mu= 7.1 = 7.1
## 46 1995 fw= 0.304619 n.wet= 111 = 111 mu= 6.7 = 6.7
## 47 1996 fw= 0.2468503 n.wet= 90 = 90 mu= 7.1 = 7.1
## 48 1997 fw= 0.2507603 n.wet= 92 = 92 mu= 6.5 = 6.5
## 49 1998 fw= 0.2735248 n.wet= 100 = 100 mu= 6.3 = 6.3
## 50 1999 fw= 0.2936545 n.wet= 107 = 107 mu= 6.1 = 6.1
## 51 2000 fw= 0.2552465 n.wet= 93 = 93 mu= 6 = 6
## 52 2001 fw= 0.2631345 n.wet= 96 = 96 mu= 6.3 = 6.3
## 53 2002 fw= 0.3343173 n.wet= 122 = 122 mu= 7.3 = 7.3
## 54 2003 fw= 0.3246082 n.wet= 119 = 119 mu= 6 = 6
## 55 2004 fw= 0.3111915 n.wet= 114 = 114 mu= 6.1 = 6.1
## 56 2005 fw= 0.3091364 n.wet= 113 = 113 mu= 6.7 = 6.7
```

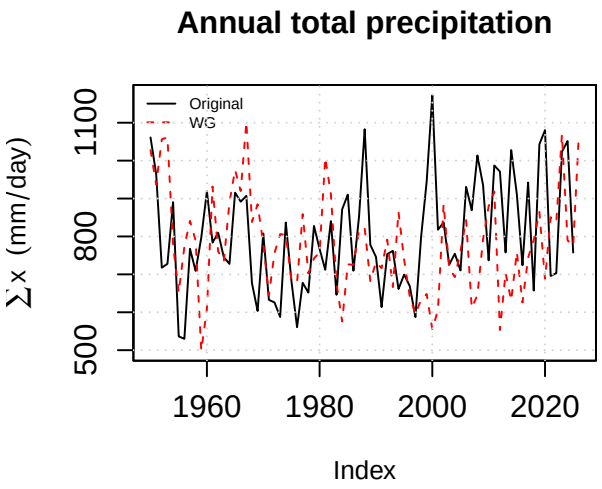
```
## 57 2006 fw= 0.3570382 n.wet= 130 = 130 mu= 6.5 = 6.5
## 58 2007 fw= 0.3249948 n.wet= 119 = 119 mu= 5.1 = 5.1
## 59 2008 fw= 0.2749945 n.wet= 100 = 100 mu= 6.4 = 6.4
## 60 2009 fw= 0.2864356 n.wet= 105 = 105 mu= 7.5 = 7.5
## 61 2010 fw= 0.3237265 n.wet= 118 = 118 mu= 7.5 = 7.5
## 62 2011 fw= 0.3520465 n.wet= 129 = 129 mu= 7.1 = 7.1
## 63 2012 fw= 0.2509845 n.wet= 92 = 92 mu= 6 = 6
## 64 2013 fw= 0.2975976 n.wet= 109 = 109 mu= 6.5 = 6.5
## 65 2014 fw= 0.2949672 n.wet= 108 = 108 mu= 5.8 = 5.8
## 66 2015 fw= 0.3403238 n.wet= 124 = 124 mu= 6.1 = 6.1
## 67 2016 fw= 0.250953 n.wet= 92 = 92 mu= 6.8 = 6.8
## 68 2017 fw= 0.3165622 n.wet= 116 = 116 mu= 6.4 = 6.4
## 69 2018 fw= 0.3625877 n.wet= 132 = 132 mu= 6 = 6
## 70 2019 fw= 0.3631428 n.wet= 133 = 133 mu= 6.5 = 6.5
## 71 2020 fw= 0.294536 n.wet= 108 = 108 mu= 6.4 = 6.4
## 72 2021 fw= 0.3714895 n.wet= 136 = 136 mu= 6.3 = 6.3
## 73 2022 fw= 0.3482524 n.wet= 127 = 127 mu= 6.6 = 6.6
## 74 2023 fw= 0.3806016 n.wet= 139 = 139 mu= 7.7 = 7.7
## 75 2024 fw= 0.2936516 n.wet= 107 = 107 mu= 7.4 = 7.4
## 76 2025 fw= 0.322468 n.wet= 118 = 118 mu= 6.6 = 6.6
## 77 2026 fw= 0.3951969 n.wet= 144 = 144 mu= 7.4 = 7.4
## [1] "Sort precipitation magnitudes"
## [1] "8735 observed wet days and 8412 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.1   1.720   1.700    35.5   NA
## Feb       0       0     0.0   1.461   1.300    28.0   NA
## Mar       0       0     0.0   1.343   0.800    32.0   NA
## Apr       0       0     0.0   1.496   1.000    34.5   NA
## May       0       0     0.0   1.764   1.200    43.3   NA
## Jun       0       0     0.0   2.444   2.500    72.8   NA
## Jul       0       0     0.1   2.779   2.800    56.0   NA
## Aug       0       0     0.1   3.256   3.500    59.8   NA
## Sep       0       0     0.0   2.821   2.500    58.7    1
## Oct       0       0     0.1   2.799   2.900    47.6   NA
## Nov       0       0     0.1   2.565   3.125    46.1   NA
## Dec       0       0     0.1   1.791   1.900    29.0   NA
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.297    1.25 35.4   NA
## Feb    0       0      0 1.253    0.90 31.4   NA
## Mar    0       0      0 1.263    0.75 42.6   NA
## Apr    0       0      0 1.362    0.00 39.9   NA
## May    0       0      0 1.772    1.30 54.7   NA
## Jun    0       0      0 2.274    2.40 61.1   NA
## Jul    0       0      0 2.760    3.20 51.5   NA
## Aug    0       0      0 3.105    4.20 57.7   NA
## Sep    0       0      0 3.051    3.60 48.9   NA
## Oct    0       0      0 2.736    3.00 60.0   NA
## Nov    0       0      0 2.614    3.10 50.5   NA
## Dec    0       0      0 2.024    2.25 50.9   NA
```

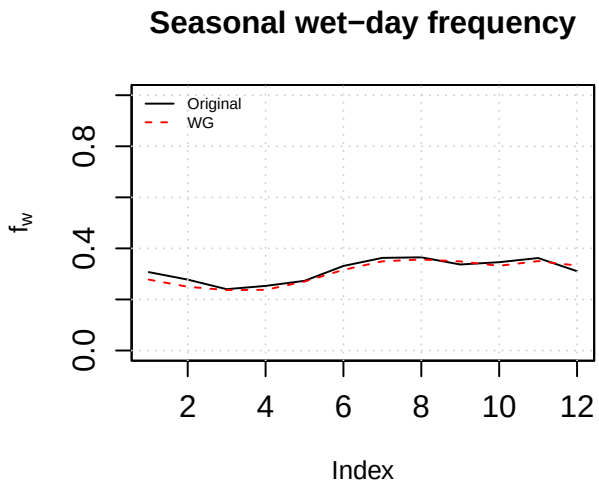

OSLO − BLINDERN wet−day amounts
WG amount (mm/day)
0
20
40
60
0
20
40
60
Observed amount (mm/day)

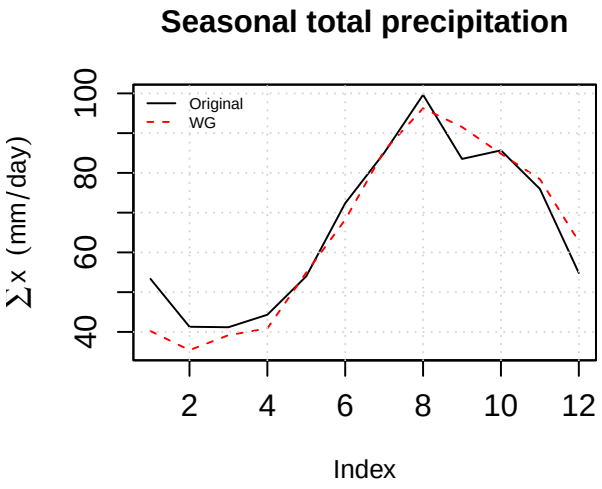

Dry spell durations
WG
5
10
15
20
5
10
15
20
obs

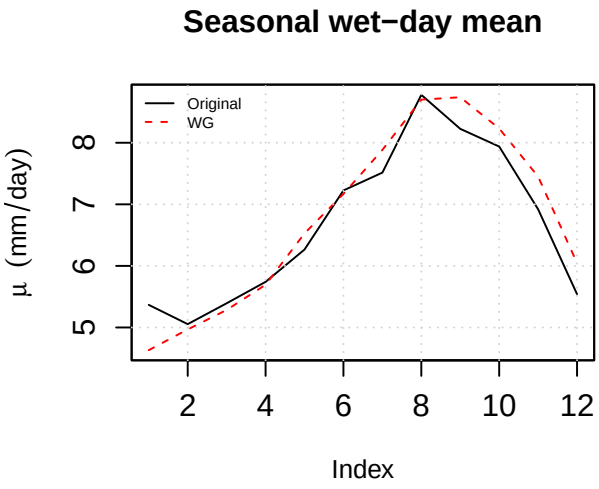

Number of annual wet days
days
20
60
100
160
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
40
0
10
20
30
40
50
obs





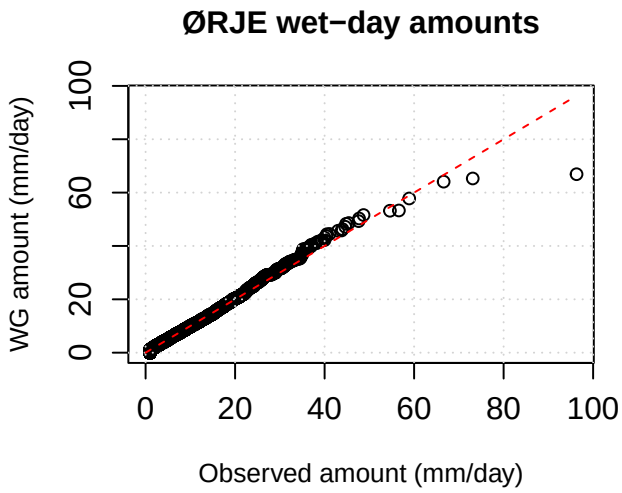


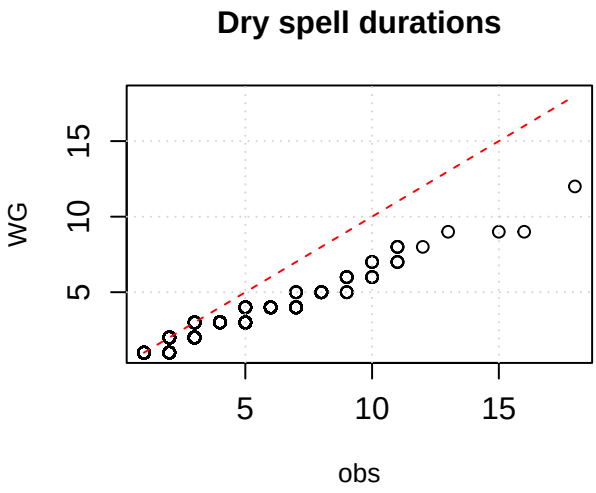


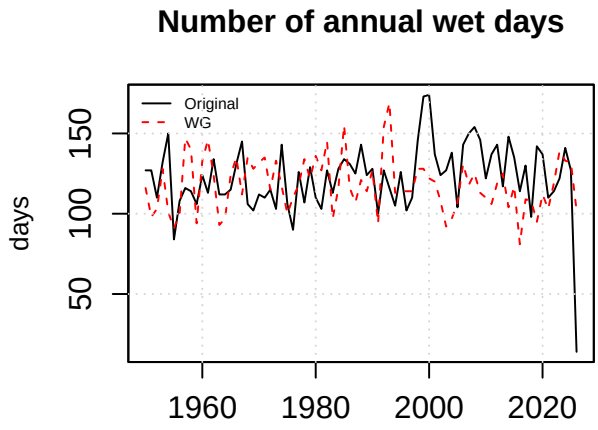

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for ØRJE"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: ØRJE"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2292
##  1st Qu.:1969   1st Qu.:0.3033
##  Median :1988   Median :0.3366
##  Mean   :1988   Mean   :0.3384
##  3rd Qu.:2007   3rd Qu.:0.3640
##  Max.   :2026   Max.   :0.4851
##      Index          c(mu)
##  Min.   :1950   Min.   :5.290
##  1st Qu.:1969   1st Qu.:6.425
##  Median :1988   Median :6.812
##  Mean   :1988   Mean   :6.823
##  3rd Qu.:2007   3rd Qu.:7.352
##  Max.   :2026   Max.   :8.142
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3166875 n.wet= 116 = 116 mu= 7.3 = 7.3
## 2 1951 fw= 0.2851196 n.wet= 104 = 104 mu= 8.1 = 8.1
```

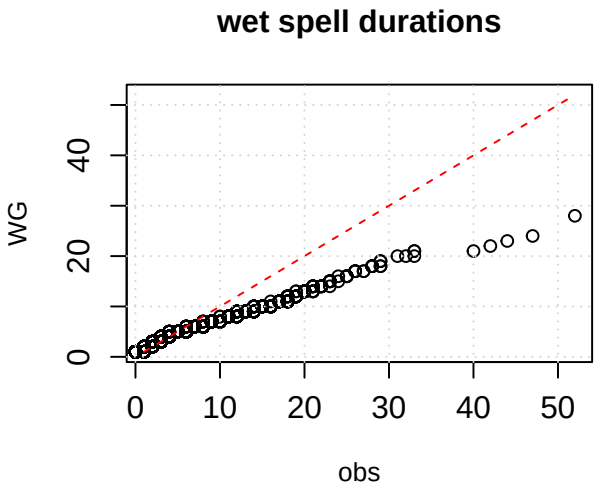
```
## 3 1952 fw= 0.2996679 n.wet= 109 = 109 mu= 6.7 = 6.7
## 4 1953 fw= 0.3589677 n.wet= 131 = 131 mu= 6.9 = 6.9
## 5 1954 fw= 0.3052602 n.wet= 111 = 111 mu= 6.6 = 6.6
## 6 1955 fw= 0.2776941 n.wet= 101 = 101 mu= 6.2 = 6.2
## 7 1956 fw= 0.285104 n.wet= 104 = 104 mu= 7.6 = 7.6
## 8 1957 fw= 0.4100074 n.wet= 150 = 150 mu= 7.2 = 7.2
## 9 1958 fw= 0.394132 n.wet= 144 = 144 mu= 6.7 = 6.7
## 10 1959 fw= 0.2677175 n.wet= 98 = 98 mu= 6.5 = 6.5
## 11 1960 fw= 0.3919691 n.wet= 143 = 143 mu= 5.9 = 5.9
## 12 1961 fw= 0.4118123 n.wet= 150 = 150 mu= 6 = 6
## 13 1962 fw= 0.3518202 n.wet= 129 = 129 mu= 6.2 = 6.2
## 14 1963 fw= 0.2768313 n.wet= 101 = 101 mu= 6.8 = 6.8
## 15 1964 fw= 0.2897054 n.wet= 106 = 106 mu= 7.4 = 7.4
## 16 1965 fw= 0.3552325 n.wet= 130 = 130 mu= 7.4 = 7.4
## 17 1966 fw= 0.3861536 n.wet= 141 = 141 mu= 6.2 = 6.2
## 18 1967 fw= 0.3337711 n.wet= 122 = 122 mu= 6.2 = 6.2
## 19 1968 fw= 0.3838995 n.wet= 140 = 140 mu= 6.5 = 6.5
## 20 1969 fw= 0.363144 n.wet= 133 = 133 mu= 6.9 = 6.9
## 21 1970 fw= 0.3640278 n.wet= 133 = 133 mu= 7.5 = 7.5
## 22 1971 fw= 0.3863206 n.wet= 141 = 141 mu= 6.9 = 6.9
## 23 1972 fw= 0.3334373 n.wet= 122 = 122 mu= 7.4 = 7.4
## 24 1973 fw= 0.3861996 n.wet= 141 = 141 mu= 6.4 = 6.4
## 25 1974 fw= 0.336635 n.wet= 123 = 123 mu= 5.9 = 5.9
## 26 1975 fw= 0.2839628 n.wet= 104 = 104 mu= 7.3 = 7.3
## 27 1976 fw= 0.3063859 n.wet= 112 = 112 mu= 7.3 = 7.3
## 28 1977 fw= 0.3356818 n.wet= 123 = 123 mu= 7.4 = 7.4
## 29 1978 fw= 0.3784486 n.wet= 138 = 138 mu= 6.5 = 6.5
## 30 1979 fw= 0.3470822 n.wet= 127 = 127 mu= 6.3 = 6.3
## 31 1980 fw= 0.3942194 n.wet= 144 = 144 mu= 6.1 = 6.1
## 32 1981 fw= 0.3628055 n.wet= 133 = 133 mu= 5.9 = 5.9
## 33 1982 fw= 0.425725 n.wet= 155 = 155 mu= 6.8 = 6.8
## 34 1983 fw= 0.2880207 n.wet= 105 = 105 mu= 7 = 7
## 35 1984 fw= 0.3190542 n.wet= 117 = 117 mu= 7.7 = 7.7
## 36 1985 fw= 0.4401913 n.wet= 161 = 161 mu= 7.4 = 7.4
## 37 1986 fw= 0.3506802 n.wet= 128 = 128 mu= 6.4 = 6.4
## 38 1987 fw= 0.3020509 n.wet= 110 = 110 mu= 6.6 = 6.6
## 39 1988 fw= 0.3522919 n.wet= 129 = 129 mu= 7.6 = 7.6
## 40 1989 fw= 0.3170872 n.wet= 116 = 116 mu= 7.9 = 7.9
## 41 1990 fw= 0.3595727 n.wet= 131 = 131 mu= 7.5 = 7.5
## 42 1991 fw= 0.2752354 n.wet= 101 = 101 mu= 8.1 = 8.1
## 43 1992 fw= 0.4394492 n.wet= 161 = 161 mu= 7 = 7
## 44 1993 fw= 0.4850885 n.wet= 177 = 177 mu= 6.5 = 6.5
## 45 1994 fw= 0.3264023 n.wet= 119 = 119 mu= 7.1 = 7.1
## 46 1995 fw= 0.3263508 n.wet= 119 = 119 mu= 6.6 = 6.6
## 47 1996 fw= 0.3254429 n.wet= 119 = 119 mu= 6.5 = 6.5
## 48 1997 fw= 0.3430841 n.wet= 125 = 125 mu= 6.7 = 6.7
## 49 1998 fw= 0.3748364 n.wet= 137 = 137 mu= 5.6 = 5.6
## 50 1999 fw= 0.3600892 n.wet= 132 = 132 mu= 6 = 6
## 51 2000 fw= 0.3498208 n.wet= 128 = 128 mu= 5.8 = 5.8
## 52 2001 fw= 0.343881 n.wet= 126 = 126 mu= 6.1 = 6.1
## 53 2002 fw= 0.3046161 n.wet= 111 = 111 mu= 7.8 = 7.8
## 54 2003 fw= 0.2584092 n.wet= 94 = 94 mu= 7.8 = 7.8
## 55 2004 fw= 0.2754457 n.wet= 101 = 101 mu= 7.5 = 7.5
## 56 2005 fw= 0.2967625 n.wet= 108 = 108 mu= 7.2 = 7.2
```

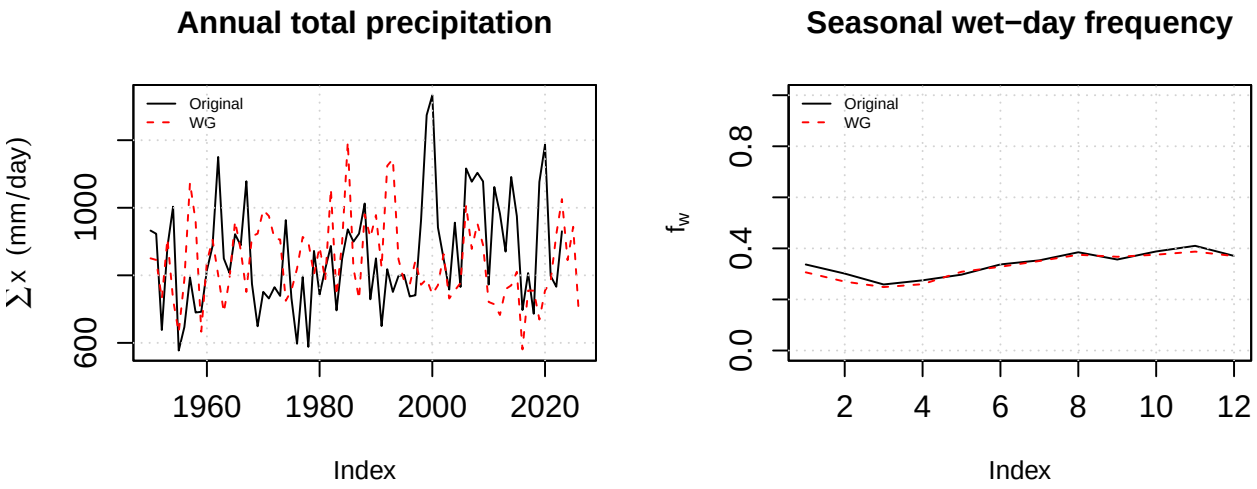
```
## 57 2006 fw= 0.3755103 n.wet= 137 = 137 mu= 7.4 = 7.4
## 58 2007 fw= 0.3396772 n.wet= 124 = 124 mu= 7.1 = 7.1
## 59 2008 fw= 0.3508123 n.wet= 128 = 128 mu= 7.4 = 7.5
## 60 2009 fw= 0.313601 n.wet= 115 = 115 mu= 7.7 = 7.7
## 61 2010 fw= 0.3024344 n.wet= 110 = 110 mu= 6.6 = 6.6
## 62 2011 fw= 0.2951675 n.wet= 108 = 108 mu= 6.6 = 6.6
## 63 2012 fw= 0.354259 n.wet= 129 = 129 mu= 5.3 = 5.3
## 64 2013 fw= 0.363698 n.wet= 133 = 133 mu= 5.7 = 5.7
## 65 2014 fw= 0.3064622 n.wet= 112 = 112 mu= 6.9 = 6.9
## 66 2015 fw= 0.3389854 n.wet= 124 = 124 mu= 6.5 = 6.5
## 67 2016 fw= 0.2291613 n.wet= 84 = 84 mu= 6.9 = 6.9
## 68 2017 fw= 0.3113072 n.wet= 114 = 114 mu= 6.6 = 6.6
## 69 2018 fw= 0.3081435 n.wet= 113 = 113 mu= 6.7 = 6.7
## 70 2019 fw= 0.2728212 n.wet= 100 = 100 mu= 6.7 = 6.7
## 71 2020 fw= 0.3294766 n.wet= 120 = 120 mu= 6.3 = 6.3
## 72 2021 fw= 0.3033077 n.wet= 111 = 111 mu= 7.1 = 7.1
## 73 2022 fw= 0.3306467 n.wet= 121 = 121 mu= 7.6 = 7.6
## 74 2023 fw= 0.3933117 n.wet= 144 = 144 mu= 7.1 = 7.1
## 75 2024 fw= 0.3759317 n.wet= 137 = 137 mu= 6.2 = 6.2
## 76 2025 fw= 0.3752988 n.wet= 137 = 137 mu= 6.9 = 6.9
## 77 2026 fw= 0.2909959 n.wet= 106 = 106 mu= 6.5 = 6.5
## [1] "Sort precipitation magnitudes"
## [1] "9428 observed wet days and 9097 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.1   2.037     2.3    28.5       1
## Feb       0       0     0.0   1.727     1.6    47.7       5
## Mar       0       0     0.0   1.416     1.0    31.2       2
## Apr       0       0     0.0   1.532     1.2    31.4      NA
## May       0       0     0.0   1.850     1.5    37.0       7
## Jun       0       0     0.0   2.530     2.5    45.4       5
## Jul       0       0     0.0   2.749     3.0    66.6       3
## Aug       0       0     0.1   3.103     3.4    96.3       2
## Sep       0       0     0.1   2.877     3.1    58.9       2
## Oct       0       0     0.1   3.246     3.6    47.6       3
## Nov       0       0     0.3   2.912     3.8    34.6       2
## Dec       0       0     0.1   2.363     3.0    38.3       3
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.666     1.7 49.3   NA
## Feb    0       0      0 1.381     1.2 34.0   NA
## Mar    0       0      0 1.242     0.9 34.5   NA
## Apr    0       0      0 1.377     1.1 57.8   NA
## May    0       0      0 1.906     2.0 39.5   NA
## Jun    0       0      0 2.426     2.8 37.1   NA
## Jul    0       0      0 2.827     3.5 64.1   NA
## Aug    0       0      0 3.117     4.0 66.9   NA
## Sep    0       0      0 3.056     3.9 65.3   NA
## Oct    0       0      0 3.266     4.6 51.6   NA
## Nov    0       0      0 3.017     3.8 44.5   NA
## Dec    0       0      0 2.276     2.8 50.3   NA
```

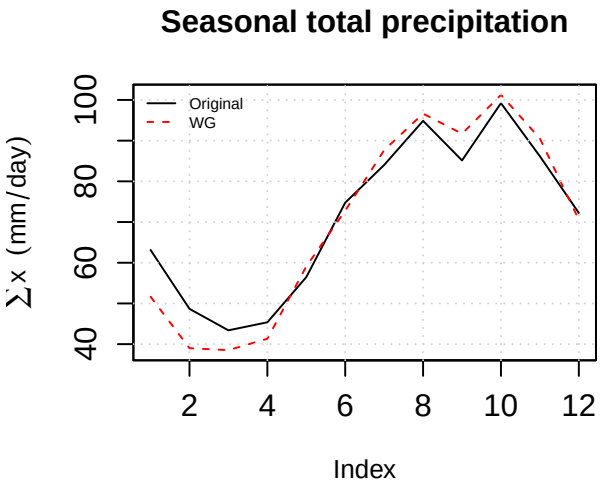

ØRJE wet−day amounts
WG amount (mm/day)
0
20
60
100
0
20
40
60
80
100
Observed amount (mm/day)

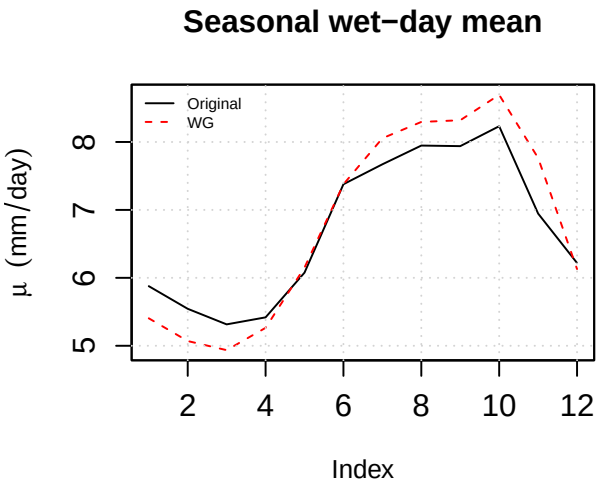

Dry spell durations
WG
5
10
15
5
10
15
obs


Number of annual wet days
days
50
100
150
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
40
0
10
20
30
40
50
obs



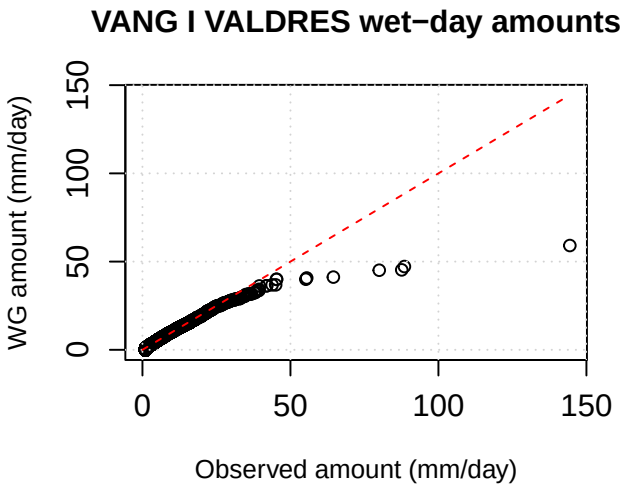


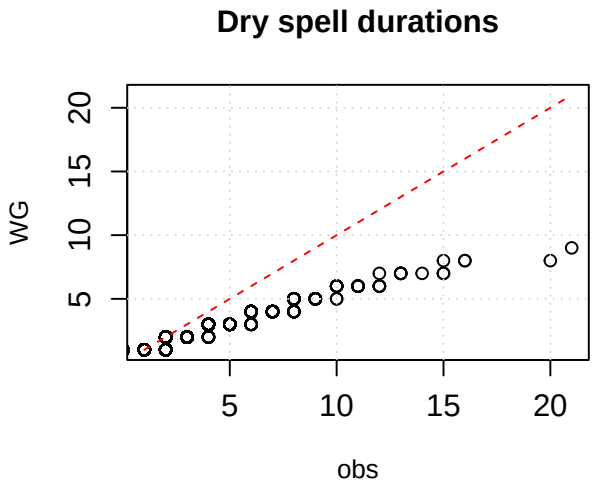


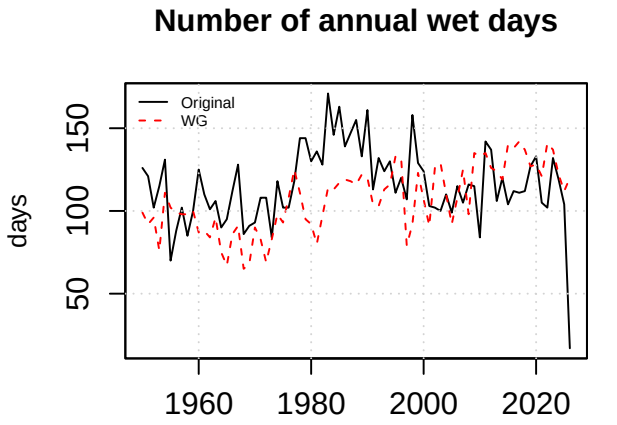

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for VANG I VALDRES"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: VANG I VALDRES"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.1781
##  1st Qu.:1969   1st Qu.:0.2847
##  Median :1988   Median :0.3161
##  Mean   :1988   Mean   :0.3176
##  3rd Qu.:2007   3rd Qu.:0.3627
##  Max.   :2026   Max.   :0.4164
##      Index          c(mu)
##  Min.   :1950   Min.   :3.967
##  1st Qu.:1969   1st Qu.:4.826
##  Median :1988   Median :5.295
##  Mean   :1988   Mean   :5.290
##  3rd Qu.:2007   3rd Qu.:5.638
##  Max.   :2026   Max.   :7.123
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.2939191 n.wet= 107 = 107 mu= 4.9 = 4.9
## 2 1951 fw= 0.2869745 n.wet= 105 = 105 mu= 4.3 = 4.3
```

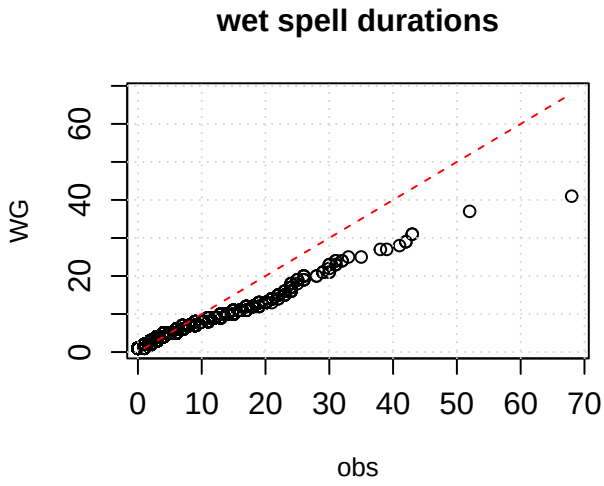
```
## 3 1952 fw= 0.2927449 n.wet= 107 = 107 mu= 5.2 = 5.2
## 4 1953 fw= 0.2203471 n.wet= 80 = 80 mu= 4.7 = 4.7
## 5 1954 fw= 0.3364598 n.wet= 123 = 123 mu= 4.7 = 4.7
## 6 1955 fw= 0.302104 n.wet= 110 = 110 mu= 4.7 = 4.7
## 7 1956 fw= 0.3202181 n.wet= 117 = 117 mu= 5 = 5
## 8 1957 fw= 0.3137633 n.wet= 115 = 115 mu= 5 = 5
## 9 1958 fw= 0.3017265 n.wet= 110 = 110 mu= 5.4 = 5.4
## 10 1959 fw= 0.2909703 n.wet= 106 = 106 mu= 5.8 = 5.8
## 11 1960 fw= 0.2504039 n.wet= 91 = 91 mu= 5.8 = 5.8
## 12 1961 fw= 0.2519258 n.wet= 92 = 92 mu= 5.5 = 5.5
## 13 1962 fw= 0.2685177 n.wet= 98 = 98 mu= 4.6 = 4.6
## 14 1963 fw= 0.3004794 n.wet= 110 = 110 mu= 5.3 = 5.3
## 15 1964 fw= 0.2150491 n.wet= 79 = 79 mu= 5.4 = 5.4
## 16 1965 fw= 0.2085059 n.wet= 76 = 76 mu= 4.8 = 4.8
## 17 1966 fw= 0.2562959 n.wet= 94 = 94 mu= 5 = 5
## 18 1967 fw= 0.2744216 n.wet= 100 = 100 mu= 4.9 = 4.9
## 19 1968 fw= 0.178121 n.wet= 65 = 65 mu= 5.2 = 5.2
## 20 1969 fw= 0.2016435 n.wet= 74 = 74 mu= 4.8 = 4.8
## 21 1970 fw= 0.2542252 n.wet= 93 = 93 mu= 5.3 = 5.3
## 22 1971 fw= 0.2543845 n.wet= 93 = 93 mu= 4.5 = 4.5
## 23 1972 fw= 0.2114034 n.wet= 77 = 77 mu= 4.9 = 4.9
## 24 1973 fw= 0.2533349 n.wet= 93 = 93 mu= 4.6 = 4.6
## 25 1974 fw= 0.3074715 n.wet= 112 = 112 mu= 4.5 = 4.5
## 26 1975 fw= 0.2644744 n.wet= 97 = 97 mu= 5.6 = 5.6
## 27 1976 fw= 0.3161499 n.wet= 115 = 115 mu= 5.7 = 5.7
## 28 1977 fw= 0.3754489 n.wet= 137 = 137 mu= 4.7 = 4.7
## 29 1978 fw= 0.321282 n.wet= 117 = 117 mu= 4.6 = 4.6
## 30 1979 fw= 0.2873577 n.wet= 105 = 105 mu= 4.2 = 4.2
## 31 1980 fw= 0.2784326 n.wet= 102 = 102 mu= 4 = 4
## 32 1981 fw= 0.2548666 n.wet= 93 = 93 mu= 4.3 = 4.3
## 33 1982 fw= 0.2921472 n.wet= 107 = 107 mu= 4.7 = 4.7
## 34 1983 fw= 0.3282193 n.wet= 120 = 120 mu= 5.1 = 5.1
## 35 1984 fw= 0.3135378 n.wet= 115 = 115 mu= 5.3 = 5.3
## 36 1985 fw= 0.3569248 n.wet= 130 = 130 mu= 4.9 = 4.9
## 37 1986 fw= 0.3627143 n.wet= 132 = 132 mu= 5.4 = 5.4
## 38 1987 fw= 0.3497446 n.wet= 128 = 128 mu= 4.6 = 4.6
## 39 1988 fw= 0.3455444 n.wet= 126 = 126 mu= 4.5 = 4.5
## 40 1989 fw= 0.3618546 n.wet= 132 = 132 mu= 5.4 = 5.4
## 41 1990 fw= 0.3485038 n.wet= 127 = 127 mu= 5.3 = 5.3
## 42 1991 fw= 0.3115098 n.wet= 114 = 114 mu= 4.8 = 4.8
## 43 1992 fw= 0.302516 n.wet= 110 = 110 mu= 5.2 = 5.2
## 44 1993 fw= 0.3397201 n.wet= 124 = 124 mu= 4.8 = 4.8
## 45 1994 fw= 0.3664252 n.wet= 134 = 134 mu= 4.3 = 4.3
## 46 1995 fw= 0.3837367 n.wet= 140 = 140 mu= 6.4 = 6.4
## 47 1996 fw= 0.3790509 n.wet= 138 = 138 mu= 5.5 = 5.5
## 48 1997 fw= 0.2346334 n.wet= 86 = 86 mu= 5 = 5
## 49 1998 fw= 0.2848802 n.wet= 104 = 104 mu= 5.6 = 5.6
## 50 1999 fw= 0.351155 n.wet= 128 = 128 mu= 6.1 = 6.1
## 51 2000 fw= 0.3103308 n.wet= 113 = 113 mu= 5.8 = 5.8
## 52 2001 fw= 0.2794366 n.wet= 102 = 102 mu= 5.4 = 5.4
## 53 2002 fw= 0.3745236 n.wet= 137 = 137 mu= 6.2 = 6.2
## 54 2003 fw= 0.3638941 n.wet= 133 = 133 mu= 6.2 = 6.2
## 55 2004 fw= 0.3192186 n.wet= 117 = 117 mu= 5.3 = 5.3
## 56 2005 fw= 0.2846771 n.wet= 104 = 104 mu= 5.5 = 5.5
```

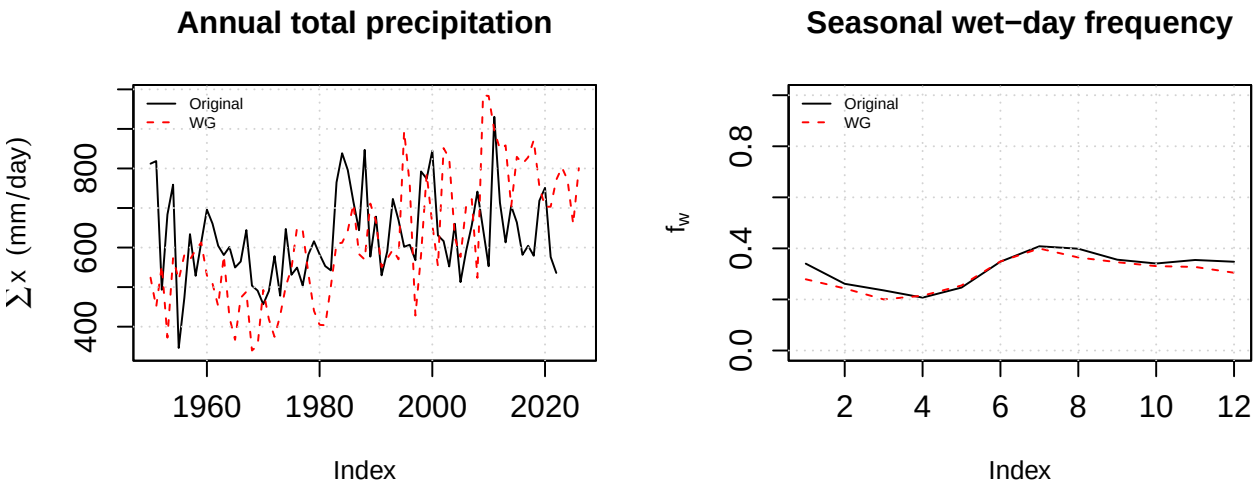
```
## 57 2006 fw= 0.314297 n.wet= 115 = 115 mu= 6.1 = 6.1
## 58 2007 fw= 0.3624245 n.wet= 132 = 132 mu= 5.5 = 5.5
## 59 2008 fw= 0.293929 n.wet= 107 = 107 mu= 4.9 = 4.9
## 60 2009 fw= 0.3906435 n.wet= 143 = 143 mu= 6.9 = 6.9
## 61 2010 fw= 0.3778822 n.wet= 138 = 138 mu= 7.1 = 7.1
## 62 2011 fw= 0.3815744 n.wet= 139 = 139 mu= 6.4 = 6.4
## 63 2012 fw= 0.3729971 n.wet= 136 = 136 mu= 6.2 = 6.2
## 64 2013 fw= 0.3686298 n.wet= 135 = 135 mu= 6.4 = 6.4
## 65 2014 fw= 0.3432989 n.wet= 125 = 125 mu= 5.6 = 5.6
## 66 2015 fw= 0.4098819 n.wet= 150 = 150 mu= 5.5 = 5.5
## 67 2016 fw= 0.3917592 n.wet= 143 = 143 mu= 5.7 = 5.7
## 68 2017 fw= 0.3967547 n.wet= 145 = 145 mu= 5.7 = 5.7
## 69 2018 fw= 0.4094573 n.wet= 150 = 150 mu= 5.8 = 5.8
## 70 2019 fw= 0.3774902 n.wet= 138 = 138 mu= 5.5 = 5.5
## 71 2020 fw= 0.3687168 n.wet= 135 = 135 mu= 5.2 = 5.2
## 72 2021 fw= 0.3617473 n.wet= 132 = 132 mu= 5.3 = 5.3
## 73 2022 fw= 0.416443 n.wet= 152 = 152 mu= 5.1 = 5.1
## 74 2023 fw= 0.4040821 n.wet= 148 = 148 mu= 5.4 = 5.4
## 75 2024 fw= 0.3488655 n.wet= 127 = 127 mu= 6.1 = 6.1
## 76 2025 fw= 0.3233443 n.wet= 118 = 118 mu= 5.6 = 5.6
## 77 2026 fw= 0.3493977 n.wet= 128 = 128 mu= 6.3 = 6.3
## [1] "Sort precipitation magnitudes"
## [1] "8894 observed wet days and 8259 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0       0  1.5140     2.0    21.0      12
## Feb       0       0       0  1.1410     1.0    30.0       5
## Mar       0       0       0  0.9541     0.6    20.5       8
## Apr       0       0       0  0.8627     0.3    34.5       2
## May       0       0       0  1.4320     0.9    34.7       3
## Jun       0       0       0  2.1190     2.1    55.5       1
## Jul       0       0       0  2.7240     3.1    80.0      24
## Aug       0       0       0  2.7100     3.1    88.5      11
## Sep       0       0       0  2.0680     2.1    36.9       6
## Oct       0       0       0  2.0740     2.0   144.4       3
## Nov       0       0       0  1.7660     2.0    39.4       7
## Dec       0       0       0  1.4910     2.0    39.3       9
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.1850   1.200 28.4   NA
## Feb    0       0      0 0.9369   0.900 22.5   NA
## Mar    0       0      0 0.7363   0.000 27.2   NA
## Apr    0       0      0 0.9154   0.000 41.2   NA
## May    0       0      0 1.4480   1.100 29.2   NA
## Jun    0       0      0 2.2080   2.875 40.7   NA
## Jul    0       0      0 2.8890   3.900 59.1   NA
## Aug    0       0      0 2.6210   3.700 40.0   NA
## Sep    0       0      0 2.1500   2.700 47.2   NA
## Oct    0       0      0 2.1600   2.450 45.3   NA
## Nov    0       0      0 1.6960   2.100 33.3   NA
## Dec    0       0      0 1.3340   1.600 31.7   NA
```

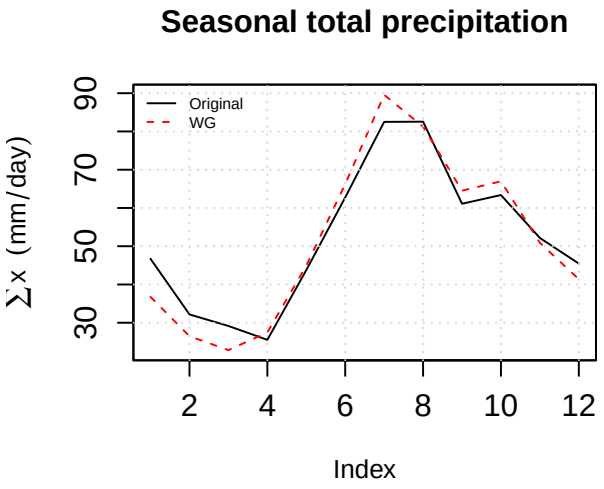

VANG I VALDRES wet−day amounts
WG amount (mm/day)
0
50
100
150
Observed amount (mm/day)

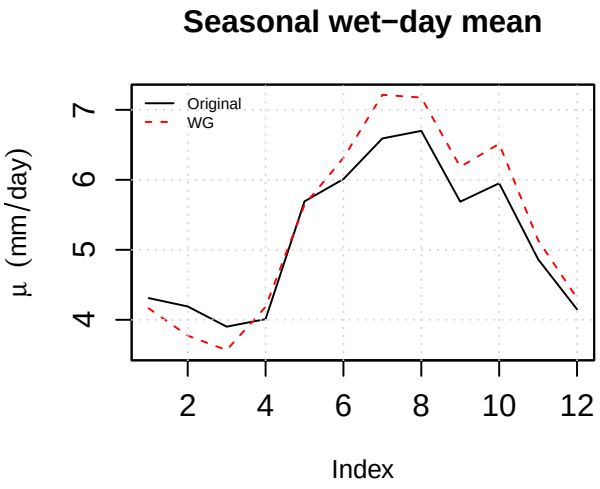

Dry spell durations
WG
5
10
15
20
obs


Number of annual wet days
days
Original
WG
50
100
150
1960
1980
2000
2020


wet spell durations
WG
0
20
40
60
0
10
20
30
40
50
60
70
obs



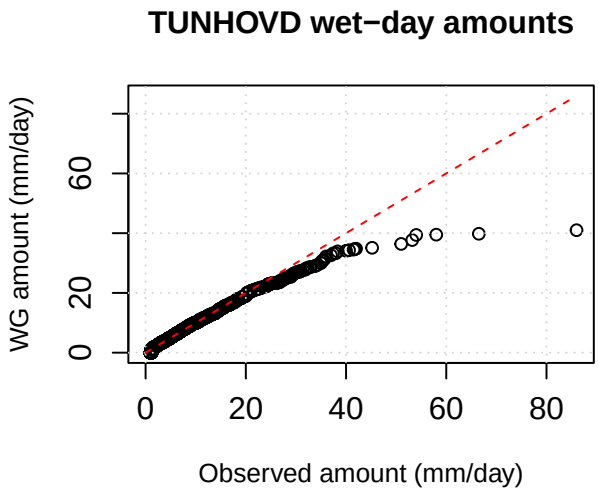


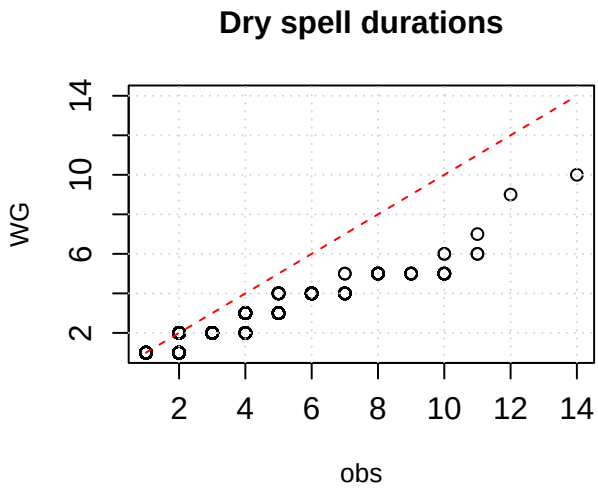


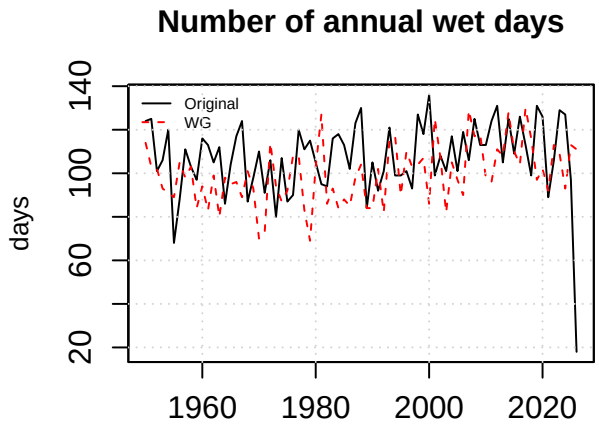

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for TUNHOVD"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: TUNHOVD"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.1981
##  1st Qu.:1969   1st Qu.:0.2709
##  Median :1988   Median :0.2984
##  Mean   :1988   Mean   :0.2953
##  3rd Qu.:2007   3rd Qu.:0.3243
##  Max.   :2026   Max.   :0.3729
##      Index          c(mu)
##  Min.   :1950   Min.   :3.701
##  1st Qu.:1969   1st Qu.:4.708
##  Median :1988   Median :5.008
##  Mean   :1988   Mean   :4.996
##  3rd Qu.:2007   3rd Qu.:5.323
##  Max.   :2026   Max.   :6.225
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3371779 n.wet= 123 = 123 mu= 5.2 = 5.2
## 2 1951 fw= 0.314545 n.wet= 115 = 115 mu= 4.9 = 4.9
```

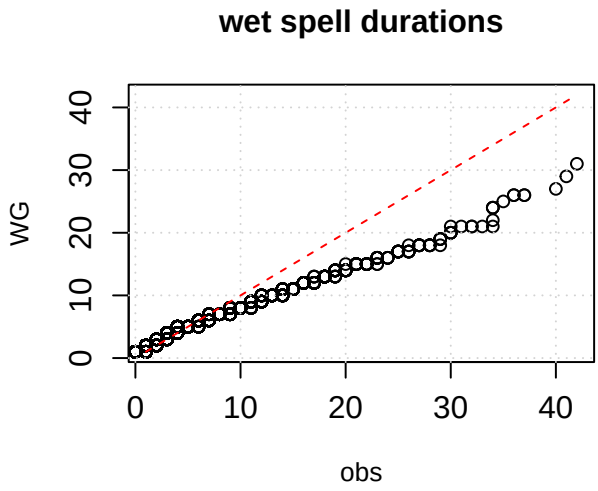
```
## 3 1952 fw= 0.3023512 n.wet= 110 = 110 mu= 5.3 = 5.3
## 4 1953 fw= 0.2687012 n.wet= 98 = 98 mu= 5.2 = 5.2
## 5 1954 fw= 0.272604 n.wet= 100 = 100 mu= 4.8 = 4.8
## 6 1955 fw= 0.2700362 n.wet= 99 = 99 mu= 5.1 = 5.1
## 7 1956 fw= 0.3242833 n.wet= 118 = 118 mu= 4.8 = 4.8
## 8 1957 fw= 0.2931881 n.wet= 107 = 107 mu= 5.1 = 5.1
## 9 1958 fw= 0.3020666 n.wet= 110 = 110 mu= 5.2 = 5.2
## 10 1959 fw= 0.2686683 n.wet= 98 = 98 mu= 4.8 = 4.8
## 11 1960 fw= 0.2844965 n.wet= 104 = 104 mu= 4.7 = 4.7
## 12 1961 fw= 0.2609393 n.wet= 95 = 95 mu= 4.9 = 4.9
## 13 1962 fw= 0.291724 n.wet= 107 = 107 mu= 4.2 = 4.3
## 14 1963 fw= 0.2476397 n.wet= 90 = 90 mu= 4.5 = 4.5
## 15 1964 fw= 0.2963374 n.wet= 108 = 108 mu= 4.5 = 4.5
## 16 1965 fw= 0.2794535 n.wet= 102 = 102 mu= 5.3 = 5.3
## 17 1966 fw= 0.3056433 n.wet= 112 = 112 mu= 4.3 = 4.3
## 18 1967 fw= 0.2736685 n.wet= 100 = 100 mu= 5 = 5
## 19 1968 fw= 0.3057975 n.wet= 112 = 112 mu= 4.5 = 4.5
## 20 1969 fw= 0.2723199 n.wet= 99 = 99 mu= 5.5 = 5.5
## 21 1970 fw= 0.2192366 n.wet= 80 = 80 mu= 5.1 = 5.1
## 22 1971 fw= 0.2127907 n.wet= 78 = 78 mu= 4.7 = 4.7
## 23 1972 fw= 0.3330896 n.wet= 122 = 122 mu= 5.3 = 5.3
## 24 1973 fw= 0.2728256 n.wet= 100 = 100 mu= 5.8 = 5.8
## 25 1974 fw= 0.2709298 n.wet= 99 = 99 mu= 4.6 = 4.6
## 26 1975 fw= 0.274718 n.wet= 100 = 100 mu= 4.5 = 4.5
## 27 1976 fw= 0.3169747 n.wet= 116 = 116 mu= 5 = 5
## 28 1977 fw= 0.3175881 n.wet= 116 = 116 mu= 5 = 5
## 29 1978 fw= 0.2435369 n.wet= 89 = 89 mu= 4.8 = 4.8
## 30 1979 fw= 0.1981374 n.wet= 72 = 72 mu= 4.7 = 4.7
## 31 1980 fw= 0.326136 n.wet= 119 = 119 mu= 4.8 = 4.8
## 32 1981 fw= 0.3496676 n.wet= 128 = 128 mu= 4.7 = 4.7
## 33 1982 fw= 0.2508349 n.wet= 92 = 92 mu= 5.1 = 5.1
## 34 1983 fw= 0.300664 n.wet= 110 = 110 mu= 4 = 4
## 35 1984 fw= 0.2548391 n.wet= 93 = 93 mu= 3.7 = 3.7
## 36 1985 fw= 0.3064557 n.wet= 112 = 112 mu= 3.7 = 3.7
## 37 1986 fw= 0.2387432 n.wet= 87 = 87 mu= 4.5 = 4.5
## 38 1987 fw= 0.3002103 n.wet= 110 = 110 mu= 4.9 = 4.9
## 39 1988 fw= 0.3089447 n.wet= 113 = 113 mu= 4.9 = 4.9
## 40 1989 fw= 0.2452277 n.wet= 90 = 90 mu= 5.2 = 5.2
## 41 1990 fw= 0.2438343 n.wet= 89 = 89 mu= 4.5 = 4.5
## 42 1991 fw= 0.2976385 n.wet= 109 = 109 mu= 4.9 = 4.9
## 43 1992 fw= 0.2633113 n.wet= 96 = 96 mu= 4.7 = 4.7
## 44 1993 fw= 0.324476 n.wet= 119 = 119 mu= 5.4 = 5.4
## 45 1994 fw= 0.3302024 n.wet= 121 = 121 mu= 5.8 = 5.8
## 46 1995 fw= 0.2520286 n.wet= 92 = 92 mu= 4.8 = 4.8
## 47 1996 fw= 0.3117379 n.wet= 114 = 114 mu= 5.7 = 5.7
## 48 1997 fw= 0.294384 n.wet= 108 = 108 mu= 5 = 5
## 49 1998 fw= 0.3030699 n.wet= 111 = 111 mu= 5.4 = 5.4
## 50 1999 fw= 0.3265252 n.wet= 119 = 119 mu= 5.6 = 5.6
## 51 2000 fw= 0.2746012 n.wet= 100 = 100 mu= 4.4 = 4.4
## 52 2001 fw= 0.372918 n.wet= 136 = 136 mu= 5.1 = 5.1
## 53 2002 fw= 0.3202065 n.wet= 117 = 117 mu= 5.5 = 5.5
## 54 2003 fw= 0.2376026 n.wet= 87 = 87 mu= 5.9 = 5.9
## 55 2004 fw= 0.3033467 n.wet= 111 = 111 mu= 5.6 = 5.6
## 56 2005 fw= 0.2983567 n.wet= 109 = 109 mu= 5.9 = 5.9
```

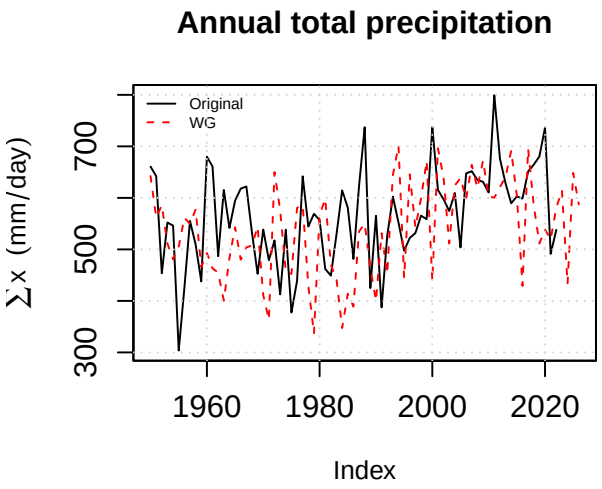
```
## 57 2006 fw= 0.2619158 n.wet= 96 = 96 mu= 6.2 = 6.2
## 58 2007 fw= 0.3601254 n.wet= 132 = 132 mu= 5 = 5
## 59 2008 fw= 0.3482089 n.wet= 127 = 127 mu= 4.9 = 4.9
## 60 2009 fw= 0.3523518 n.wet= 129 = 129 mu= 5.2 = 5.2
## 61 2010 fw= 0.2845555 n.wet= 104 = 104 mu= 5.8 = 5.8
## 62 2011 fw= 0.2847299 n.wet= 104 = 104 mu= 5.8 = 5.8
## 63 2012 fw= 0.3388343 n.wet= 124 = 124 mu= 5 = 5
## 64 2013 fw= 0.3151333 n.wet= 115 = 115 mu= 5.6 = 5.6
## 65 2014 fw= 0.3663786 n.wet= 134 = 134 mu= 5.2 = 5.2
## 66 2015 fw= 0.327999 n.wet= 120 = 120 mu= 5 = 5
## 67 2016 fw= 0.313304 n.wet= 114 = 114 mu= 3.8 = 3.8
## 68 2017 fw= 0.359978 n.wet= 131 = 131 mu= 5.3 = 5.3
## 69 2018 fw= 0.3288406 n.wet= 120 = 120 mu= 4.9 = 4.9
## 70 2019 fw= 0.2887196 n.wet= 105 = 105 mu= 4.9 = 4.9
## 71 2020 fw= 0.2972144 n.wet= 109 = 109 mu= 4.9 = 4.9
## 72 2021 fw= 0.255007 n.wet= 93 = 93 mu= 5.6 = 5.6
## 73 2022 fw= 0.3386781 n.wet= 124 = 124 mu= 4.7 = 4.7
## 74 2023 fw= 0.3263324 n.wet= 119 = 119 mu= 5.2 = 5.2
## 75 2024 fw= 0.2744582 n.wet= 100 = 100 mu= 4.3 = 4.3
## 76 2025 fw= 0.3169511 n.wet= 116 = 116 mu= 5.6 = 5.6
## 77 2026 fw= 0.3333709 n.wet= 122 = 122 mu= 4.8 = 4.8
## [1] "Sort precipitation magnitudes"
## [1] "8251 observed wet days and 7661 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.1  1.1570    1.40    20.3       6
## Feb       0       0     0.0  0.9500    1.00    16.2       7
## Mar       0       0     0.0  0.9010    0.70    23.9       1
## Apr       0       0     0.0  0.9593    0.60    26.5      10
## May       0       0     0.0  1.3120    0.90    32.8       7
## Jun       0       0     0.0  2.1340    2.15    86.0       1
## Jul       0       0     0.1  2.7390    3.20    58.0       4
## Aug       0       0     0.1  2.4800    3.00    66.5       1
## Sep       0       0     0.1  1.8890    1.60    35.8       1
## Oct       0       0     0.0  1.6260    1.50    37.4       4
## Nov       0       0     0.1  1.4850    1.50    28.5       6
## Dec       0       0     0.1  1.1540    1.30    23.6      14
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 0.7903     0.8 16.3   NA
## Feb    0       0      0 0.8105     0.0 21.8   NA
## Mar    0       0      0 0.7607     0.0 19.8   NA
## Apr    0       0      0 0.9078     0.0 28.5   NA
## May    0       0      0 1.2550     0.0 39.5   NA
## Jun    0       0      0 2.0420     2.4 41.0   NA
## Jul    0       0      0 2.7080     3.8 39.8   NA
## Aug    0       0      0 2.5710     3.6 34.8   NA
## Sep    0       0      0 1.7480     2.2 32.6   NA
## Oct    0       0      0 1.5200     1.5 26.4   NA
## Nov    0       0      0 1.3860     1.7 26.9   NA
## Dec    0       0      0 1.1850     1.4 39.4   NA
```

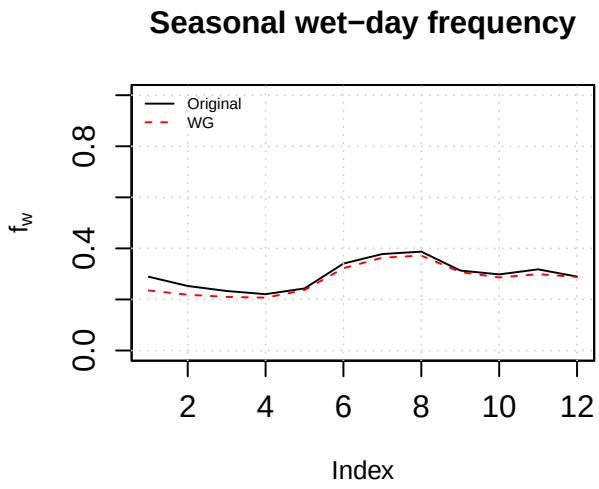

TUNHOVD wet−day amounts
WG amount (mm/day)
0
20
40
60
80
Observed amount (mm/day)

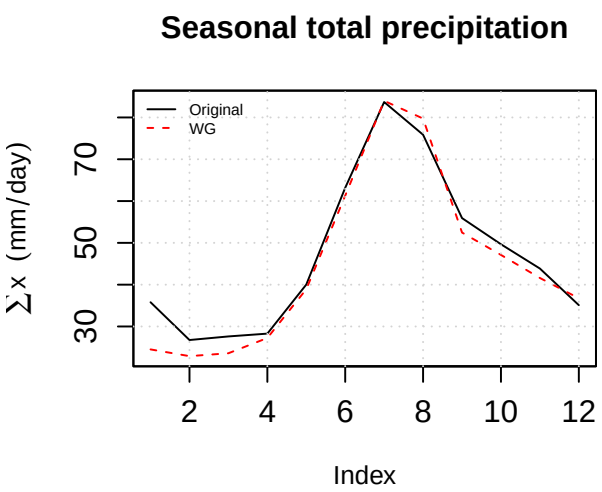

Dry spell durations
WG
2
6
10
14
obs

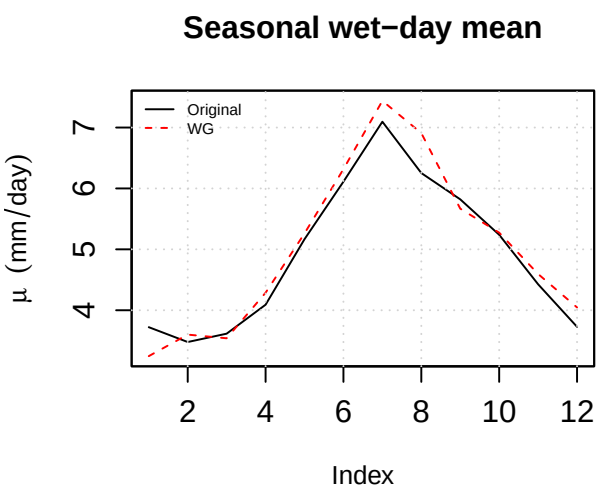

Number of annual wet days
days
20
60
100
140
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
40
obs





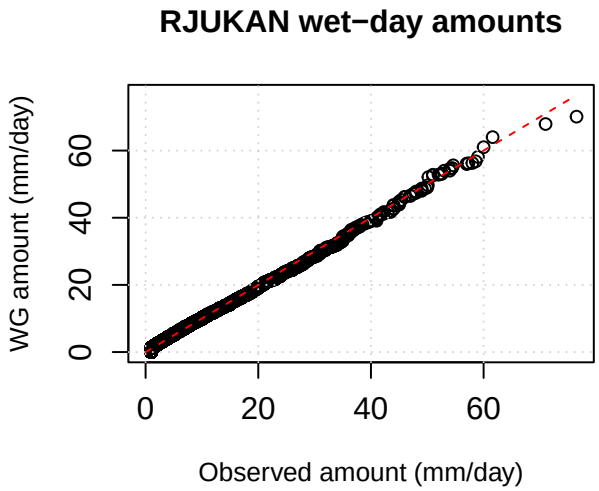


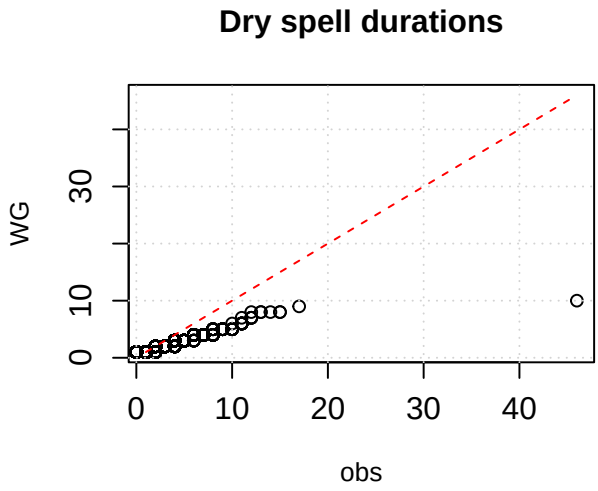


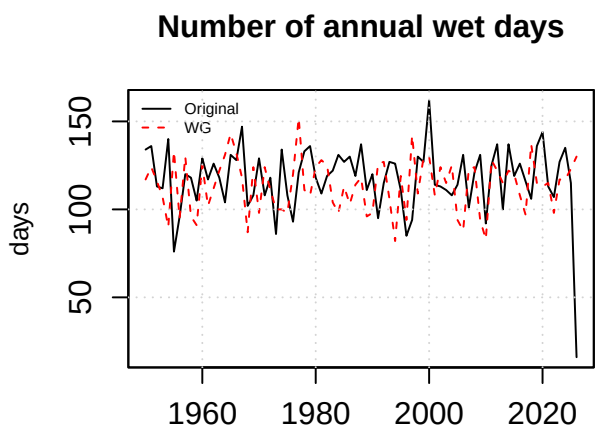

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for RJUKAN"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: RJUKAN"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2348
##  1st Qu.:1969   1st Qu.:0.2880
##  Median :1988   Median :0.3321
##  Mean   :1988   Mean   :0.3251
##  3rd Qu.:2007   3rd Qu.:0.3538
##  Max.   :2026   Max.   :0.4345
##      Index          c(mu)
##  Min.   :1950   Min.   :4.624
##  1st Qu.:1969   1st Qu.:6.312
##  Median :1988   Median :7.035
##  Mean   :1988   Mean   :6.975
##  3rd Qu.:2007   3rd Qu.:7.594
##  Max.   :2026   Max.   :8.808
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3364953 n.wet= 123 = 123 mu= 5.7 = 5.7
## 2 1951 fw= 0.3474202 n.wet= 127 = 127 mu= 7.9 = 7.9
```

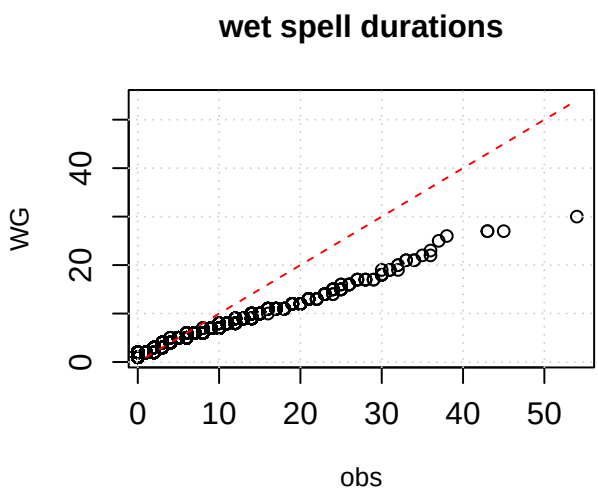
```
## 3 1952 fw= 0.3250178 n.wet= 119 = 119 mu= 7.4 = 7.4
## 4 1953 fw= 0.3273895 n.wet= 120 = 120 mu= 5.4 = 5.4
## 5 1954 fw= 0.2546397 n.wet= 93 = 93 mu= 7.3 = 7.3
## 6 1955 fw= 0.3755721 n.wet= 137 = 137 mu= 6.4 = 6.4
## 7 1956 fw= 0.2690988 n.wet= 98 = 98 mu= 7.4 = 7.4
## 8 1957 fw= 0.3801329 n.wet= 139 = 139 mu= 4.6 = 4.6
## 9 1958 fw= 0.2715327 n.wet= 99 = 99 mu= 7 = 7
## 10 1959 fw= 0.2637369 n.wet= 96 = 96 mu= 7.7 = 7.7
## 11 1960 fw= 0.3647345 n.wet= 133 = 133 mu= 6.2 = 6.2
## 12 1961 fw= 0.2858652 n.wet= 104 = 104 mu= 7.4 = 7.3
## 13 1962 fw= 0.3091881 n.wet= 113 = 113 mu= 5.8 = 5.8
## 14 1963 fw= 0.3537768 n.wet= 129 = 129 mu= 7 = 7
## 15 1964 fw= 0.3784717 n.wet= 138 = 138 mu= 6.4 = 6.4
## 16 1965 fw= 0.393883 n.wet= 144 = 144 mu= 7.2 = 7.2
## 17 1966 fw= 0.3729928 n.wet= 136 = 136 mu= 6.9 = 6.9
## 18 1967 fw= 0.3345356 n.wet= 122 = 122 mu= 5.5 = 5.5
## 19 1968 fw= 0.2440101 n.wet= 89 = 89 mu= 6.4 = 6.4
## 20 1969 fw= 0.3529497 n.wet= 129 = 129 mu= 6.5 = 6.5
## 21 1970 fw= 0.27577 n.wet= 101 = 101 mu= 6.8 = 6.8
## 22 1971 fw= 0.3497645 n.wet= 128 = 128 mu= 7.4 = 7.4
## 23 1972 fw= 0.3204821 n.wet= 117 = 117 mu= 7.1 = 7.1
## 24 1973 fw= 0.2880419 n.wet= 105 = 105 mu= 6.3 = 6.3
## 25 1974 fw= 0.2867771 n.wet= 105 = 105 mu= 6.3 = 6.3
## 26 1975 fw= 0.2788822 n.wet= 102 = 102 mu= 6.7 = 6.7
## 27 1976 fw= 0.3411718 n.wet= 125 = 125 mu= 6.8 = 6.8
## 28 1977 fw= 0.4344579 n.wet= 159 = 159 mu= 6.3 = 6.3
## 29 1978 fw= 0.3095923 n.wet= 113 = 113 mu= 7.5 = 7.5
## 30 1979 fw= 0.3168873 n.wet= 116 = 116 mu= 6.6 = 6.6
## 31 1980 fw= 0.3462936 n.wet= 126 = 126 mu= 6.6 = 6.6
## 32 1981 fw= 0.36459 n.wet= 133 = 133 mu= 6.3 = 6.3
## 33 1982 fw= 0.3454752 n.wet= 126 = 126 mu= 7.4 = 7.4
## 34 1983 fw= 0.3081517 n.wet= 113 = 113 mu= 5.6 = 5.6
## 35 1984 fw= 0.2880507 n.wet= 105 = 105 mu= 7.4 = 7.4
## 36 1985 fw= 0.3193241 n.wet= 117 = 117 mu= 6.5 = 6.5
## 37 1986 fw= 0.2898889 n.wet= 106 = 106 mu= 6.1 = 6.1
## 38 1987 fw= 0.3214163 n.wet= 117 = 117 mu= 6.1 = 6.1
## 39 1988 fw= 0.3535158 n.wet= 129 = 129 mu= 7.6 = 7.6
## 40 1989 fw= 0.2797576 n.wet= 102 = 102 mu= 6.9 = 6.9
## 41 1990 fw= 0.2762386 n.wet= 101 = 101 mu= 6.8 = 6.8
## 42 1991 fw= 0.3499216 n.wet= 128 = 128 mu= 7.4 = 7.5
## 43 1992 fw= 0.3782976 n.wet= 138 = 138 mu= 7.3 = 7.3
## 44 1993 fw= 0.3064032 n.wet= 112 = 112 mu= 7.3 = 7.3
## 45 1994 fw= 0.2363355 n.wet= 86 = 86 mu= 7 = 7
## 46 1995 fw= 0.3448973 n.wet= 126 = 126 mu= 8.5 = 8.5
## 47 1996 fw= 0.2752502 n.wet= 101 = 101 mu= 7.6 = 7.6
## 48 1997 fw= 0.388502 n.wet= 142 = 142 mu= 8.5 = 8.5
## 49 1998 fw= 0.315828 n.wet= 115 = 115 mu= 7.9 = 7.9
## 50 1999 fw= 0.3579463 n.wet= 131 = 131 mu= 7.7 = 7.7
## 51 2000 fw= 0.3722695 n.wet= 136 = 136 mu= 8 = 8
## 52 2001 fw= 0.3044218 n.wet= 111 = 111 mu= 8.5 = 8.5
## 53 2002 fw= 0.3568688 n.wet= 130 = 130 mu= 7 = 7
## 54 2003 fw= 0.336344 n.wet= 123 = 123 mu= 5.9 = 5.9
## 55 2004 fw= 0.3607335 n.wet= 132 = 132 mu= 5.4 = 5.4
## 56 2005 fw= 0.2703646 n.wet= 99 = 99 mu= 8 = 8
```

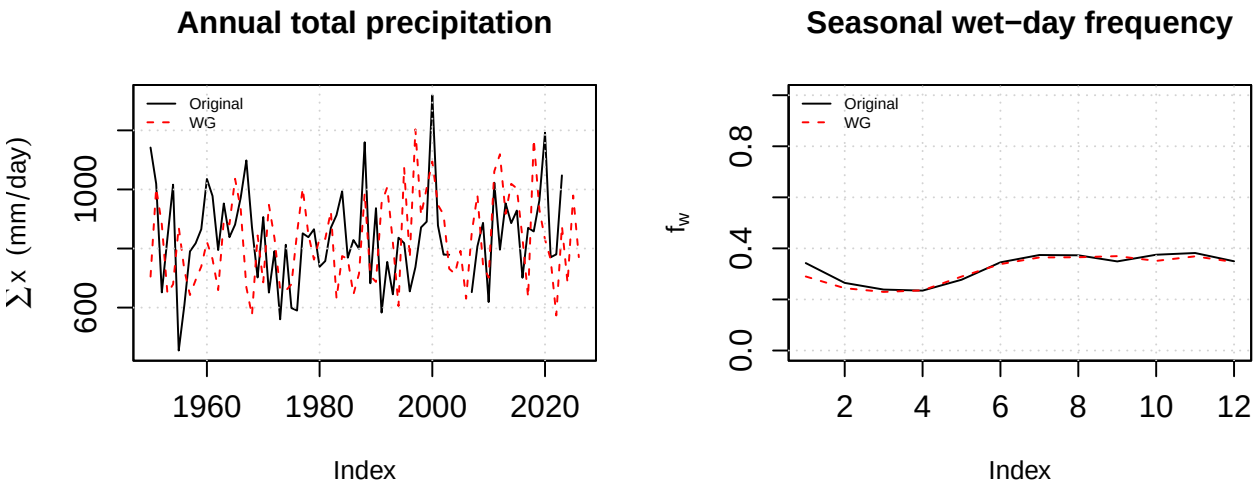
```
## 57 2006 fw= 0.2595421 n.wet= 95 = 95 mu= 6.6 = 6.6
## 58 2007 fw= 0.368917 n.wet= 135 = 135 mu= 6.3 = 6.3
## 59 2008 fw= 0.3438761 n.wet= 126 = 126 mu= 7.8 = 7.8
## 60 2009 fw= 0.2749919 n.wet= 100 = 100 mu= 7.4 = 7.4
## 61 2010 fw= 0.2347718 n.wet= 86 = 86 mu= 8.2 = 8.2
## 62 2011 fw= 0.3630243 n.wet= 133 = 133 mu= 8 = 8
## 63 2012 fw= 0.3468785 n.wet= 127 = 127 mu= 8.8 = 8.8
## 64 2013 fw= 0.3226016 n.wet= 118 = 118 mu= 7.8 = 7.8
## 65 2014 fw= 0.3399689 n.wet= 124 = 124 mu= 8.2 = 8.2
## 66 2015 fw= 0.3379502 n.wet= 123 = 123 mu= 8.2 = 8.2
## 67 2016 fw= 0.3106386 n.wet= 113 = 113 mu= 7.4 = 7.4
## 68 2017 fw= 0.2826277 n.wet= 103 = 103 mu= 6.2 = 6.2
## 69 2018 fw= 0.3898641 n.wet= 142 = 142 mu= 8.2 = 8.2
## 70 2019 fw= 0.3287578 n.wet= 120 = 120 mu= 7.8 = 7.8
## 71 2020 fw= 0.3423236 n.wet= 125 = 125 mu= 6.6 = 6.6
## 72 2021 fw= 0.3321 n.wet= 121 = 121 mu= 6.3 = 6.3
## 73 2022 fw= 0.2705942 n.wet= 99 = 99 mu= 5.8 = 5.8
## 74 2023 fw= 0.3325962 n.wet= 121 = 121 mu= 7.2 = 7.2
## 75 2024 fw= 0.3219791 n.wet= 118 = 118 mu= 5.8 = 5.8
## 76 2025 fw= 0.3606404 n.wet= 132 = 132 mu= 7.4 = 7.4
## 77 2026 fw= 0.3757037 n.wet= 137 = 137 mu= 5.6 = 5.6
## [1] "Sort precipitation magnitudes"
## [1] "9036 observed wet days and 8757 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.0   1.792   2.000    30.5       7
## Feb       0       0     0.0   1.355   1.000    34.8       8
## Mar       0       0     0.0   1.122   0.700    28.0      27
## Apr       0       0     0.0   1.255   0.700    41.0       4
## May       0       0     0.0   2.102   1.400    60.0      NA
## Jun       0       0     0.0   2.653   2.700    59.0       1
## Jul       0       0     0.0   3.015   3.050    54.4       1
## Aug       0       0     0.0   3.457   3.500    71.0       2
## Sep       0       0     0.0   3.211   2.775    61.6       2
## Oct       0       0     0.0   3.127   3.125    76.5      NA
## Nov       0       0     0.1   2.734   3.000    52.3      20
## Dec       0       0     0.0   1.867   2.000    50.0      24
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.410   1.400 30.5   NA
## Feb    0       0      0 1.229   0.900 37.0   NA
## Mar    0       0      0 1.117   0.000 28.1   NA
## Apr    0       0      0 1.560   0.000 61.0   NA
## May    0       0      0 2.087   2.000 67.9   NA
## Jun    0       0      0 2.569   2.900 64.0   NA
## Jul    0       0      0 3.014   3.600 56.8   NA
## Aug    0       0      0 3.157   4.100 54.6   NA
## Sep    0       0      0 3.400   3.975 70.1   NA
## Oct    0       0      0 2.768   3.300 54.8   NA
## Nov    0       0      0 2.753   3.300 53.1   NA
## Dec    0       0      0 2.076   2.400 56.1   NA
```

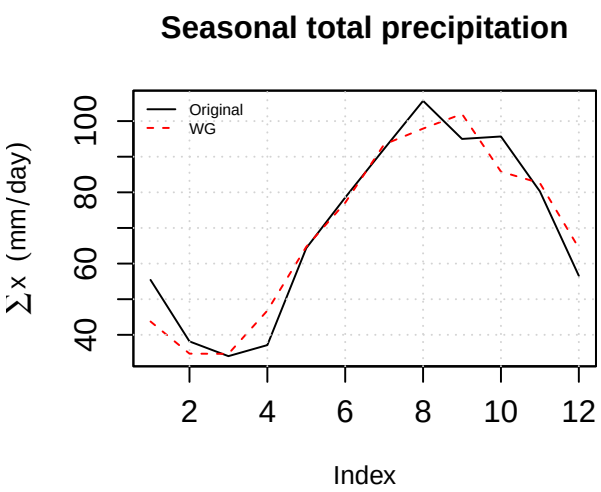

RJUKAN wet−day amounts
WG amount (mm/day)
0
20
40
60
0
20
40
60
Observed amount (mm/day)

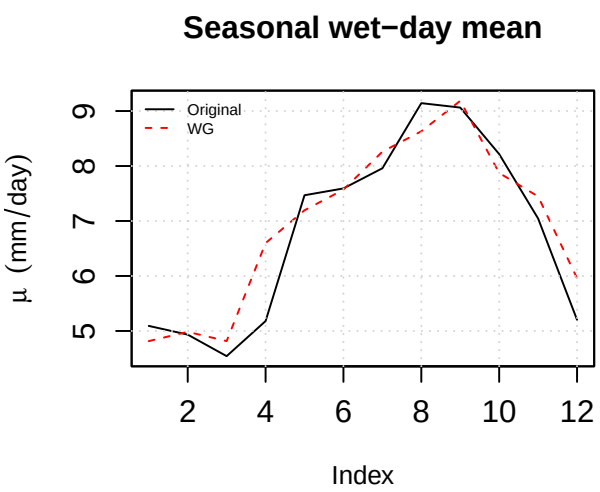

Dry spell durations
WG
0
10
30
0
10
20
30
40
obs


Number of annual wet days
days
50
100
150
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
40
0
10
20
30
40
50
obs



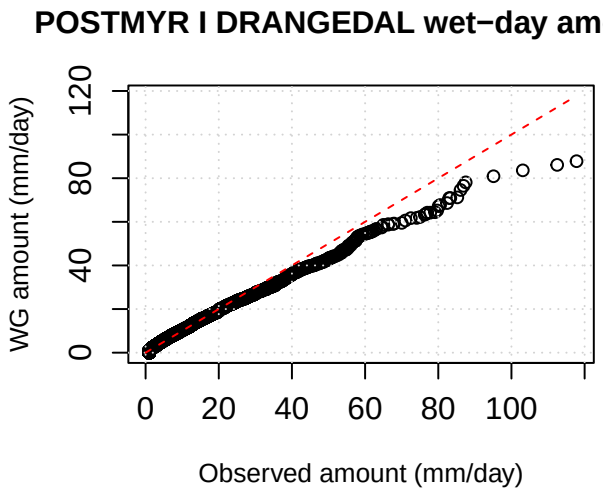


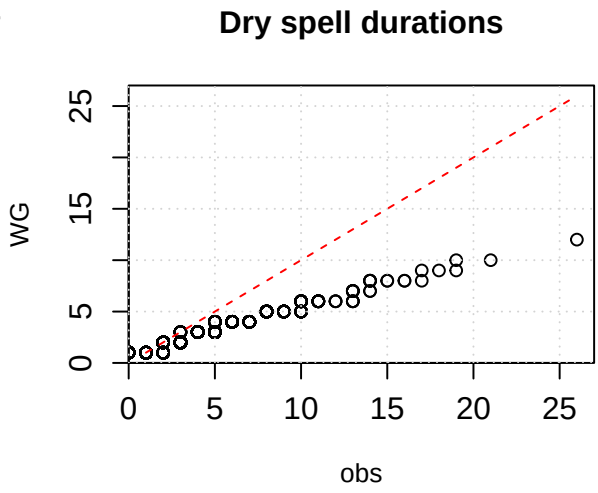


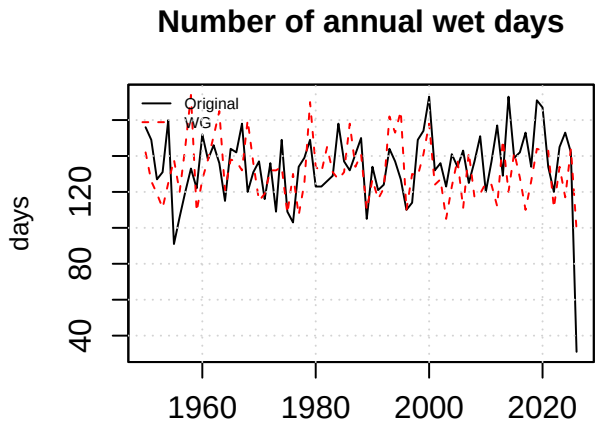

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for POSTMYR I DRANGEDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: POSTMYR I DRANGEDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2784
##  1st Qu.:1969   1st Qu.:0.3418
##  Median :1988   Median :0.3659
##  Mean   :1988   Mean   :0.3715
##  3rd Qu.:2007   3rd Qu.:0.4011
##  Max.   :2026   Max.   :0.4879
##      Index          c(mu)
##  Min.   :1950   Min.   : 6.524
##  1st Qu.:1969   1st Qu.: 7.863
##  Median :1988   Median : 8.701
##  Mean   :1988   Mean   : 8.616
##  3rd Qu.:2007   3rd Qu.: 9.223
##  Max.   :2026   Max.   :10.557
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.4014775 n.wet= 147 = 147 mu= 8.7 = 8.7
## 2 1951 fw= 0.3556367 n.wet= 130 = 130 mu= 9.2 = 9.2
```

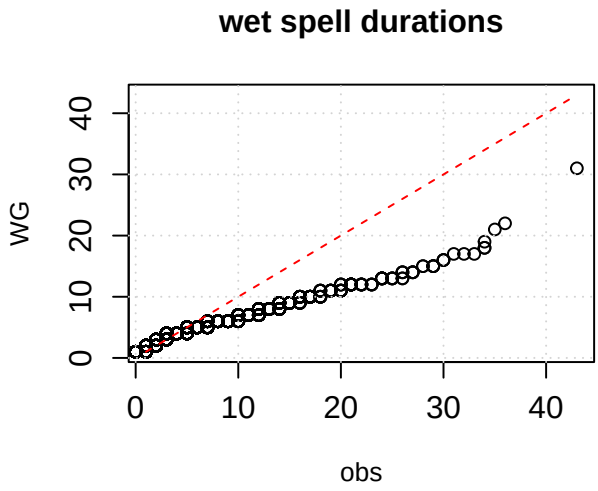
```
## 3 1952 fw= 0.3385043 n.wet= 124 = 124 mu= 9 = 9
## 4 1953 fw= 0.3150277 n.wet= 115 = 115 mu= 10 = 10
## 5 1954 fw= 0.350507 n.wet= 128 = 128 mu= 7.6 = 7.6
## 6 1955 fw= 0.378812 n.wet= 138 = 138 mu= 9.5 = 9.5
## 7 1956 fw= 0.3485478 n.wet= 127 = 127 mu= 6.7 = 6.7
## 8 1957 fw= 0.4286953 n.wet= 157 = 157 mu= 7.7 = 7.7
## 9 1958 fw= 0.4879256 n.wet= 178 = 178 mu= 8.3 = 8.3
## 10 1959 fw= 0.3031624 n.wet= 111 = 111 mu= 7.2 = 7.2
## 11 1960 fw= 0.3548991 n.wet= 130 = 130 mu= 9.7 = 9.7
## 12 1961 fw= 0.3865967 n.wet= 141 = 141 mu= 9.5 = 9.5
## 13 1962 fw= 0.4206017 n.wet= 154 = 154 mu= 9.6 = 9.6
## 14 1963 fw= 0.4576283 n.wet= 167 = 167 mu= 9.1 = 9.1
## 15 1964 fw= 0.3460822 n.wet= 126 = 126 mu= 8.5 = 8.5
## 16 1965 fw= 0.3922464 n.wet= 143 = 143 mu= 8.6 = 8.6
## 17 1966 fw= 0.3788245 n.wet= 138 = 138 mu= 10.2 = 10.2
## 18 1967 fw= 0.3945101 n.wet= 144 = 144 mu= 6.7 = 6.7
## 19 1968 fw= 0.4414446 n.wet= 161 = 161 mu= 8.3 = 8.3
## 20 1969 fw= 0.3814833 n.wet= 139 = 139 mu= 8.1 = 8.1
## 21 1970 fw= 0.3368874 n.wet= 123 = 123 mu= 7.4 = 7.4
## 22 1971 fw= 0.3281902 n.wet= 120 = 120 mu= 9 = 9
## 23 1972 fw= 0.3659088 n.wet= 134 = 134 mu= 7.6 = 7.6
## 24 1973 fw= 0.3727675 n.wet= 136 = 136 mu= 8.4 = 8.4
## 25 1974 fw= 0.3744004 n.wet= 137 = 137 mu= 9.1 = 9.1
## 26 1975 fw= 0.3097921 n.wet= 113 = 113 mu= 8.3 = 8.3
## 27 1976 fw= 0.3578494 n.wet= 131 = 131 mu= 7.4 = 7.4
## 28 1977 fw= 0.3016747 n.wet= 110 = 110 mu= 8.7 = 8.7
## 29 1978 fw= 0.3769089 n.wet= 138 = 138 mu= 8.6 = 8.6
## 30 1979 fw= 0.4732562 n.wet= 173 = 173 mu= 8.9 = 8.9
## 31 1980 fw= 0.3803263 n.wet= 139 = 139 mu= 8.2 = 8.2
## 32 1981 fw= 0.3656678 n.wet= 134 = 134 mu= 8.7 = 8.7
## 33 1982 fw= 0.4214583 n.wet= 154 = 154 mu= 8.4 = 8.4
## 34 1983 fw= 0.3778385 n.wet= 138 = 138 mu= 8.9 = 8.9
## 35 1984 fw= 0.3580446 n.wet= 131 = 131 mu= 8.8 = 8.8
## 36 1985 fw= 0.363277 n.wet= 133 = 133 mu= 8.6 = 8.6
## 37 1986 fw= 0.4405316 n.wet= 161 = 161 mu= 7.5 = 7.5
## 38 1987 fw= 0.3725203 n.wet= 136 = 136 mu= 9.4 = 9.4
## 39 1988 fw= 0.4092882 n.wet= 149 = 149 mu= 8 = 8
## 40 1989 fw= 0.3076781 n.wet= 112 = 112 mu= 8.8 = 8.8
## 41 1990 fw= 0.3567657 n.wet= 130 = 130 mu= 8.9 = 8.9
## 42 1991 fw= 0.3310076 n.wet= 121 = 121 mu= 9.4 = 9.4
## 43 1992 fw= 0.3418435 n.wet= 125 = 125 mu= 8.2 = 8.2
## 44 1993 fw= 0.4580128 n.wet= 167 = 167 mu= 9.9 = 9.9
## 45 1994 fw= 0.448347 n.wet= 164 = 164 mu= 8 = 8
## 46 1995 fw= 0.4605033 n.wet= 168 = 168 mu= 7.5 = 7.5
## 47 1996 fw= 0.3136151 n.wet= 115 = 115 mu= 9.7 = 9.7
## 48 1997 fw= 0.3784511 n.wet= 138 = 138 mu= 7.6 = 7.6
## 49 1998 fw= 0.3673493 n.wet= 134 = 134 mu= 10.1 = 10.1
## 50 1999 fw= 0.397014 n.wet= 145 = 145 mu= 7.6 = 7.6
## 51 2000 fw= 0.4498026 n.wet= 164 = 164 mu= 7.4 = 7.4
## 52 2001 fw= 0.3424429 n.wet= 125 = 125 mu= 10.4 = 10.4
## 53 2002 fw= 0.3554603 n.wet= 130 = 130 mu= 9.6 = 9.6
## 54 2003 fw= 0.2993992 n.wet= 109 = 109 mu= 10.6 = 10.6
## 55 2004 fw= 0.3425612 n.wet= 125 = 125 mu= 8.6 = 8.6
## 56 2005 fw= 0.3831456 n.wet= 140 = 140 mu= 9.2 = 9.2
```

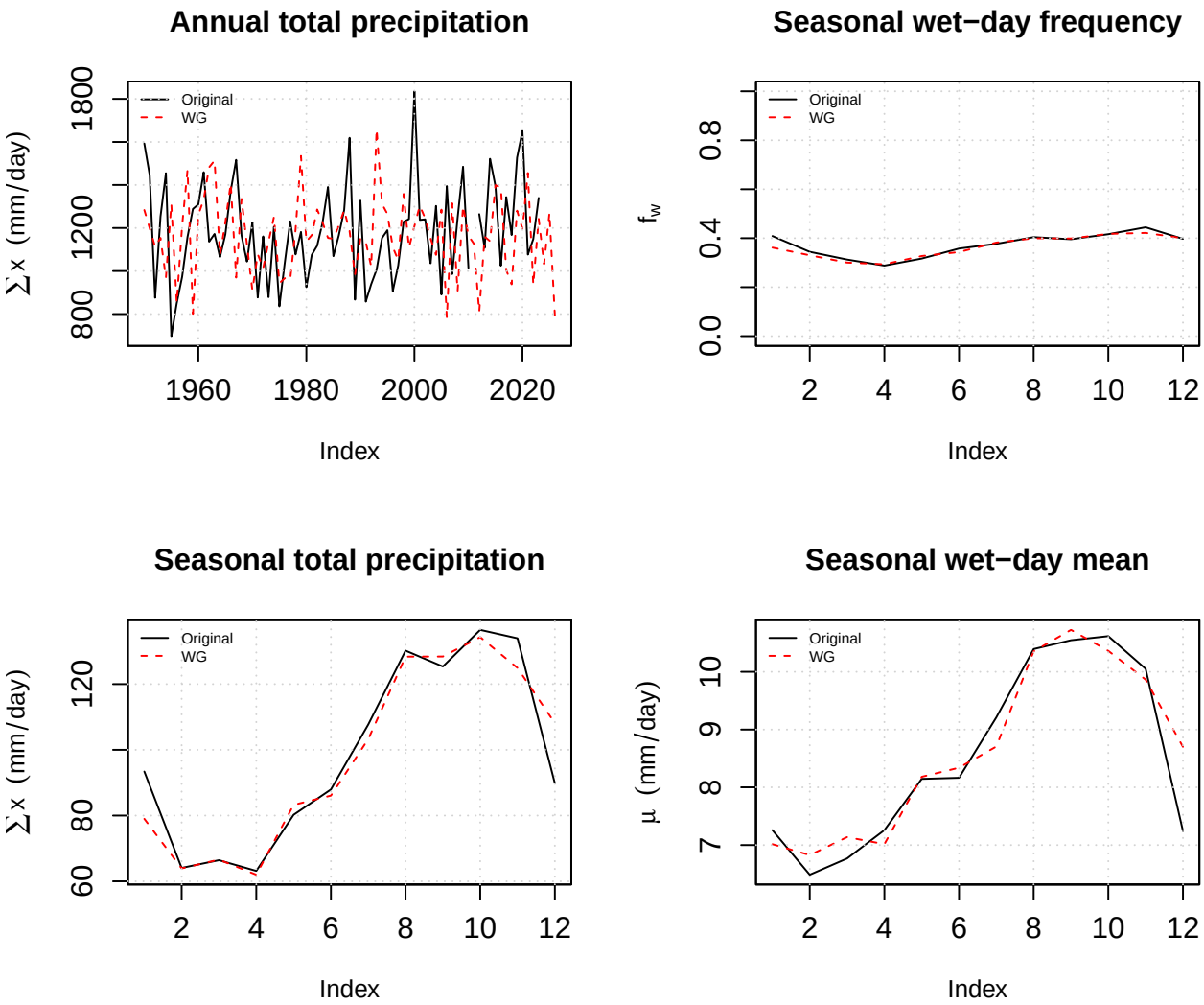
```
## 57 2006 fw= 0.3291456 n.wet= 120 = 120 mu= 6.5 = 6.5
## 58 2007 fw= 0.4056545 n.wet= 148 = 148 mu= 8.9 = 8.9
## 59 2008 fw= 0.3268205 n.wet= 119 = 119 mu= 7.6 = 7.6
## 60 2009 fw= 0.3420087 n.wet= 125 = 125 mu= 10.4 = 10.4
## 61 2010 fw= 0.3626556 n.wet= 132 = 132 mu= 8.8 = 8.8
## 62 2011 fw= 0.3494968 n.wet= 128 = 128 mu= 8.8 = 8.8
## 63 2012 fw= 0.3098249 n.wet= 113 = 113 mu= 7.2 = 7.2
## 64 2013 fw= 0.4155809 n.wet= 152 = 152 mu= 7.6 = 7.6
## 65 2014 fw= 0.3356155 n.wet= 123 = 123 mu= 9.3 = 9.3
## 66 2015 fw= 0.4061173 n.wet= 148 = 148 mu= 9.5 = 9.5
## 67 2016 fw= 0.3644618 n.wet= 133 = 133 mu= 10.4 = 10.4
## 68 2017 fw= 0.3036633 n.wet= 111 = 111 mu= 9.1 = 9.1
## 69 2018 fw= 0.3494954 n.wet= 128 = 128 mu= 7.3 = 7.3
## 70 2019 fw= 0.4042542 n.wet= 148 = 148 mu= 8.7 = 8.7
## 71 2020 fw= 0.3982675 n.wet= 145 = 145 mu= 8.3 = 8.3
## 72 2021 fw= 0.4081106 n.wet= 149 = 149 mu= 9.8 = 9.8
## 73 2022 fw= 0.3256519 n.wet= 119 = 119 mu= 7.9 = 7.9
## 74 2023 fw= 0.374138 n.wet= 137 = 137 mu= 9.1 = 9.1
## 75 2024 fw= 0.3303225 n.wet= 121 = 121 mu= 8.5 = 8.5
## 76 2025 fw= 0.4010614 n.wet= 146 = 146 mu= 8.7 = 8.7
## 77 2026 fw= 0.2783937 n.wet= 102 = 102 mu= 7.8 = 7.8
## [1] "Sort precipitation magnitudes"
## [1] "10338 observed wet days and 10118 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.2   3.015     3.7    64.5       2
## Feb       0       0     0.0   2.289     2.3    50.9      20
## Mar       0       0     0.0   2.167     2.0    60.7      NA
## Apr       0       0     0.0   2.136     1.7    67.9       3
## May       0       0     0.0   2.623     2.4    55.4       1
## Jun       0       0     0.0   2.971     3.0    85.2       1
## Jul       0       0     0.1   3.524     3.3    87.5       3
## Aug       0       0     0.2   4.256     4.1    86.9       1
## Sep       0       0     0.2   4.235     3.7   117.8       1
## Oct       0       0     0.3   4.478     4.7   112.5       9
## Nov       0       0     0.5   4.525     5.0    79.7       1
## Dec       0       0     0.2   2.936     3.4    42.0       2
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 2.548   2.800 71.2   NA
## Feb    0       0      0 2.263   2.100 47.2   NA
## Mar    0       0      0 2.148   1.900 53.6   NA
## Apr    0       0      0 2.066   1.800 57.4   NA
## May    0       0      0 2.685   2.800 56.6   NA
## Jun    0       0      0 2.869   3.100 64.4   NA
## Jul    0       0      0 3.330   4.500 65.2   NA
## Aug    0       0      0 4.140   5.400 80.9   NA
## Sep    0       0      0 4.280   5.675 87.8   NA
## Oct    0       0      0 4.331   6.100 86.1   NA
## Nov    0       0      0 4.163   5.500 70.9   NA
## Dec    0       0      0 3.487   4.200 76.5   NA
```


POSTMYR I DRANGEDAL wet−day amoun
WG amount (mm/day)
0
40
80
120
0
20
40
60
80
100
Observed amount (mm/day)


Dry spell durations
WG
0
5
15
25
0
5
10
15
20
25
obs


Number of annual wet days
days
40
80
120
Original
WG
1960
1980
2000
2020

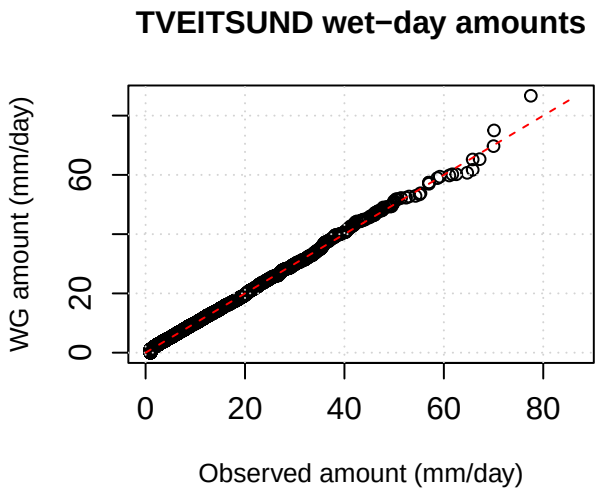

wet spell durations
WG
0
10
20
30
40
0
10
20
30
40
obs

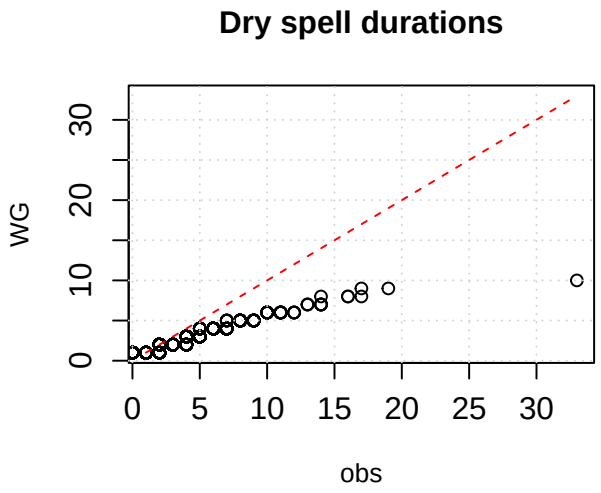


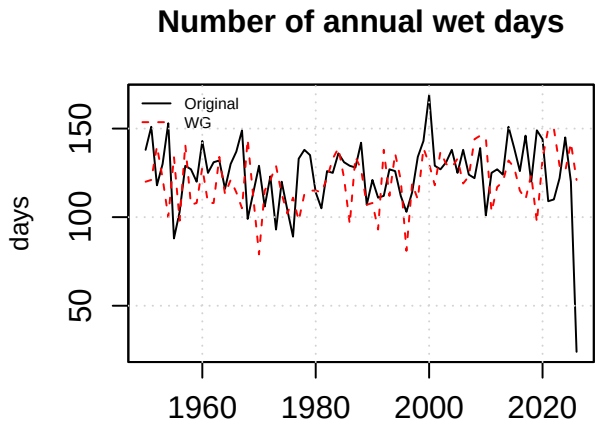

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for TVEITSUND"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: TVEITSUND"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2206
##  1st Qu.:1969   1st Qu.:0.3126
##  Median :1988   Median :0.3461
##  Mean   :1988   Mean   :0.3440
##  3rd Qu.:2007   3rd Qu.:0.3759
##  Max.   :2026   Max.   :0.4291
##      Index          c(mu)
##  Min.   :1950   Min.   : 6.327
##  1st Qu.:1969   1st Qu.: 7.375
##  Median :1988   Median : 8.055
##  Mean   :1988   Mean   : 7.996
##  3rd Qu.:2007   3rd Qu.: 8.510
##  Max.   :2026   Max.   :10.026
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3432058 n.wet= 125 = 125 mu= 8.2 = 8.2
## 2 1951 fw= 0.3461438 n.wet= 126 = 126 mu= 9 = 9
```

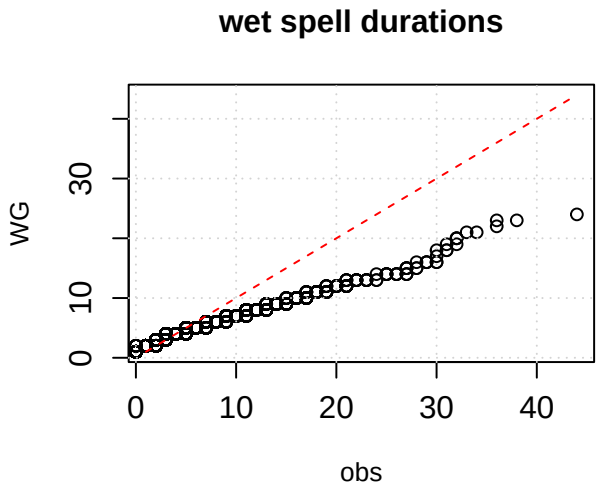
```
## 3 1952 fw= 0.4066205 n.wet= 149 = 149 mu= 7.5 = 7.5
## 4 1953 fw= 0.3336661 n.wet= 122 = 122 mu= 9 = 9
## 5 1954 fw= 0.2896321 n.wet= 106 = 106 mu= 7.4 = 7.4
## 6 1955 fw= 0.3921666 n.wet= 143 = 143 mu= 7.1 = 7.1
## 7 1956 fw= 0.2695568 n.wet= 98 = 98 mu= 7.4 = 7.4
## 8 1957 fw= 0.3854792 n.wet= 141 = 141 mu= 7.8 = 7.8
## 9 1958 fw= 0.3127638 n.wet= 114 = 114 mu= 7.2 = 7.2
## 10 1959 fw= 0.3060683 n.wet= 112 = 112 mu= 9.5 = 9.5
## 11 1960 fw= 0.3609505 n.wet= 132 = 132 mu= 9.5 = 9.5
## 12 1961 fw= 0.3064633 n.wet= 112 = 112 mu= 8.7 = 8.7
## 13 1962 fw= 0.3108462 n.wet= 114 = 114 mu= 7.7 = 7.7
## 14 1963 fw= 0.3960337 n.wet= 145 = 145 mu= 6.6 = 6.6
## 15 1964 fw= 0.3492295 n.wet= 128 = 128 mu= 6.5 = 6.5
## 16 1965 fw= 0.3510267 n.wet= 128 = 128 mu= 8.4 = 8.4
## 17 1966 fw= 0.3136609 n.wet= 115 = 115 mu= 8.4 = 8.5
## 18 1967 fw= 0.3064122 n.wet= 112 = 112 mu= 8.6 = 8.6
## 19 1968 fw= 0.3986111 n.wet= 146 = 146 mu= 8 = 8
## 20 1969 fw= 0.3090797 n.wet= 113 = 113 mu= 9 = 9
## 21 1970 fw= 0.2206048 n.wet= 81 = 81 mu= 8.3 = 8.3
## 22 1971 fw= 0.3269234 n.wet= 119 = 119 mu= 7.1 = 7.1
## 23 1972 fw= 0.3432493 n.wet= 125 = 125 mu= 6.3 = 6.3
## 24 1973 fw= 0.3589912 n.wet= 131 = 131 mu= 7.8 = 7.8
## 25 1974 fw= 0.3358243 n.wet= 123 = 123 mu= 9 = 9
## 26 1975 fw= 0.2971896 n.wet= 109 = 109 mu= 8.6 = 8.6
## 27 1976 fw= 0.3058637 n.wet= 112 = 112 mu= 9.7 = 9.7
## 28 1977 fw= 0.2762618 n.wet= 101 = 101 mu= 7.6 = 7.6
## 29 1978 fw= 0.312561 n.wet= 114 = 114 mu= 8.1 = 8.1
## 30 1979 fw= 0.3460738 n.wet= 126 = 126 mu= 6.9 = 6.9
## 31 1980 fw= 0.3413382 n.wet= 125 = 125 mu= 6.6 = 6.6
## 32 1981 fw= 0.3376562 n.wet= 123 = 123 mu= 7.3 = 7.3
## 33 1982 fw= 0.3375012 n.wet= 123 = 123 mu= 8.5 = 8.5
## 34 1983 fw= 0.3707958 n.wet= 135 = 135 mu= 10 = 10
## 35 1984 fw= 0.3866156 n.wet= 141 = 141 mu= 8.7 = 8.7
## 36 1985 fw= 0.3469519 n.wet= 127 = 127 mu= 8.6 = 8.6
## 37 1986 fw= 0.2802121 n.wet= 102 = 102 mu= 6.9 = 6.9
## 38 1987 fw= 0.3800253 n.wet= 139 = 139 mu= 8.3 = 8.3
## 39 1988 fw= 0.3685934 n.wet= 135 = 135 mu= 6.5 = 6.5
## 40 1989 fw= 0.306722 n.wet= 112 = 112 mu= 8.3 = 8.3
## 41 1990 fw= 0.3121873 n.wet= 114 = 114 mu= 8.7 = 8.7
## 42 1991 fw= 0.277789 n.wet= 101 = 101 mu= 8.2 = 8.2
## 43 1992 fw= 0.3868494 n.wet= 141 = 141 mu= 7.8 = 7.8
## 44 1993 fw= 0.3164196 n.wet= 116 = 116 mu= 6.7 = 6.7
## 45 1994 fw= 0.3795642 n.wet= 139 = 139 mu= 8.3 = 8.3
## 46 1995 fw= 0.347337 n.wet= 127 = 127 mu= 7 = 7
## 47 1996 fw= 0.2324672 n.wet= 85 = 85 mu= 8.3 = 8.3
## 48 1997 fw= 0.3463385 n.wet= 127 = 127 mu= 7 = 7
## 49 1998 fw= 0.3051636 n.wet= 111 = 111 mu= 9.3 = 9.3
## 50 1999 fw= 0.3897585 n.wet= 142 = 142 mu= 8.1 = 8.1
## 51 2000 fw= 0.3667881 n.wet= 134 = 134 mu= 8.1 = 8.1
## 52 2001 fw= 0.3388142 n.wet= 124 = 124 mu= 8.1 = 8.1
## 53 2002 fw= 0.3861302 n.wet= 141 = 141 mu= 8.1 = 8.1
## 54 2003 fw= 0.3729103 n.wet= 136 = 136 mu= 8.3 = 8.3
## 55 2004 fw= 0.3740135 n.wet= 137 = 137 mu= 7.1 = 7.1
## 56 2005 fw= 0.3783709 n.wet= 138 = 138 mu= 6.8 = 6.8
```

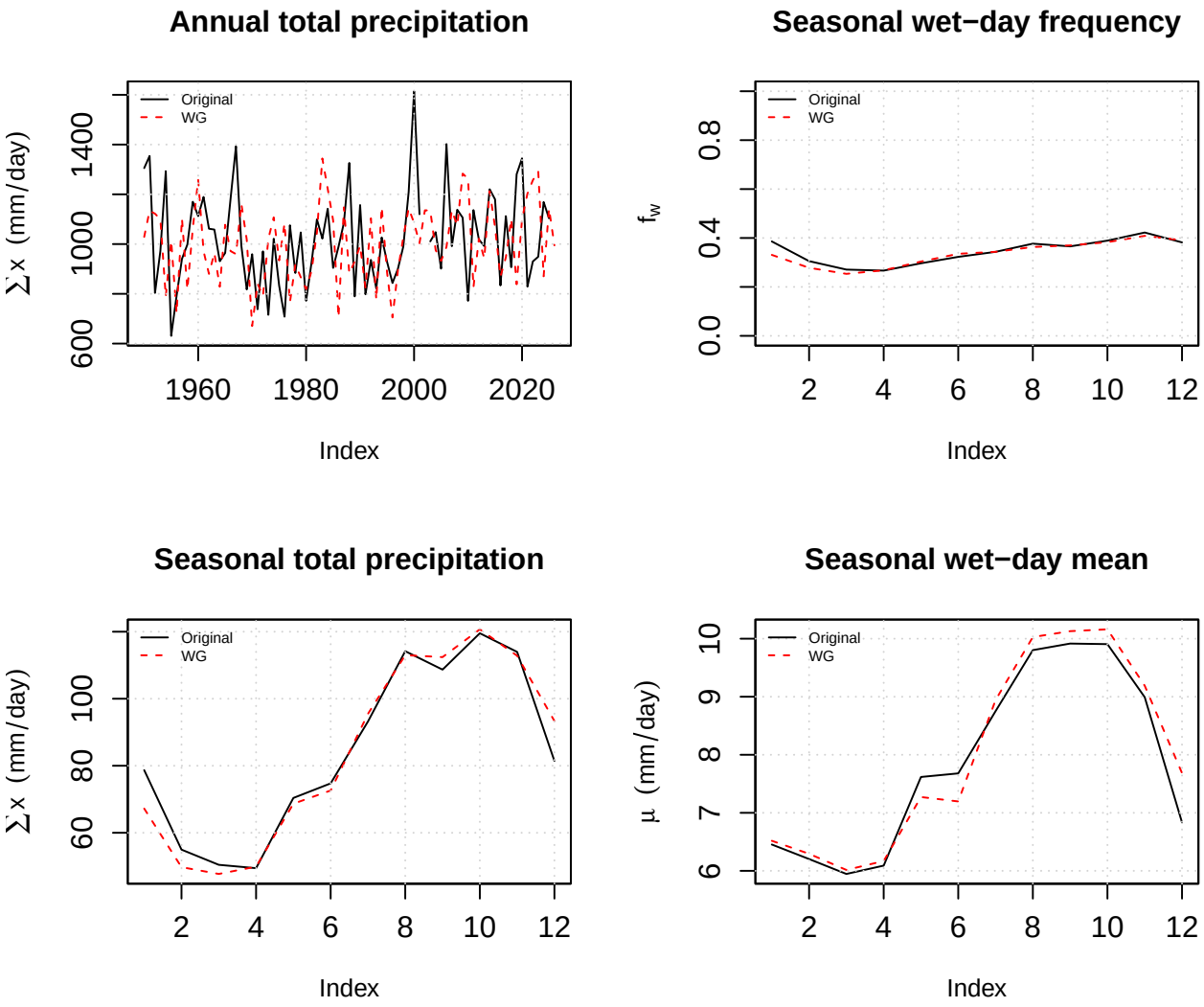
```
## 57 2006 fw= 0.331643 n.wet= 121 = 121 mu= 8.2 = 8.2
## 58 2007 fw= 0.353805 n.wet= 129 = 129 mu= 8.8 = 8.8
## 59 2008 fw= 0.4037407 n.wet= 147 = 147 mu= 7.3 = 7.3
## 60 2009 fw= 0.4187956 n.wet= 153 = 153 mu= 8.4 = 8.4
## 61 2010 fw= 0.4060647 n.wet= 148 = 148 mu= 8.5 = 8.5
## 62 2011 fw= 0.3011967 n.wet= 110 = 110 mu= 7.5 = 7.5
## 63 2012 fw= 0.338654 n.wet= 124 = 124 mu= 8.2 = 8.2
## 64 2013 fw= 0.3469697 n.wet= 127 = 127 mu= 7.4 = 7.4
## 65 2014 fw= 0.3715455 n.wet= 136 = 136 mu= 8.9 = 8.9
## 66 2015 fw= 0.3759315 n.wet= 137 = 137 mu= 7.8 = 7.8
## 67 2016 fw= 0.3404951 n.wet= 124 = 124 mu= 7 = 7
## 68 2017 fw= 0.3125684 n.wet= 114 = 114 mu= 8.3 = 8.3
## 69 2018 fw= 0.3583536 n.wet= 131 = 131 mu= 8.4 = 8.4
## 70 2019 fw= 0.2741543 n.wet= 100 = 100 mu= 8.4 = 8.4
## 71 2020 fw= 0.3854685 n.wet= 141 = 141 mu= 7.8 = 7.8
## 72 2021 fw= 0.4151881 n.wet= 152 = 152 mu= 7.9 = 7.9
## 73 2022 fw= 0.4290841 n.wet= 157 = 157 mu= 8 = 8
## 74 2023 fw= 0.3544944 n.wet= 129 = 129 mu= 10 = 10
## 75 2024 fw= 0.3497462 n.wet= 128 = 128 mu= 6.8 = 6.8
## 76 2025 fw= 0.4013559 n.wet= 147 = 147 mu= 7.8 = 7.8
## 77 2026 fw= 0.3383158 n.wet= 124 = 124 mu= 8 = 8
## [1] "Sort precipitation magnitudes"
## [1] "9573 observed wet days and 9289 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.1   2.539     3.0    38.1    1
## Feb       0       0     0.0   1.946     1.7    41.2    1
## Mar       0       0     0.0   1.656     1.3    39.1   16
## Apr       0       0     0.0   1.669     1.2    49.8   NA
## May       0       0     0.0   2.300     1.9    46.8   NA
## Jun       0       0     0.0   2.524     2.2    47.8   NA
## Jul       0       0     0.0   3.046     2.7    64.7   NA
## Aug       0       0     0.0   3.735     3.6    70.0    2
## Sep       0       0     0.0   3.670     3.5    77.5   NA
## Oct       0       0     0.1   3.906     4.2    65.8   NA
## Nov       0       0     0.3   3.848     4.8    61.7   NA
## Dec       0       0     0.1   2.661     3.0    46.1   NA
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 2.168   2.200 47.2   NA
## Feb    0       0      0 1.760   1.400 41.2   NA
## Mar    0       0      0 1.539   1.000 41.0   NA
## Apr    0       0      0 1.662   1.200 58.9   NA
## May    0       0      0 2.215   2.050 46.0   NA
## Jun    0       0      0 2.420   2.500 59.4   NA
## Jul    0       0      0 3.080   3.300 86.7   NA
## Aug    0       0      0 3.645   4.600 75.0   NA
## Sep    0       0      0 3.747   4.500 65.3   NA
## Oct    0       0      0 3.893   5.100 57.4   NA
## Nov    0       0      0 3.760   4.775 60.2   NA
## Dec    0       0      0 3.011   3.600 69.7   NA
```


TVEITSUND wet−day amounts
WG amount (mm/day)
0
20
60
0
20
40
60
80
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
obs


Number of annual wet days
days
50
100
150
Original
WG
1960
1980
2000
2020

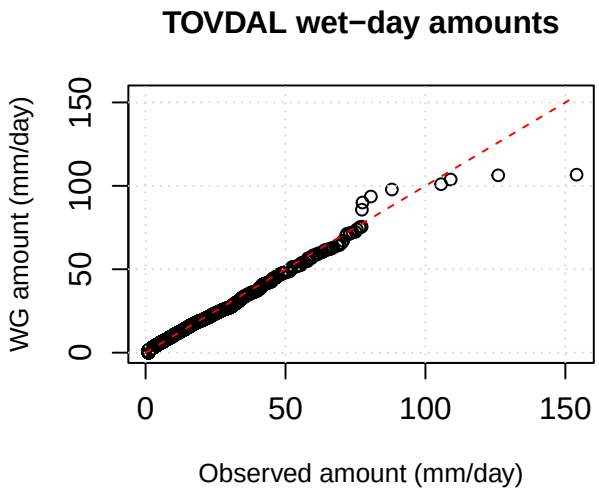

wet spell durations
WG
0
10
30
0
10
20
30
40
obs

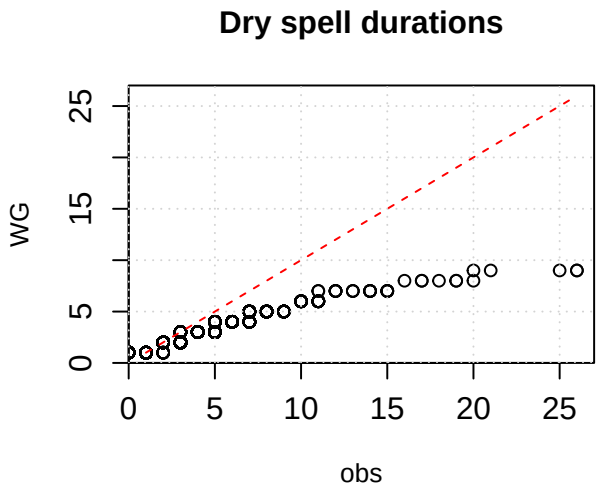


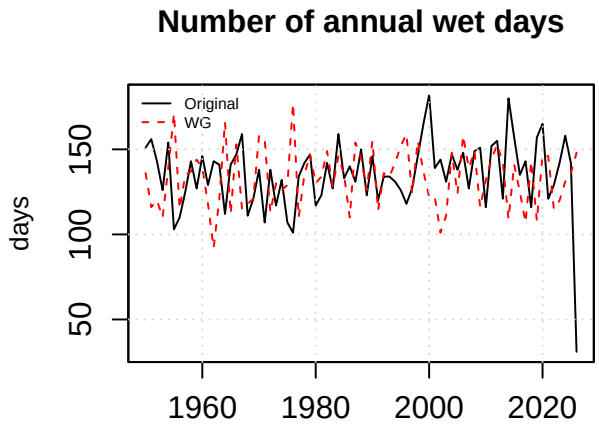

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for TOVDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: TOVDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2704
##  1st Qu.:1969   1st Qu.:0.3412
##  Median :1988   Median :0.3759
##  Mean   :1988   Mean   :0.3760
##  3rd Qu.:2007   3rd Qu.:0.4095
##  Max.   :2026   Max.   :0.4931
##      Index          c(mu)
##  Min.   :1950   Min.   : 6.944
##  1st Qu.:1969   1st Qu.: 8.309
##  Median :1988   Median : 9.159
##  Mean   :1988   Mean   : 9.074
##  3rd Qu.:2007   3rd Qu.: 9.799
##  Max.   :2026   Max.   :12.188
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.389407 n.wet= 142 = 142 mu= 9.2 = 9.2
## 2 1951 fw= 0.3279895 n.wet= 120 = 120 mu= 10.7 = 10.7
```

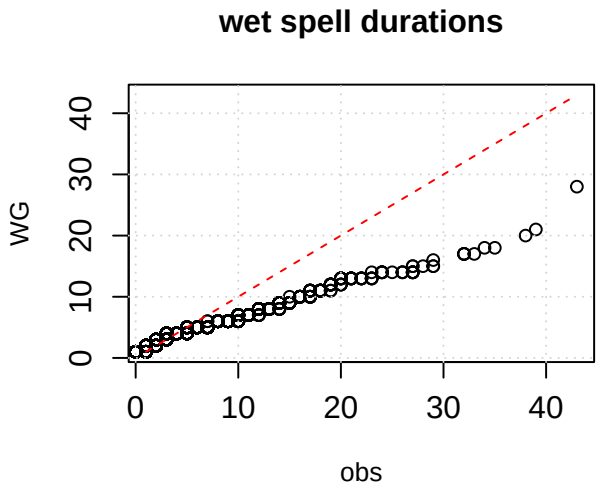
```
## 3 1952 fw= 0.3508725 n.wet= 128 = 128 mu= 9.8 = 9.8
## 4 1953 fw= 0.3192594 n.wet= 117 = 117 mu= 9.2 = 9.2
## 5 1954 fw= 0.3845213 n.wet= 140 = 140 mu= 9.9 = 9.9
## 6 1955 fw= 0.4750813 n.wet= 174 = 174 mu= 9.6 = 9.6
## 7 1956 fw= 0.317148 n.wet= 116 = 116 mu= 8.3 = 8.3
## 8 1957 fw= 0.384085 n.wet= 140 = 140 mu= 7.6 = 7.6
## 9 1958 fw= 0.386086 n.wet= 141 = 141 mu= 9.4 = 9.4
## 10 1959 fw= 0.4027742 n.wet= 147 = 147 mu= 10 = 10
## 11 1960 fw= 0.3913722 n.wet= 143 = 143 mu= 8.6 = 8.6
## 12 1961 fw= 0.3435654 n.wet= 125 = 125 mu= 7.2 = 7.2
## 13 1962 fw= 0.2704304 n.wet= 99 = 99 mu= 9.7 = 9.7
## 14 1963 fw= 0.3500666 n.wet= 128 = 128 mu= 8.2 = 8.2
## 15 1964 fw= 0.4585001 n.wet= 167 = 167 mu= 10 = 10
## 16 1965 fw= 0.3119335 n.wet= 114 = 114 mu= 9.2 = 9.2
## 17 1966 fw= 0.4307509 n.wet= 157 = 157 mu= 8.5 = 8.5
## 18 1967 fw= 0.3364336 n.wet= 123 = 123 mu= 9.9 = 9.9
## 19 1968 fw= 0.3359831 n.wet= 123 = 123 mu= 8 = 8
## 20 1969 fw= 0.359062 n.wet= 131 = 131 mu= 8.3 = 8.3
## 21 1970 fw= 0.4515245 n.wet= 165 = 165 mu= 9.2 = 9.2
## 22 1971 fw= 0.4370188 n.wet= 160 = 160 mu= 9.4 = 9.4
## 23 1972 fw= 0.3211267 n.wet= 117 = 117 mu= 9.3 = 9.3
## 24 1973 fw= 0.3630184 n.wet= 133 = 133 mu= 8.8 = 8.8
## 25 1974 fw= 0.3585822 n.wet= 131 = 131 mu= 9.1 = 9.1
## 26 1975 fw= 0.3637935 n.wet= 133 = 133 mu= 9.7 = 9.7
## 27 1976 fw= 0.4931104 n.wet= 180 = 180 mu= 9.8 = 9.8
## 28 1977 fw= 0.2999413 n.wet= 110 = 110 mu= 6.9 = 6.9
## 29 1978 fw= 0.3758884 n.wet= 137 = 137 mu= 10 = 10
## 30 1979 fw= 0.4077848 n.wet= 149 = 149 mu= 8.6 = 8.6
## 31 1980 fw= 0.3633976 n.wet= 133 = 133 mu= 9.9 = 9.9
## 32 1981 fw= 0.381066 n.wet= 139 = 139 mu= 10.9 = 10.9
## 33 1982 fw= 0.4075547 n.wet= 149 = 149 mu= 11.2 = 11.2
## 34 1983 fw= 0.3690233 n.wet= 135 = 135 mu= 7.1 = 7.1
## 35 1984 fw= 0.4151303 n.wet= 152 = 152 mu= 8.2 = 8.2
## 36 1985 fw= 0.3739419 n.wet= 137 = 137 mu= 7.8 = 7.8
## 37 1986 fw= 0.3074292 n.wet= 112 = 112 mu= 8.3 = 8.3
## 38 1987 fw= 0.4232605 n.wet= 155 = 155 mu= 9.8 = 9.8
## 39 1988 fw= 0.4079665 n.wet= 149 = 149 mu= 9.3 = 9.3
## 40 1989 fw= 0.3586477 n.wet= 131 = 131 mu= 9.6 = 9.6
## 41 1990 fw= 0.440406 n.wet= 161 = 161 mu= 9 = 9
## 42 1991 fw= 0.3153272 n.wet= 115 = 115 mu= 9.3 = 9.3
## 43 1992 fw= 0.3954917 n.wet= 144 = 144 mu= 9.5 = 9.5
## 44 1993 fw= 0.3707022 n.wet= 135 = 135 mu= 8 = 8
## 45 1994 fw= 0.4165922 n.wet= 152 = 152 mu= 8.9 = 8.9
## 46 1995 fw= 0.4299683 n.wet= 157 = 157 mu= 9.2 = 9.2
## 47 1996 fw= 0.4428478 n.wet= 162 = 162 mu= 9.6 = 9.6
## 48 1997 fw= 0.3498937 n.wet= 128 = 128 mu= 8.5 = 8.5
## 49 1998 fw= 0.4249234 n.wet= 155 = 155 mu= 8.5 = 8.5
## 50 1999 fw= 0.3801018 n.wet= 139 = 139 mu= 9.4 = 9.4
## 51 2000 fw= 0.3382639 n.wet= 124 = 124 mu= 11.6 = 11.6
## 52 2001 fw= 0.3563357 n.wet= 130 = 130 mu= 7.3 = 7.3
## 53 2002 fw= 0.2977826 n.wet= 109 = 109 mu= 8.1 = 8
## 54 2003 fw= 0.3031564 n.wet= 111 = 111 mu= 10.2 = 10.2
## 55 2004 fw= 0.4201508 n.wet= 153 = 153 mu= 7.9 = 7.9
## 56 2005 fw= 0.3412353 n.wet= 125 = 125 mu= 12.2 = 12.2
```

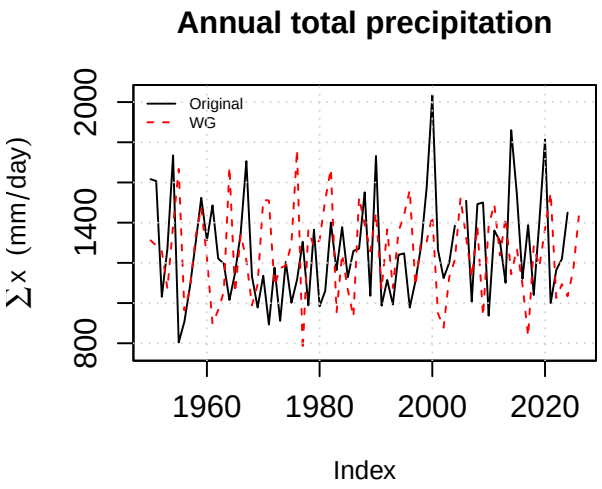
```
## 57 2006 fw= 0.4441252 n.wet= 162 = 162 mu= 8.2 = 8.2
## 58 2007 fw= 0.3807834 n.wet= 139 = 139 mu= 8.1 = 8.1
## 59 2008 fw= 0.4120818 n.wet= 151 = 151 mu= 9.2 = 9.2
## 60 2009 fw= 0.3313008 n.wet= 121 = 121 mu= 7.7 = 7.7
## 61 2010 fw= 0.3678332 n.wet= 134 = 134 mu= 10.3 = 10.3
## 62 2011 fw= 0.3994766 n.wet= 146 = 146 mu= 10.2 = 10.2
## 63 2012 fw= 0.4348429 n.wet= 159 = 159 mu= 7.8 = 7.8
## 64 2013 fw= 0.4014565 n.wet= 147 = 147 mu= 9.7 = 9.7
## 65 2014 fw= 0.3038623 n.wet= 111 = 111 mu= 10.3 = 10.3
## 66 2015 fw= 0.394972 n.wet= 144 = 144 mu= 8.8 = 8.8
## 67 2016 fw= 0.3497606 n.wet= 128 = 128 mu= 8.5 = 8.5
## 68 2017 fw= 0.3144631 n.wet= 115 = 115 mu= 7.3 = 7.3
## 69 2018 fw= 0.396553 n.wet= 145 = 145 mu= 8.9 = 8.9
## 70 2019 fw= 0.3018445 n.wet= 110 = 110 mu= 10.7 = 10.7
## 71 2020 fw= 0.415572 n.wet= 152 = 152 mu= 9 = 9
## 72 2021 fw= 0.409545 n.wet= 150 = 150 mu= 10.3 = 10.3
## 73 2022 fw= 0.3260081 n.wet= 119 = 119 mu= 8.6 = 8.6
## 74 2023 fw= 0.3586164 n.wet= 131 = 131 mu= 8.4 = 8.4
## 75 2024 fw= 0.3736993 n.wet= 136 = 136 mu= 7.6 = 7.6
## 76 2025 fw= 0.3914246 n.wet= 143 = 143 mu= 8.1 = 8.1
## 77 2026 fw= 0.4183392 n.wet= 153 = 153 mu= 9.4 = 9.4
## [1] "Sort precipitation magnitudes"
## [1] "10419 observed wet days and 10261 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.2   3.337   4.100    52.3       3
## Feb       0       0     0.0   2.527   2.500    52.5       1
## Mar       0       0     0.0   2.092   2.000    52.0      NA
## Apr       0       0     0.0   2.118   1.500    53.1       2
## May       0       0     0.0   2.790   2.500    52.2       2
## Jun       0       0     0.0   2.785   2.600    61.0       1
## Jul       0       0     0.0   3.394   3.000   126.0       1
## Aug       0       0     0.0   4.186   4.225   154.0      NA
## Sep       0       0     0.0   4.555   4.200    76.6       2
## Oct       0       0     0.4   4.953   5.600    88.0      NA
## Nov       0       0     0.6   5.036   6.200   109.0      NA
## Dec       0       0     0.3   3.548   4.200    54.1      16
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0      0 2.828   3.300  61.4   NA
## Feb    0       0      0 2.351   2.450  97.8   NA
## Mar    0       0      0 2.090   1.800  49.9   NA
## Apr    0       0      0 2.153   1.800  47.9   NA
## May    0       0      0 2.747   2.500  71.7   NA
## Jun    0       0      0 2.845   3.100 106.7   NA
## Jul    0       0      0 3.457   3.800 101.0   NA
## Aug    0       0      0 3.904   4.400  93.6   NA
## Sep    0       0      0 4.376   6.100  64.1   NA
## Oct    0       0      0 4.729   6.400  71.3   NA
## Nov    0       0      0 5.248   7.175 103.8   NA
## Dec    0       0      0 4.199   5.400 106.3   NA
```

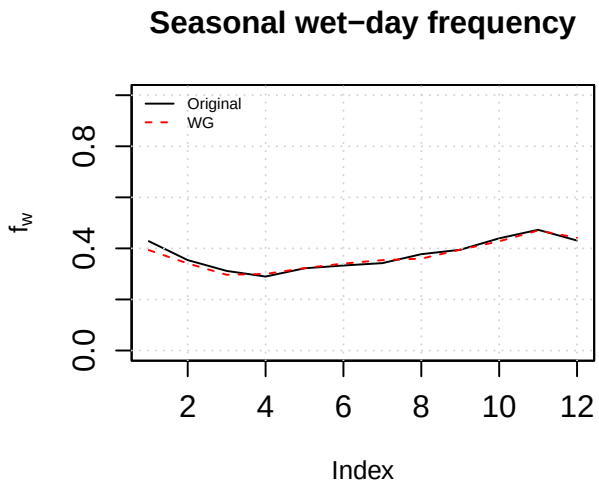

TOVDAL wet−day amounts
WG amount (mm/day)
0
50
100
150
0
50
100
150
Observed amount (mm/day)

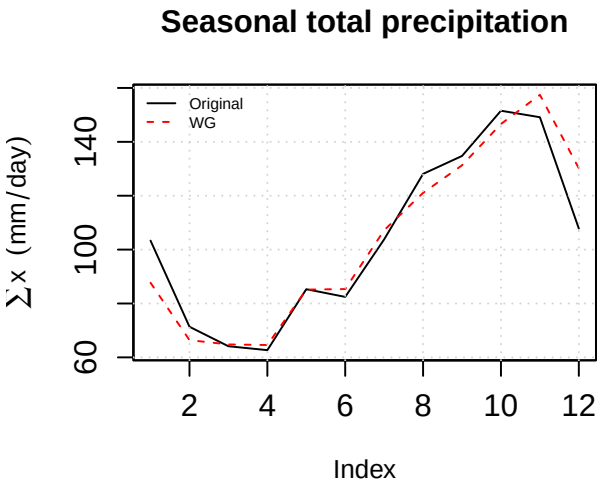

Dry spell durations
WG
0
5
15
25
0
5
10
15
20
25
obs

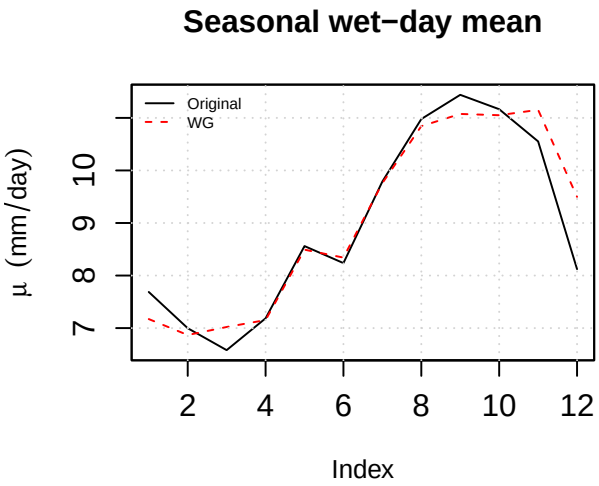

Number of annual wet days
days
50
100
150
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
40
0
10
20
30
40
obs





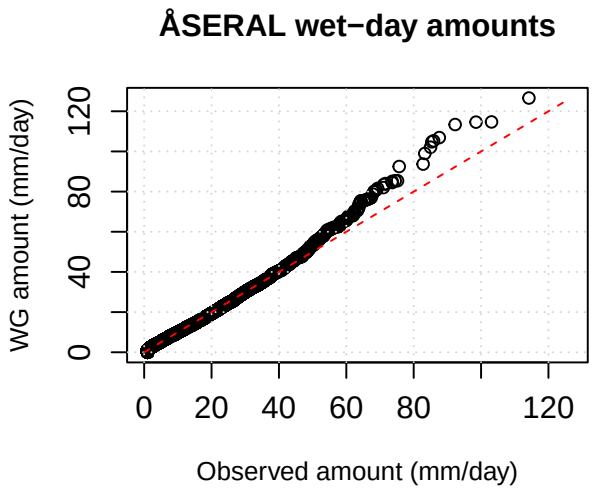


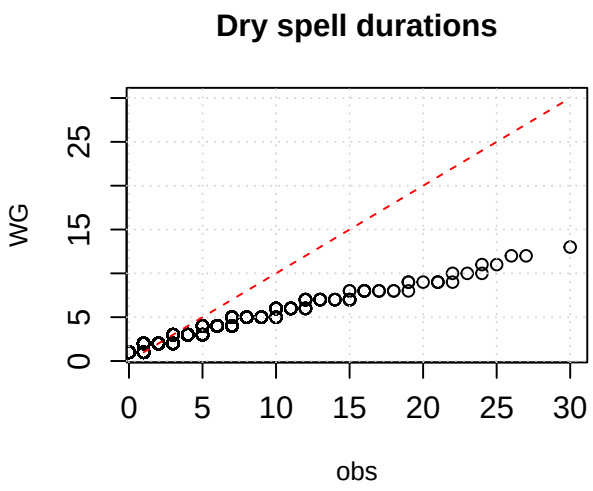


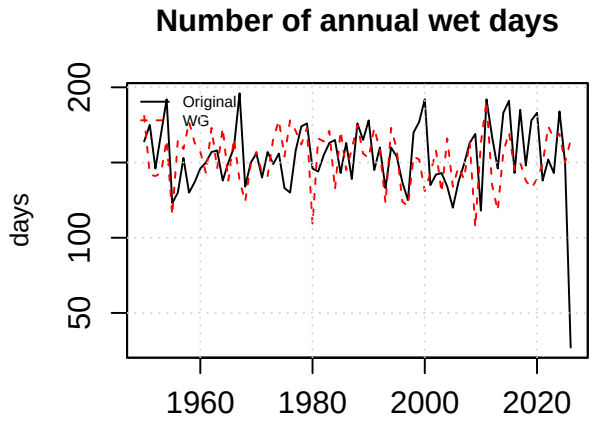

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for ÅSERAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: ÅSERAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2984
##  1st Qu.:1969   1st Qu.:0.3945
##  Median :1988   Median :0.4342
##  Mean   :1988   Mean   :0.4265
##  3rd Qu.:2007   3rd Qu.:0.4624
##  Max.   :2026   Max.   :0.5253
##      Index          c(mu)
##  Min.   :1950   Min.   : 8.309
##  1st Qu.:1969   1st Qu.:10.292
##  Median :1988   Median :11.245
##  Mean   :1988   Mean   :11.240
##  3rd Qu.:2007   3rd Qu.:12.263
##  Max.   :2026   Max.   :13.727
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.5018866 n.wet= 183 = 183 mu= 11.4 = 11.4
## 2 1951 fw= 0.3996108 n.wet= 146 = 146 mu= 12.8 = 12.8
```

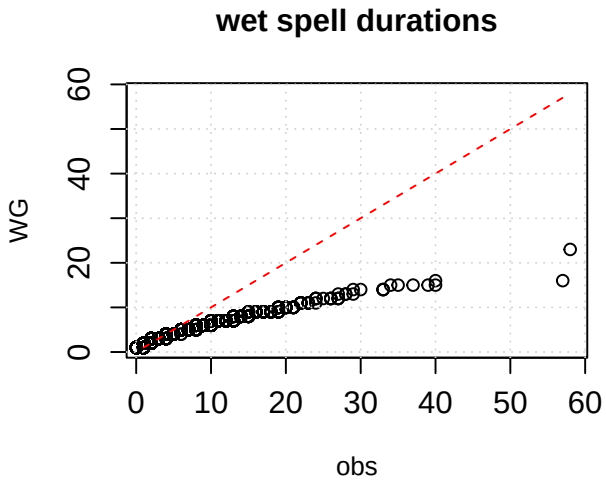
```
## 3 1952 fw= 0.4104196 n.wet= 150 = 150 mu= 10.7 = 10.7
## 4 1953 fw= 0.3976474 n.wet= 145 = 145 mu= 13.1 = 13.1
## 5 1954 fw= 0.4648089 n.wet= 170 = 170 mu= 10.6 = 10.6
## 6 1955 fw= 0.321299 n.wet= 117 = 117 mu= 9.8 = 9.8
## 7 1956 fw= 0.4559041 n.wet= 167 = 167 mu= 10.8 = 10.8
## 8 1957 fw= 0.4427245 n.wet= 162 = 162 mu= 10.9 = 10.9
## 9 1958 fw= 0.4978376 n.wet= 182 = 182 mu= 13.7 = 13.7
## 10 1959 fw= 0.4578053 n.wet= 167 = 167 mu= 11.6 = 11.6
## 11 1960 fw= 0.4383718 n.wet= 160 = 160 mu= 10.1 = 10.1
## 12 1961 fw= 0.3962153 n.wet= 145 = 145 mu= 9 = 9
## 13 1962 fw= 0.495121 n.wet= 181 = 181 mu= 12.2 = 12.2
## 14 1963 fw= 0.3995119 n.wet= 146 = 146 mu= 10.5 = 10.5
## 15 1964 fw= 0.4777506 n.wet= 174 = 174 mu= 10.8 = 10.8
## 16 1965 fw= 0.3891944 n.wet= 142 = 142 mu= 11.2 = 11.2
## 17 1966 fw= 0.4587787 n.wet= 168 = 168 mu= 12.3 = 12.3
## 18 1967 fw= 0.3891327 n.wet= 142 = 142 mu= 13.3 = 13.3
## 19 1968 fw= 0.3509762 n.wet= 128 = 128 mu= 11.3 = 11.3
## 20 1969 fw= 0.4241496 n.wet= 155 = 155 mu= 11.1 = 11.1
## 21 1970 fw= 0.4423624 n.wet= 162 = 162 mu= 10.1 = 10.1
## 22 1971 fw= 0.4042983 n.wet= 148 = 148 mu= 9.1 = 9.1
## 23 1972 fw= 0.3987753 n.wet= 146 = 146 mu= 9.3 = 9.3
## 24 1973 fw= 0.4596865 n.wet= 168 = 168 mu= 9.9 = 9.9
## 25 1974 fw= 0.4968919 n.wet= 181 = 181 mu= 10.4 = 10.4
## 26 1975 fw= 0.4336606 n.wet= 158 = 158 mu= 11.2 = 11.3
## 27 1976 fw= 0.4922054 n.wet= 180 = 180 mu= 12.7 = 12.7
## 28 1977 fw= 0.4690624 n.wet= 171 = 171 mu= 10 = 10
## 29 1978 fw= 0.4605565 n.wet= 168 = 168 mu= 9.3 = 9.3
## 30 1979 fw= 0.4782704 n.wet= 175 = 175 mu= 9.6 = 9.6
## 31 1980 fw= 0.2984005 n.wet= 109 = 109 mu= 11.3 = 11.3
## 32 1981 fw= 0.4604498 n.wet= 168 = 168 mu= 12.4 = 12.4
## 33 1982 fw= 0.4546521 n.wet= 166 = 166 mu= 10.5 = 10.5
## 34 1983 fw= 0.4832987 n.wet= 177 = 177 mu= 12.8 = 12.8
## 35 1984 fw= 0.3640602 n.wet= 133 = 133 mu= 13.3 = 13.3
## 36 1985 fw= 0.4735121 n.wet= 173 = 173 mu= 12.9 = 12.9
## 37 1986 fw= 0.4091288 n.wet= 149 = 149 mu= 12.2 = 12.2
## 38 1987 fw= 0.4440258 n.wet= 162 = 162 mu= 12 = 12
## 39 1988 fw= 0.4935715 n.wet= 180 = 180 mu= 9.5 = 9.5
## 40 1989 fw= 0.4340608 n.wet= 159 = 159 mu= 9.9 = 9.9
## 41 1990 fw= 0.4191695 n.wet= 153 = 153 mu= 12.3 = 12.2
## 42 1991 fw= 0.4782606 n.wet= 175 = 175 mu= 11.6 = 11.6
## 43 1992 fw= 0.4418778 n.wet= 161 = 161 mu= 12.2 = 12.2
## 44 1993 fw= 0.3483146 n.wet= 127 = 127 mu= 8.7 = 8.7
## 45 1994 fw= 0.47978 n.wet= 175 = 175 mu= 11.6 = 11.6
## 46 1995 fw= 0.444708 n.wet= 162 = 162 mu= 10.3 = 10.3
## 47 1996 fw= 0.3418057 n.wet= 125 = 125 mu= 11.1 = 11.1
## 48 1997 fw= 0.3575203 n.wet= 131 = 131 mu= 8.3 = 8.3
## 49 1998 fw= 0.4342056 n.wet= 159 = 159 mu= 12.6 = 12.6
## 50 1999 fw= 0.4237545 n.wet= 155 = 155 mu= 11.5 = 11.6
## 51 2000 fw= 0.3730832 n.wet= 136 = 136 mu= 11.1 = 11.1
## 52 2001 fw= 0.394512 n.wet= 144 = 144 mu= 10.2 = 10.2
## 53 2002 fw= 0.440027 n.wet= 161 = 161 mu= 11.7 = 11.7
## 54 2003 fw= 0.3597258 n.wet= 131 = 131 mu= 10.5 = 10.5
## 55 2004 fw= 0.4653463 n.wet= 170 = 170 mu= 9.4 = 9.4
## 56 2005 fw= 0.3823274 n.wet= 140 = 140 mu= 9.5 = 9.5
```

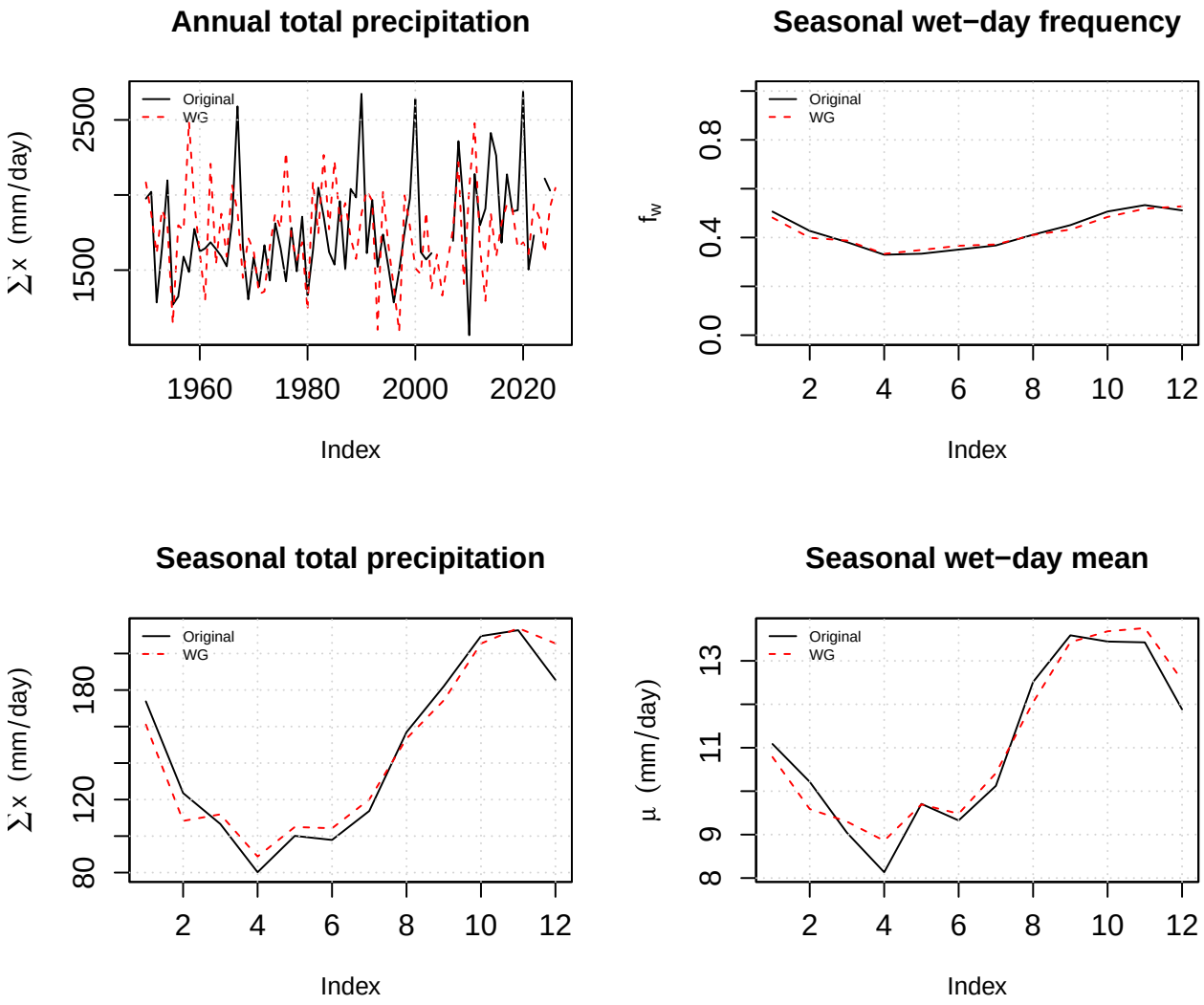
```
## 57 2006 fw= 0.4119469 n.wet= 150 = 150 mu= 10.4 = 10.4
## 58 2007 fw= 0.381277 n.wet= 139 = 139 mu= 12.8 = 12.8
## 59 2008 fw= 0.4606635 n.wet= 168 = 168 mu= 13.2 = 13.2
## 60 2009 fw= 0.2991725 n.wet= 109 = 109 mu= 12.9 = 12.9
## 61 2010 fw= 0.4553847 n.wet= 166 = 166 mu= 12.3 = 12.3
## 62 2011 fw= 0.525306 n.wet= 192 = 192 mu= 12.9 = 12.9
## 63 2012 fw= 0.3753753 n.wet= 137 = 137 mu= 12 = 12
## 64 2013 fw= 0.3318752 n.wet= 121 = 121 mu= 10.7 = 10.7
## 65 2014 fw= 0.4425979 n.wet= 162 = 162 mu= 11.6 = 11.6
## 66 2015 fw= 0.4700104 n.wet= 172 = 172 mu= 9.2 = 9.2
## 67 2016 fw= 0.4092447 n.wet= 149 = 149 mu= 12.2 = 12.2
## 68 2017 fw= 0.4250131 n.wet= 155 = 155 mu= 12.5 = 12.5
## 69 2018 fw= 0.3812995 n.wet= 139 = 139 mu= 13.7 = 13.7
## 70 2019 fw= 0.3764042 n.wet= 137 = 137 mu= 12 = 12
## 71 2020 fw= 0.3828148 n.wet= 140 = 140 mu= 12 = 12
## 72 2021 fw= 0.4206949 n.wet= 154 = 154 mu= 10.4 = 10.4
## 73 2022 fw= 0.4818534 n.wet= 176 = 176 mu= 11 = 11
## 74 2023 fw= 0.4624405 n.wet= 169 = 169 mu= 10.9 = 10.9
## 75 2024 fw= 0.4679719 n.wet= 171 = 171 mu= 9.4 = 9.4
## 76 2025 fw= 0.4168684 n.wet= 152 = 152 mu= 12.6 = 12.6
## 77 2026 fw= 0.4570732 n.wet= 167 = 167 mu= 12.3 = 12.3
## [1] "Sort precipitation magnitudes"
## [1] "11797 observed wet days and 11750 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     1.0   5.653   7.500    60.8      20
## Feb       0       0     0.2   4.408   5.375    67.8      17
## Mar       0       0     0.0   3.485   3.900    64.3       4
## Apr       0       0     0.0   2.710   2.600    58.5       1
## May       0       0     0.0   3.272   3.000    60.4      NA
## Jun       0       0     0.0   3.307   3.200    65.2       1
## Jul       0       0     0.0   3.756   3.400    92.3      24
## Aug       0       0     0.1   5.186   5.900   103.1      26
## Sep       0       0     0.4   6.164   7.775   114.2       6
## Oct       0       0     1.0   6.852  10.000    98.5       1
## Nov       0       0     1.5   7.188  10.250    83.3       1
## Dec       0       0     1.0   6.114   8.200    87.6      19
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    0.0 5.195   6.550 106.9   NA
## Feb    0       0    0.0 3.834   4.300  62.2   NA
## Mar    0       0    0.0 3.610   4.200  65.6   NA
## Apr    0       0    0.0 2.959   3.000  84.0   NA
## May    0       0    0.0 3.387   3.400  76.5   NA
## Jun    0       0    0.0 3.475   4.000  76.7   NA
## Jul    0       0    0.0 3.873   4.300  79.9   NA
## Aug    0       0    0.0 4.948   6.400  92.5   NA
## Sep    0       0    0.0 5.811   7.400 114.7   NA
## Oct    0       0    0.0 6.628   9.250 114.6   NA
## Nov    0       0    1.5 7.131  10.375  93.7   NA
## Dec    0       0    1.7 6.629   9.500 126.6   NA
```


ÅSERAL wet−day amounts
WG amount (mm/day)
0
40
80
120
0
20
40
60
80
120
Observed amount (mm/day)


Dry spell durations
WG
0
5
15
25
0
5
10
15
20
25
30
obs


Number of annual wet days
days
50
100
200
Original
WG
1960
1980
2000
2020

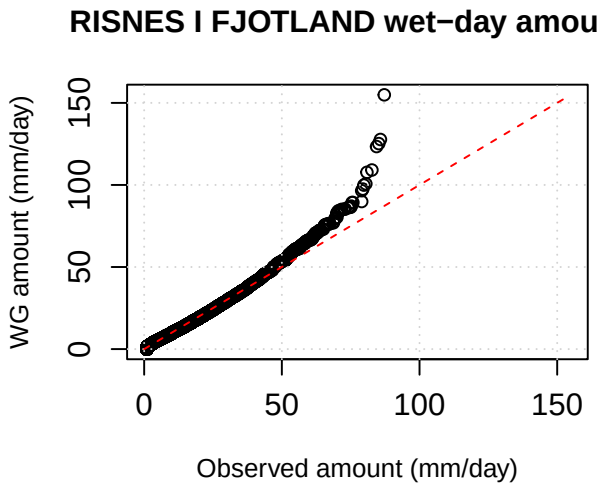

wet spell durations
WG
0
20
40
60
0
10
20
30
40
50
60
obs

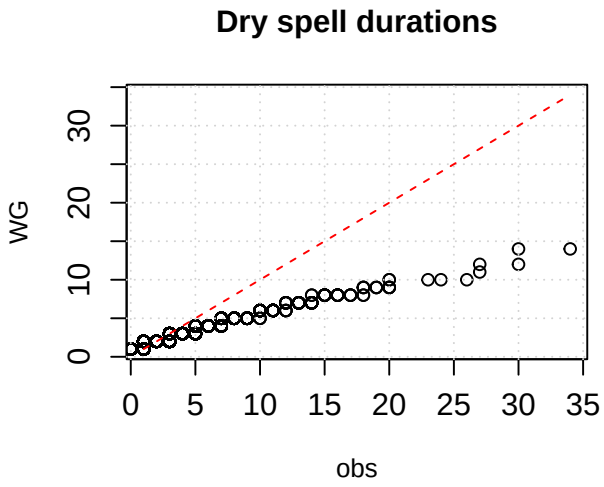


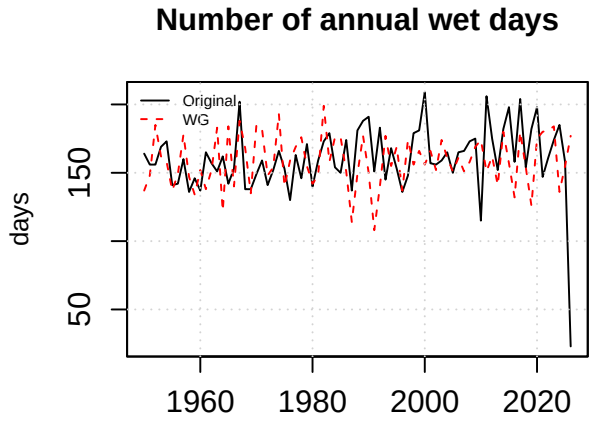

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for RISNES I FJOTLAND"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: RISNES I FJOTLAND"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3055
##  1st Qu.:1969   1st Qu.:0.4127
##  Median :1988   Median :0.4395
##  Mean   :1988   Mean   :0.4446
##  3rd Qu.:2007   3rd Qu.:0.4915
##  Max.   :2026   Max.   :0.5550
##      Index          c(mu)
##  Min.   :1950   Min.   : 7.876
##  1st Qu.:1969   1st Qu.:10.681
##  Median :1988   Median :11.555
##  Mean   :1988   Mean   :11.441
##  3rd Qu.:2007   3rd Qu.:12.260
##  Max.   :2026   Max.   :14.598
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3821388 n.wet= 140 = 140 mu= 12.8 = 12.8
## 2 1951 fw= 0.4046245 n.wet= 148 = 148 mu= 11.1 = 11.1
```

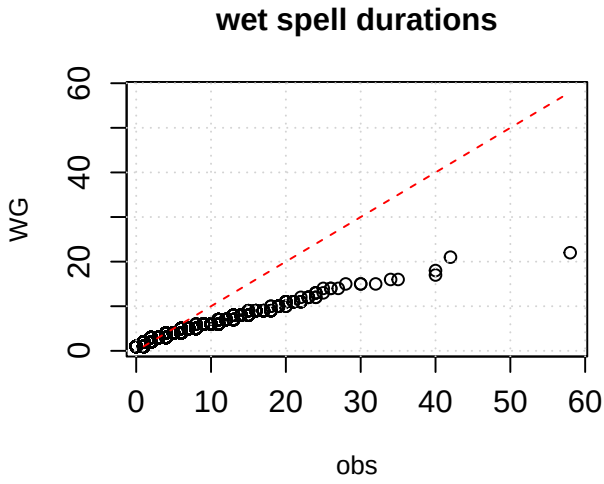
```
## 3 1952 fw= 0.5175516 n.wet= 189 = 189 mu= 10.7 = 10.7
## 4 1953 fw= 0.4620236 n.wet= 169 = 169 mu= 11.2 = 11.2
## 5 1954 fw= 0.4422674 n.wet= 162 = 162 mu= 12.3 = 12.3
## 6 1955 fw= 0.3842317 n.wet= 140 = 140 mu= 11.9 = 11.9
## 7 1956 fw= 0.419171 n.wet= 153 = 153 mu= 11.8 = 11.8
## 8 1957 fw= 0.4977541 n.wet= 182 = 182 mu= 11.9 = 11.9
## 9 1958 fw= 0.4146092 n.wet= 151 = 151 mu= 12.7 = 12.7
## 10 1959 fw= 0.3814888 n.wet= 139 = 139 mu= 11.3 = 11.3
## 11 1960 fw= 0.4226005 n.wet= 154 = 154 mu= 10.7 = 10.7
## 12 1961 fw= 0.3861327 n.wet= 141 = 141 mu= 11.8 = 11.8
## 13 1962 fw= 0.4326067 n.wet= 158 = 158 mu= 12.5 = 12.5
## 14 1963 fw= 0.5025079 n.wet= 184 = 184 mu= 13.1 = 13.1
## 15 1964 fw= 0.3491285 n.wet= 128 = 128 mu= 12.1 = 12.1
## 16 1965 fw= 0.5051349 n.wet= 185 = 185 mu= 12.2 = 12.2
## 17 1966 fw= 0.3888193 n.wet= 142 = 142 mu= 12 = 12
## 18 1967 fw= 0.5211748 n.wet= 190 = 190 mu= 11.7 = 11.7
## 19 1968 fw= 0.4766253 n.wet= 174 = 174 mu= 9.2 = 9.2
## 20 1969 fw= 0.3779176 n.wet= 138 = 138 mu= 11.8 = 11.8
## 21 1970 fw= 0.5089256 n.wet= 186 = 186 mu= 12.1 = 12.1
## 22 1971 fw= 0.5097003 n.wet= 186 = 186 mu= 12.8 = 12.8
## 23 1972 fw= 0.4126512 n.wet= 151 = 151 mu= 10.8 = 10.8
## 24 1973 fw= 0.4339308 n.wet= 158 = 158 mu= 10.4 = 10.4
## 25 1974 fw= 0.5355028 n.wet= 196 = 196 mu= 12.2 = 12.2
## 26 1975 fw= 0.3884411 n.wet= 142 = 142 mu= 10.3 = 10.3
## 27 1976 fw= 0.4394527 n.wet= 161 = 161 mu= 11.9 = 11.9
## 28 1977 fw= 0.4709453 n.wet= 172 = 172 mu= 12.7 = 12.7
## 29 1978 fw= 0.4911326 n.wet= 179 = 179 mu= 10.8 = 10.8
## 30 1979 fw= 0.4498881 n.wet= 164 = 164 mu= 10.9 = 10.9
## 31 1980 fw= 0.398347 n.wet= 145 = 145 mu= 11.4 = 11.4
## 32 1981 fw= 0.4076878 n.wet= 149 = 149 mu= 12 = 12
## 33 1982 fw= 0.5549558 n.wet= 203 = 203 mu= 11.5 = 11.5
## 34 1983 fw= 0.4366303 n.wet= 159 = 159 mu= 11.5 = 11.5
## 35 1984 fw= 0.5011336 n.wet= 183 = 183 mu= 9.2 = 9.2
## 36 1985 fw= 0.5053967 n.wet= 185 = 185 mu= 11.6 = 11.6
## 37 1986 fw= 0.4294788 n.wet= 157 = 157 mu= 7.9 = 7.9
## 38 1987 fw= 0.3187565 n.wet= 116 = 116 mu= 9.5 = 9.5
## 39 1988 fw= 0.4136106 n.wet= 151 = 151 mu= 11.1 = 11.1
## 40 1989 fw= 0.487408 n.wet= 178 = 178 mu= 9.7 = 9.7
## 41 1990 fw= 0.4249762 n.wet= 155 = 155 mu= 14.1 = 14.1
## 42 1991 fw= 0.3054515 n.wet= 112 = 112 mu= 11.3 = 11.3
## 43 1992 fw= 0.3974234 n.wet= 145 = 145 mu= 9.4 = 9.4
## 44 1993 fw= 0.4934599 n.wet= 180 = 180 mu= 10.9 = 10.9
## 45 1994 fw= 0.4347148 n.wet= 159 = 159 mu= 10.1 = 10.1
## 46 1995 fw= 0.4673657 n.wet= 171 = 171 mu= 11.2 = 11.2
## 47 1996 fw= 0.3891577 n.wet= 142 = 142 mu= 10.5 = 10.5
## 48 1997 fw= 0.4994822 n.wet= 182 = 182 mu= 9.6 = 9.6
## 49 1998 fw= 0.4425351 n.wet= 162 = 162 mu= 9.6 = 9.6
## 50 1999 fw= 0.4675349 n.wet= 171 = 171 mu= 9.3 = 9.3
## 51 2000 fw= 0.438251 n.wet= 160 = 160 mu= 8.2 = 8.2
## 52 2001 fw= 0.4709437 n.wet= 172 = 172 mu= 9.4 = 9.4
## 53 2002 fw= 0.4242935 n.wet= 155 = 155 mu= 9.5 = 9.5
## 54 2003 fw= 0.4830676 n.wet= 176 = 176 mu= 11 = 11
## 55 2004 fw= 0.4524248 n.wet= 165 = 165 mu= 11 = 11
## 56 2005 fw= 0.4160582 n.wet= 152 = 152 mu= 11.3 = 11.3
```

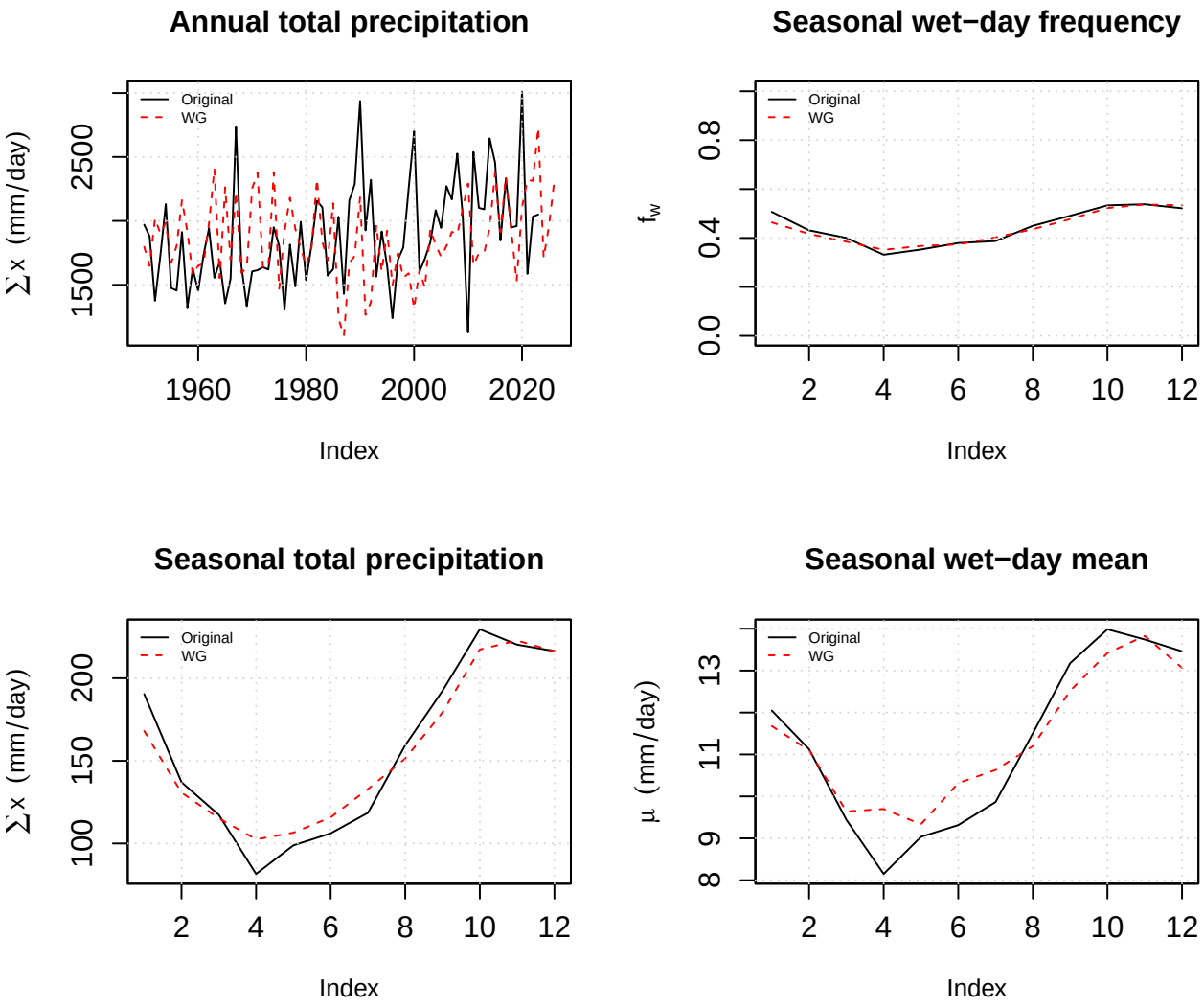
```
## 57 2006 fw= 0.4498204 n.wet= 164 = 164 mu= 11 = 11
## 58 2007 fw= 0.4128941 n.wet= 151 = 151 mu= 12.7 = 12.7
## 59 2008 fw= 0.4369136 n.wet= 160 = 160 mu= 11.9 = 11.8
## 60 2009 fw= 0.4817185 n.wet= 176 = 176 mu= 11.9 = 11.9
## 61 2010 fw= 0.4922092 n.wet= 180 = 180 mu= 12.7 = 12.7
## 62 2011 fw= 0.426467 n.wet= 156 = 156 mu= 10.6 = 10.6
## 63 2012 fw= 0.4648788 n.wet= 170 = 170 mu= 10.3 = 10.3
## 64 2013 fw= 0.3966421 n.wet= 145 = 145 mu= 12.1 = 12.1
## 65 2014 fw= 0.5058572 n.wet= 185 = 185 mu= 10.5 = 10.5
## 66 2015 fw= 0.446671 n.wet= 163 = 163 mu= 14.6 = 14.6
## 67 2016 fw= 0.365557 n.wet= 134 = 134 mu= 14.3 = 14.3
## 68 2017 fw= 0.4914906 n.wet= 180 = 180 mu= 13 = 13
## 69 2018 fw= 0.4303891 n.wet= 157 = 157 mu= 12.3 = 12.3
## 70 2019 fw= 0.3453022 n.wet= 126 = 126 mu= 12.1 = 12.1
## 71 2020 fw= 0.4885875 n.wet= 178 = 178 mu= 11.8 = 11.8
## 72 2021 fw= 0.498836 n.wet= 182 = 182 mu= 12.8 = 12.8
## 73 2022 fw= 0.5079936 n.wet= 186 = 186 mu= 12.4 = 12.4
## 74 2023 fw= 0.5120791 n.wet= 187 = 187 mu= 14.6 = 14.6
## 75 2024 fw= 0.3751069 n.wet= 137 = 137 mu= 12.5 = 12.5
## 76 2025 fw= 0.433832 n.wet= 158 = 158 mu= 12.4 = 12.4
## 77 2026 fw= 0.4976303 n.wet= 182 = 182 mu= 12.8 = 12.8
## [1] "Sort precipitation magnitudes"
## [1] "12335 observed wet days and 12224 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     1.0   6.157    7.90    87.2       6
## Feb       0       0     0.3   4.852    6.00    69.5      NA
## Mar       0       0     0.1   3.829    4.10    82.7       1
## Apr       0       0     0.0   2.754    2.40    58.6      NA
## May       0       0     0.0   3.232    3.30    63.0       1
## Jun       0       0     0.1   3.583    4.00    57.2      NA
## Jul       0       0     0.1   3.874    4.10    80.9      NA
## Aug       0       0     0.4   5.222    6.45    84.4       5
## Sep       0       0     0.9   6.521    8.80    71.4       8
## Oct       0       0     1.5   7.506   10.50    79.8       1
## Nov       0       0     1.5   7.443   11.05    80.5       1
## Dec       0       0     1.2   7.074    9.60    85.8       1
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    0.0 5.422   6.850  72.5   NA
## Feb    0       0    0.0 4.629   5.200 127.7   NA
## Mar    0       0    0.0 3.718   4.500  79.5   NA
## Apr    0       0    0.0 3.415   3.400  75.0   NA
## May    0       0    0.0 3.435   3.700  69.1   NA
## Jun    0       0    0.0 3.859   4.000  99.9   NA
## Jul    0       0    0.0 4.286   4.950 125.2   NA
## Aug    0       0    0.0 4.884   5.800  97.5   NA
## Sep    0       0    0.0 5.976   8.075  96.5   NA
## Oct    0       0    1.5 7.012  10.100 123.4   NA
## Nov    0       0    2.0 7.425  10.000 109.1   NA
## Dec    0       0    1.9 6.979   9.950 154.9   NA
```


RISNES I FJOTLAND wet−day amounts
WG amount (mm/day)
0
50
100
150
0
50
100
150
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs


Number of annual wet days
days
50
150
Original
WG
1960
1980
2000
2020

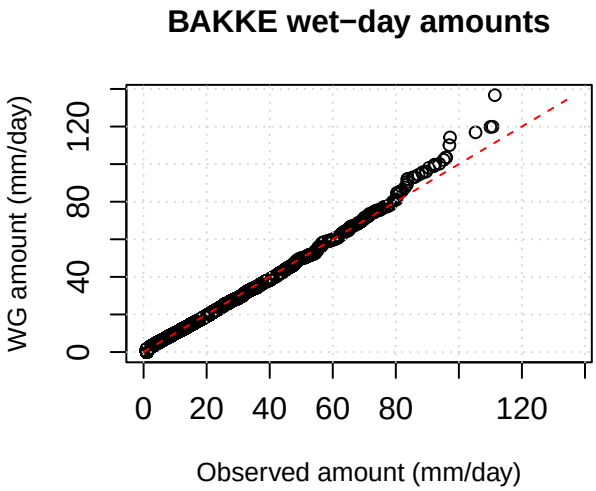

wet spell durations
WG
0
20
40
60
0
10
20
30
40
50
60
obs

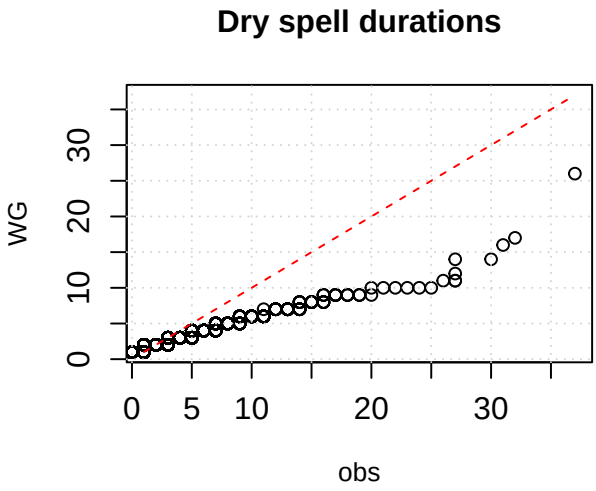


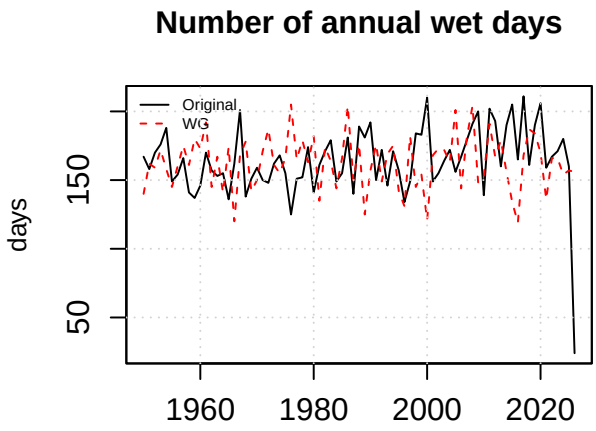

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for BAKKE"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: BAKKE"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3368
##  1st Qu.:1969   1st Qu.:0.4200
##  Median :1988   Median :0.4580
##  Mean   :1988   Mean   :0.4539
##  3rd Qu.:2007   3rd Qu.:0.4899
##  Max.   :2026   Max.   :0.5815
##      Index          c(mu)
##  Min.   :1950   Min.   : 8.742
##  1st Qu.:1969   1st Qu.:11.143
##  Median :1988   Median :11.892
##  Mean   :1988   Mean   :11.867
##  3rd Qu.:2007   3rd Qu.:12.858
##  Max.   :2026   Max.   :14.829
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.387404 n.wet= 141 = 141 mu= 11.7 = 11.7
## 2 1951 fw= 0.4474044 n.wet= 163 = 163 mu= 12.7 = 12.7
```

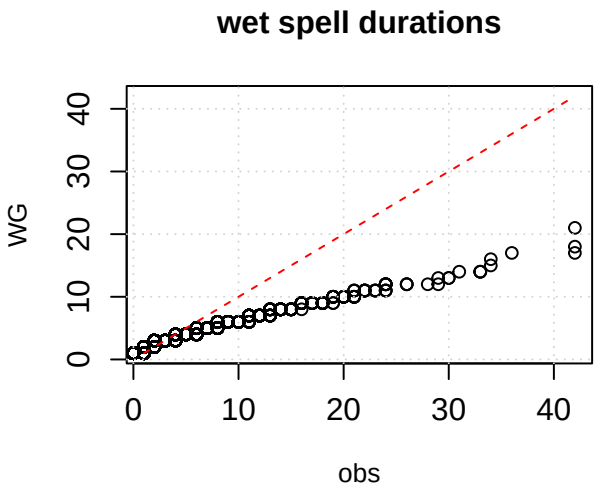
```
## 3 1952 fw= 0.4491819 n.wet= 164 = 164 mu= 11.9 = 11.9
## 4 1953 fw= 0.4710187 n.wet= 172 = 172 mu= 11 = 11
## 5 1954 fw= 0.4540095 n.wet= 166 = 166 mu= 10.6 = 10.6
## 6 1955 fw= 0.4088822 n.wet= 149 = 149 mu= 11.3 = 11.3
## 7 1956 fw= 0.4407375 n.wet= 161 = 161 mu= 9.1 = 9.1
## 8 1957 fw= 0.495289 n.wet= 181 = 181 mu= 12.2 = 12.2
## 9 1958 fw= 0.4529515 n.wet= 165 = 165 mu= 9.6 = 9.6
## 10 1959 fw= 0.5073541 n.wet= 185 = 185 mu= 11.7 = 11.7
## 11 1960 fw= 0.4788472 n.wet= 175 = 175 mu= 13.5 = 13.5
## 12 1961 fw= 0.5326833 n.wet= 195 = 195 mu= 12.3 = 12.3
## 13 1962 fw= 0.4076229 n.wet= 149 = 149 mu= 12.5 = 12.5
## 14 1963 fw= 0.4714678 n.wet= 172 = 172 mu= 11.1 = 11.1
## 15 1964 fw= 0.3956422 n.wet= 145 = 145 mu= 12.2 = 12.2
## 16 1965 fw= 0.4830445 n.wet= 176 = 176 mu= 11.5 = 11.5
## 17 1966 fw= 0.3417177 n.wet= 125 = 125 mu= 11.3 = 11.2
## 18 1967 fw= 0.4696509 n.wet= 172 = 172 mu= 11.1 = 11.1
## 19 1968 fw= 0.4938439 n.wet= 180 = 180 mu= 11.8 = 11.8
## 20 1969 fw= 0.4036385 n.wet= 147 = 147 mu= 13.2 = 13.2
## 21 1970 fw= 0.4167485 n.wet= 152 = 152 mu= 10.9 = 10.9
## 22 1971 fw= 0.4853199 n.wet= 177 = 177 mu= 12.5 = 12.5
## 23 1972 fw= 0.5169681 n.wet= 189 = 189 mu= 10.6 = 10.6
## 24 1973 fw= 0.446794 n.wet= 163 = 163 mu= 12.3 = 12.3
## 25 1974 fw= 0.4298971 n.wet= 157 = 157 mu= 13.4 = 13.4
## 26 1975 fw= 0.4615385 n.wet= 169 = 169 mu= 14.8 = 14.8
## 27 1976 fw= 0.563156 n.wet= 206 = 206 mu= 13.6 = 13.6
## 28 1977 fw= 0.4641557 n.wet= 170 = 170 mu= 12.3 = 12.3
## 29 1978 fw= 0.4978515 n.wet= 182 = 182 mu= 11.3 = 11.3
## 30 1979 fw= 0.4564635 n.wet= 167 = 167 mu= 12.2 = 12.2
## 31 1980 fw= 0.5064301 n.wet= 185 = 185 mu= 12.8 = 12.8
## 32 1981 fw= 0.3812466 n.wet= 139 = 139 mu= 9.9 = 9.9
## 33 1982 fw= 0.4899119 n.wet= 179 = 179 mu= 14 = 14
## 34 1983 fw= 0.4518618 n.wet= 165 = 165 mu= 13.1 = 13.1
## 35 1984 fw= 0.4089206 n.wet= 149 = 149 mu= 11.3 = 11.3
## 36 1985 fw= 0.4712357 n.wet= 172 = 172 mu= 10.4 = 10.3
## 37 1986 fw= 0.5815482 n.wet= 212 = 212 mu= 8.7 = 8.7
## 38 1987 fw= 0.4202152 n.wet= 153 = 153 mu= 13.3 = 13.3
## 39 1988 fw= 0.4907748 n.wet= 179 = 179 mu= 13.3 = 13.3
## 40 1989 fw= 0.3490478 n.wet= 127 = 127 mu= 13.2 = 13.2
## 41 1990 fw= 0.4399787 n.wet= 161 = 161 mu= 13 = 13
## 42 1991 fw= 0.4855413 n.wet= 177 = 177 mu= 11.9 = 11.9
## 43 1992 fw= 0.415509 n.wet= 152 = 152 mu= 13.1 = 13.1
## 44 1993 fw= 0.4738555 n.wet= 173 = 173 mu= 13.8 = 13.8
## 45 1994 fw= 0.4888036 n.wet= 179 = 179 mu= 11.4 = 11.4
## 46 1995 fw= 0.3891818 n.wet= 142 = 142 mu= 11.8 = 11.8
## 47 1996 fw= 0.3586826 n.wet= 131 = 131 mu= 13.1 = 13.1
## 48 1997 fw= 0.5077452 n.wet= 185 = 185 mu= 12.2 = 12.2
## 49 1998 fw= 0.4000498 n.wet= 146 = 146 mu= 12.6 = 12.6
## 50 1999 fw= 0.4210097 n.wet= 154 = 154 mu= 13.1 = 13.1
## 51 2000 fw= 0.3372824 n.wet= 123 = 123 mu= 14.2 = 14.2
## 52 2001 fw= 0.4699738 n.wet= 172 = 172 mu= 12.8 = 12.8
## 53 2002 fw= 0.4908678 n.wet= 179 = 179 mu= 10.5 = 10.5
## 54 2003 fw= 0.4702505 n.wet= 172 = 172 mu= 11.6 = 11.6
## 55 2004 fw= 0.4606753 n.wet= 168 = 168 mu= 11.6 = 11.6
## 56 2005 fw= 0.5572362 n.wet= 204 = 204 mu= 11.3 = 11.3
```

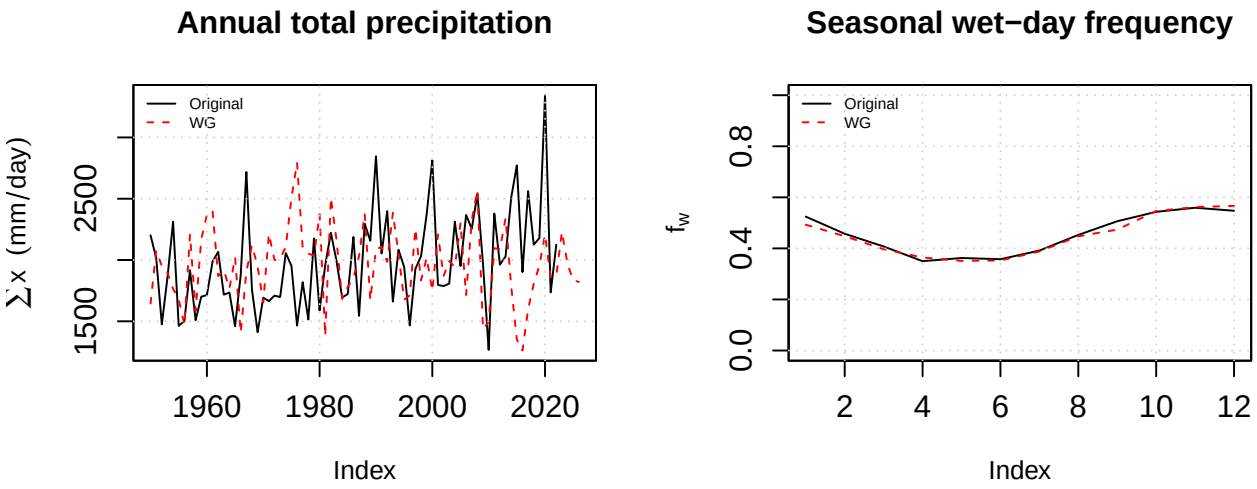
```
## 57 2006 fw= 0.3982957 n.wet= 145 = 145 mu= 11.8 = 11.8
## 58 2007 fw= 0.5034406 n.wet= 184 = 184 mu= 12.6 = 12.6
## 59 2008 fw= 0.5678964 n.wet= 207 = 207 mu= 12.4 = 12.4
## 60 2009 fw= 0.4200287 n.wet= 153 = 153 mu= 9.4 = 9.4
## 61 2010 fw= 0.4298953 n.wet= 157 = 157 mu= 9.5 = 9.5
## 62 2011 fw= 0.5265801 n.wet= 192 = 192 mu= 10.9 = 10.9
## 63 2012 fw= 0.4559005 n.wet= 167 = 167 mu= 12.5 = 12.5
## 64 2013 fw= 0.4971425 n.wet= 182 = 182 mu= 12.9 = 12.9
## 65 2014 fw= 0.4323143 n.wet= 158 = 158 mu= 11.3 = 11.3
## 66 2015 fw= 0.3719841 n.wet= 136 = 136 mu= 9.9 = 9.9
## 67 2016 fw= 0.3367613 n.wet= 123 = 123 mu= 10.3 = 10.3
## 68 2017 fw= 0.4699224 n.wet= 172 = 172 mu= 9.3 = 9.3
## 69 2018 fw= 0.5280485 n.wet= 193 = 193 mu= 9.4 = 9.4
## 70 2019 fw= 0.5070922 n.wet= 185 = 185 mu= 10.6 = 10.6
## 71 2020 fw= 0.4694544 n.wet= 171 = 171 mu= 12.9 = 12.9
## 72 2021 fw= 0.3774276 n.wet= 138 = 138 mu= 13.5 = 13.5
## 73 2022 fw= 0.4580308 n.wet= 167 = 167 mu= 11.2 = 11.2
## 74 2023 fw= 0.458654 n.wet= 168 = 168 mu= 13.3 = 13.3
## 75 2024 fw= 0.4233479 n.wet= 155 = 155 mu= 12.7 = 12.7
## 76 2025 fw= 0.4366503 n.wet= 159 = 159 mu= 11.5 = 11.5
## 77 2026 fw= 0.4306264 n.wet= 157 = 157 mu= 11.6 = 11.6
## [1] "Sort precipitation magnitudes"
## [1] "12630 observed wet days and 12532 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     1.3   6.743     9.0    95.8      15
## Feb       0       0     0.4   5.511     6.6    97.2       8
## Mar       0       0     0.1   4.446     4.5   105.3       7
## Apr       0       0     0.0   3.026     3.0    62.5      11
## May       0       0     0.0   3.152     3.1    71.6       2
## Jun       0       0     0.0   3.459     3.4    61.7       1
## Jul       0       0     0.0   3.964     4.0    71.4      NA
## Aug       0       0     0.3   5.514     6.9    76.3       4
## Sep       0       0     1.0   6.726     9.0    93.8       5
## Oct       0       0     1.6   7.848    10.5   111.4       5
## Nov       0       0     2.0   7.797    11.5    92.2       7
## Dec       0       0     1.5   7.496    10.5   110.7       5
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    0.0 6.099   8.200  95.3   NA
## Feb    0       0    0.0 4.959   6.100  69.5   NA
## Mar    0       0    0.0 4.313   5.050 119.9   NA
## Apr    0       0    0.0 3.339   3.600  94.3   NA
## May    0       0    0.0 3.156   3.000  96.0   NA
## Jun    0       0    0.0 3.764   3.775  90.6   NA
## Jul    0       0    0.0 4.091   4.700  89.1   NA
## Aug    0       0    0.0 5.242   6.800 110.1   NA
## Sep    0       0    0.0 6.372   8.300 114.2   NA
## Oct    0       0    2.3 7.640  10.800 136.7   NA
## Nov    0       0    2.6 7.837  11.200 102.3   NA
## Dec    0       0    2.6 7.689  11.100 103.5   NA
```

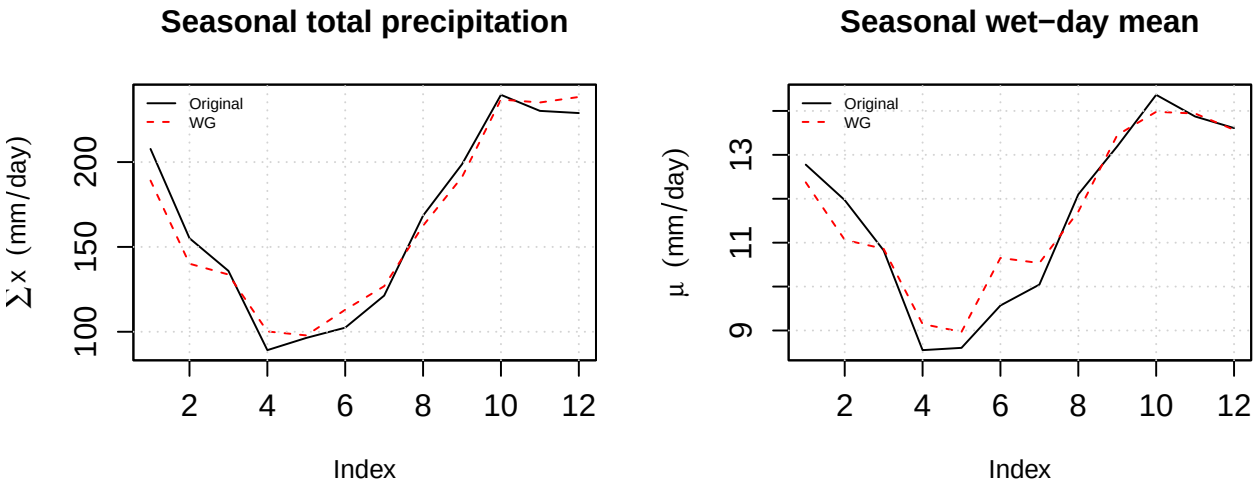

BAKKE wet−day amounts
WG amount (mm/day)
0
40
80
120
0
20
40
60
80
120
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
0
5
10
20
30
obs


Number of annual wet days
days
50
150
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
40
0
10
20
30
40
obs

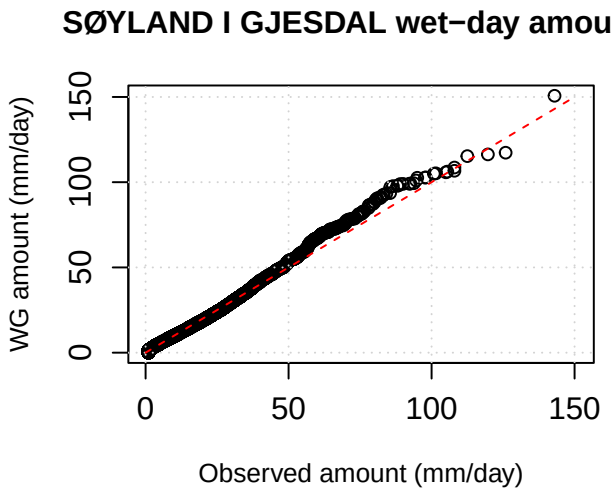


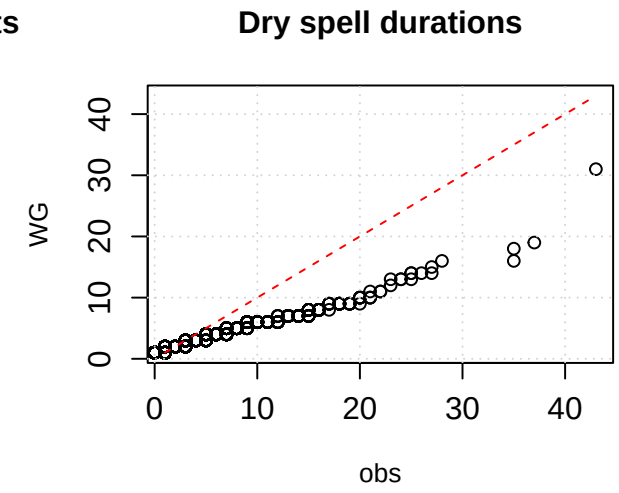


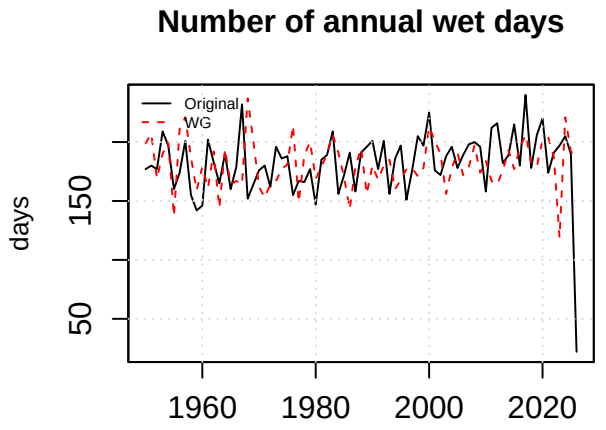

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for SØYLAND I GJESDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: SØYLAND I GJESDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3262
##  1st Qu.:1969   1st Qu.:0.4655
##  Median :1988   Median :0.5024
##  Mean   :1988   Mean   :0.5063
##  3rd Qu.:2007   3rd Qu.:0.5450
##  Max.   :2026   Max.   :0.6611
##      Index          c(mu)
##  Min.   :1950   Min.   : 8.906
##  1st Qu.:1969   1st Qu.:11.210
##  Median :1988   Median :12.258
##  Mean   :1988   Mean   :12.168
##  3rd Qu.:2007   3rd Qu.:13.066
##  Max.   :2026   Max.   :14.915
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.5450074 n.wet= 199 = 199 mu= 12.1 = 12.1
## 2 1951 fw= 0.5731737 n.wet= 209 = 209 mu= 14 = 14
```

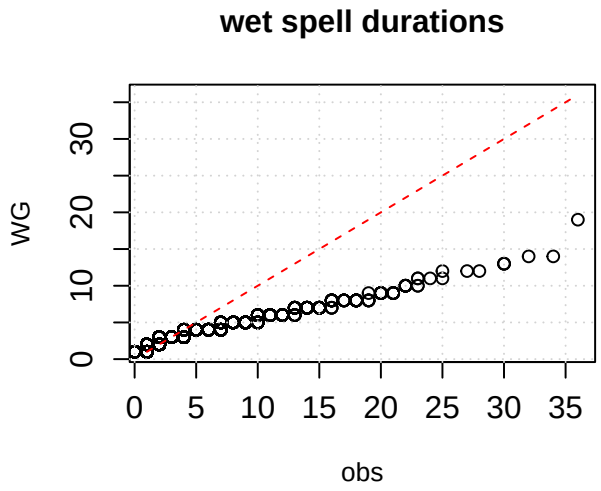
```
## 3 1952 fw= 0.4640559 n.wet= 169 = 169 mu= 13.2 = 13.2
## 4 1953 fw= 0.5258235 n.wet= 192 = 192 mu= 14.4 = 14.4
## 5 1954 fw= 0.5528162 n.wet= 202 = 202 mu= 14.2 = 14.2
## 6 1955 fw= 0.381455 n.wet= 139 = 139 mu= 12.9 = 12.9
## 7 1956 fw= 0.5936747 n.wet= 217 = 217 mu= 12.3 = 12.3
## 8 1957 fw= 0.617863 n.wet= 226 = 226 mu= 12.1 = 12.1
## 9 1958 fw= 0.5303308 n.wet= 194 = 194 mu= 13.2 = 13.2
## 10 1959 fw= 0.4494026 n.wet= 164 = 164 mu= 12.8 = 12.8
## 11 1960 fw= 0.4955616 n.wet= 181 = 181 mu= 14.9 = 14.9
## 12 1961 fw= 0.4549076 n.wet= 166 = 166 mu= 12.6 = 12.6
## 13 1962 fw= 0.5379377 n.wet= 196 = 196 mu= 13.3 = 13.3
## 14 1963 fw= 0.3999754 n.wet= 146 = 146 mu= 13.5 = 13.5
## 15 1964 fw= 0.5354994 n.wet= 196 = 196 mu= 12.2 = 12.2
## 16 1965 fw= 0.4628476 n.wet= 169 = 169 mu= 13.1 = 13.1
## 17 1966 fw= 0.4655448 n.wet= 170 = 170 mu= 12.3 = 12.3
## 18 1967 fw= 0.4603716 n.wet= 168 = 168 mu= 10.4 = 10.4
## 19 1968 fw= 0.6611389 n.wet= 241 = 241 mu= 10.2 = 10.2
## 20 1969 fw= 0.5688931 n.wet= 208 = 208 mu= 8.9 = 8.9
## 21 1970 fw= 0.4523465 n.wet= 165 = 165 mu= 10 = 10.1
## 22 1971 fw= 0.435069 n.wet= 159 = 159 mu= 12.3 = 12.3
## 23 1972 fw= 0.4574452 n.wet= 167 = 167 mu= 13.8 = 13.8
## 24 1973 fw= 0.465236 n.wet= 170 = 170 mu= 11.3 = 11.3
## 25 1974 fw= 0.4901667 n.wet= 179 = 179 mu= 10.8 = 10.9
## 26 1975 fw= 0.5155163 n.wet= 188 = 188 mu= 12.3 = 12.3
## 27 1976 fw= 0.6034584 n.wet= 220 = 220 mu= 11.8 = 11.8
## 28 1977 fw= 0.4268003 n.wet= 156 = 156 mu= 9.7 = 9.7
## 29 1978 fw= 0.5233261 n.wet= 191 = 191 mu= 10.6 = 10.6
## 30 1979 fw= 0.5693393 n.wet= 208 = 208 mu= 12.9 = 12.9
## 31 1980 fw= 0.4718753 n.wet= 172 = 172 mu= 10.9 = 10.9
## 32 1981 fw= 0.5017421 n.wet= 183 = 183 mu= 9.8 = 9.8
## 33 1982 fw= 0.535795 n.wet= 196 = 196 mu= 10.2 = 10.2
## 34 1983 fw= 0.5757014 n.wet= 210 = 210 mu= 11.5 = 11.5
## 35 1984 fw= 0.5453387 n.wet= 199 = 199 mu= 11.1 = 11.1
## 36 1985 fw= 0.4773005 n.wet= 174 = 174 mu= 11.4 = 11.4
## 37 1986 fw= 0.4047167 n.wet= 148 = 148 mu= 10.7 = 10.7
## 38 1987 fw= 0.4989818 n.wet= 182 = 182 mu= 14 = 14
## 39 1988 fw= 0.5459766 n.wet= 199 = 199 mu= 11.8 = 11.8
## 40 1989 fw= 0.432951 n.wet= 158 = 158 mu= 10.2 = 10.2
## 41 1990 fw= 0.5023607 n.wet= 183 = 183 mu= 12.3 = 12.3
## 42 1991 fw= 0.4812841 n.wet= 176 = 176 mu= 10.1 = 10.1
## 43 1992 fw= 0.5087809 n.wet= 186 = 186 mu= 12.1 = 12.1
## 44 1993 fw= 0.5103718 n.wet= 186 = 186 mu= 10.3 = 10.3
## 45 1994 fw= 0.4484667 n.wet= 164 = 164 mu= 11.2 = 11.2
## 46 1995 fw= 0.4773092 n.wet= 174 = 174 mu= 10 = 10
## 47 1996 fw= 0.4925889 n.wet= 180 = 180 mu= 12.2 = 12.2
## 48 1997 fw= 0.4891817 n.wet= 179 = 179 mu= 13.8 = 13.8
## 49 1998 fw= 0.4840983 n.wet= 177 = 177 mu= 11.6 = 11.6
## 50 1999 fw= 0.4972833 n.wet= 182 = 182 mu= 11.3 = 11.3
## 51 2000 fw= 0.5999847 n.wet= 219 = 219 mu= 12.8 = 12.8
## 52 2001 fw= 0.5599391 n.wet= 205 = 205 mu= 11.6 = 11.6
## 53 2002 fw= 0.5313499 n.wet= 194 = 194 mu= 10.1 = 10.1
## 54 2003 fw= 0.4325949 n.wet= 158 = 158 mu= 12.3 = 12.3
## 55 2004 fw= 0.5006616 n.wet= 183 = 183 mu= 12.4 = 12.4
## 56 2005 fw= 0.5290054 n.wet= 193 = 193 mu= 14.8 = 14.8
```

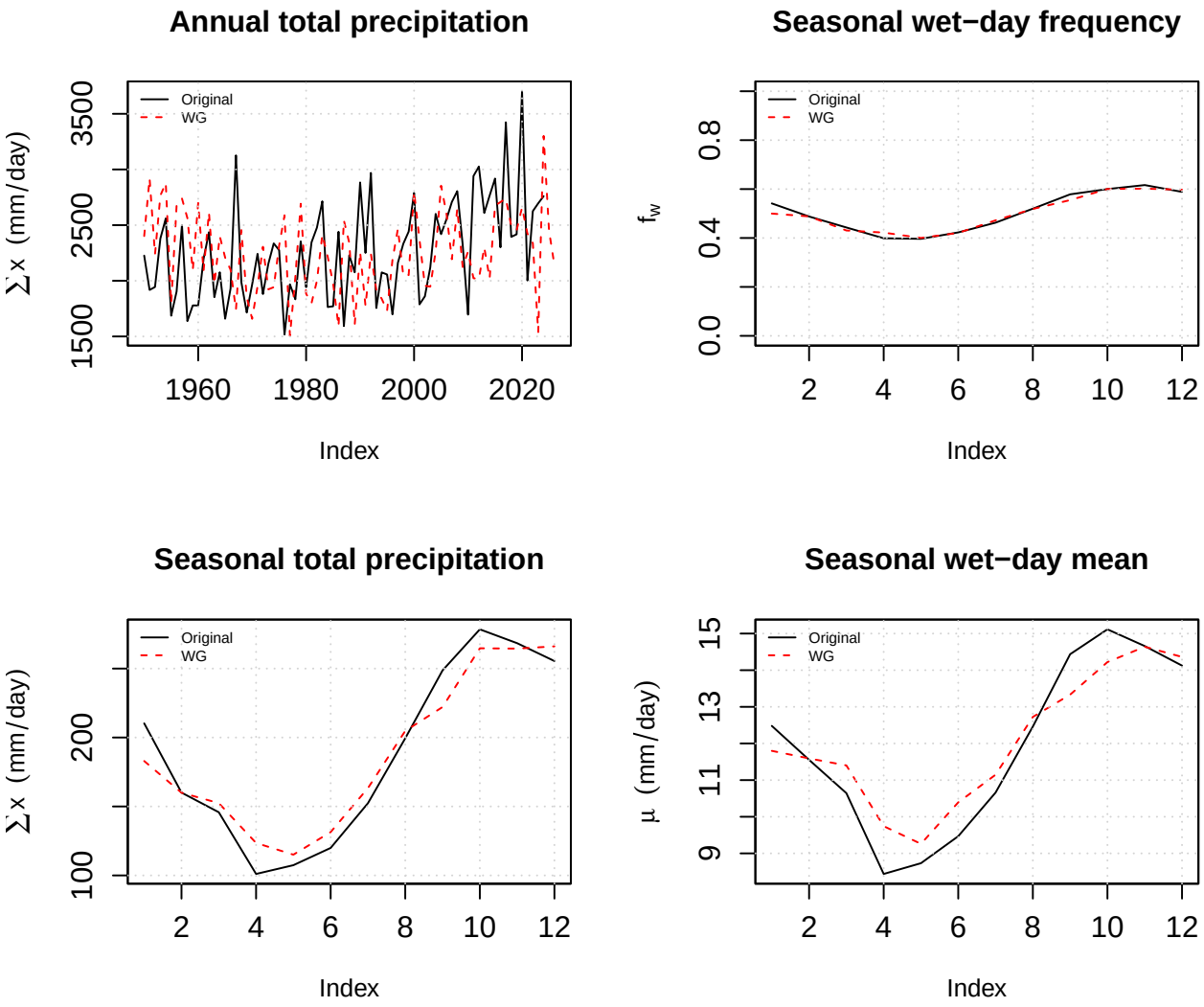
```
## 57 2006 fw= 0.4781063 n.wet= 175 = 175 mu= 14.9 = 14.9
## 58 2007 fw= 0.4909584 n.wet= 179 = 179 mu= 12.3 = 12.3
## 59 2008 fw= 0.5491022 n.wet= 201 = 201 mu= 13.2 = 13.2
## 60 2009 fw= 0.4877719 n.wet= 178 = 178 mu= 11.9 = 11.9
## 61 2010 fw= 0.5127971 n.wet= 187 = 187 mu= 12.1 = 12.1
## 62 2011 fw= 0.4613944 n.wet= 169 = 169 mu= 12 = 12
## 63 2012 fw= 0.4550886 n.wet= 166 = 166 mu= 12.1 = 12.1
## 64 2013 fw= 0.4820315 n.wet= 176 = 176 mu= 13.1 = 13.1
## 65 2014 fw= 0.5362649 n.wet= 196 = 196 mu= 10.3 = 10.3
## 66 2015 fw= 0.496453 n.wet= 181 = 181 mu= 14.8 = 14.8
## 67 2016 fw= 0.5538248 n.wet= 202 = 202 mu= 13.4 = 13.4
## 68 2017 fw= 0.5752087 n.wet= 210 = 210 mu= 13 = 13
## 69 2018 fw= 0.5091157 n.wet= 186 = 186 mu= 13.4 = 13.4
## 70 2019 fw= 0.5050529 n.wet= 184 = 184 mu= 13.3 = 13.3
## 71 2020 fw= 0.5629407 n.wet= 206 = 206 mu= 12.9 = 12.9
## 72 2021 fw= 0.5637256 n.wet= 206 = 206 mu= 11.8 = 11.8
## 73 2022 fw= 0.5150623 n.wet= 188 = 188 mu= 12.4 = 12.4
## 74 2023 fw= 0.3262343 n.wet= 119 = 119 mu= 12.9 = 12.9
## 75 2024 fw= 0.6142976 n.wet= 224 = 224 mu= 14.7 = 14.7
## 76 2025 fw= 0.5301824 n.wet= 194 = 194 mu= 12.6 = 12.6
## 77 2026 fw= 0.5280388 n.wet= 193 = 193 mu= 11.1 = 11.1
## [1] "Sort precipitation magnitudes"
## [1] "14032 observed wet days and 13950 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     1.5   6.800   9.500   112.5       6
## Feb       0       0     0.7   5.676   7.100    92.2       4
## Mar       0       0     0.3   4.759   5.600    85.5       1
## Apr       0       0     0.1   3.414   4.000    66.2       1
## May       0       0     0.1   3.512   4.250    54.7       1
## Jun       0       0     0.2   4.050   4.400    71.3      NA
## Jul       0       0     0.5   4.984   6.400   105.5       2
## Aug       0       0     1.2   6.526   8.900   119.7       3
## Sep       0       0     2.1   8.397  12.500   125.9      NA
## Oct       0       0     3.0   9.115  13.125   143.0       4
## Nov       0       0     3.2   9.072  13.975   108.0       2
## Dec       0       0     2.5   8.352  11.500   105.0       1
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    0.9 5.901    8.00  99.4   NA
## Feb    0       0    0.0 5.663    7.40  97.2   NA
## Mar    0       0    0.0 4.917    5.80  99.2   NA
## Apr    0       0    0.0 4.118    4.70 105.2   NA
## May    0       0    0.0 3.710    4.30  70.7   NA
## Jun    0       0    0.0 4.380    5.30  98.1   NA
## Jul    0       0    0.0 5.268    6.65 115.3   NA
## Aug    0       0    1.4 6.605    8.80 108.6   NA
## Sep    0       0    2.3 7.403   10.10 150.7   NA
## Oct    0       0    3.2 8.539   12.10 117.3   NA
## Nov    0       0    3.4 8.815   12.10 116.3   NA
## Dec    0       0    3.5 8.584   12.15 106.2   NA
```


SØYLAND I GJESDAL wet−day amounts
WG amount (mm/day)
0
50
100
150
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
40
obs


Number of annual wet days
days
Original
WG
50
150
1960
1980
2000
2020

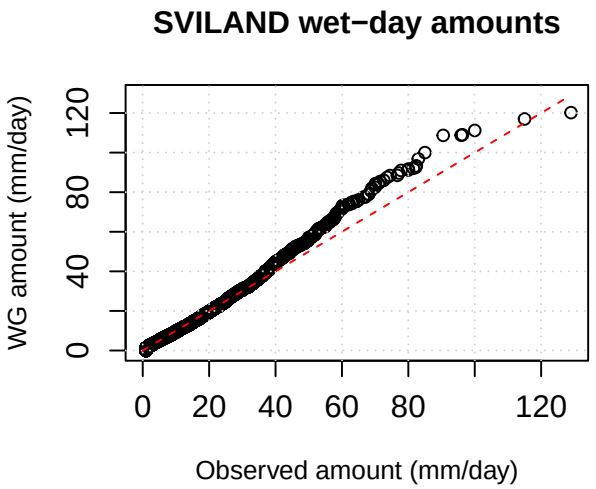

wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs

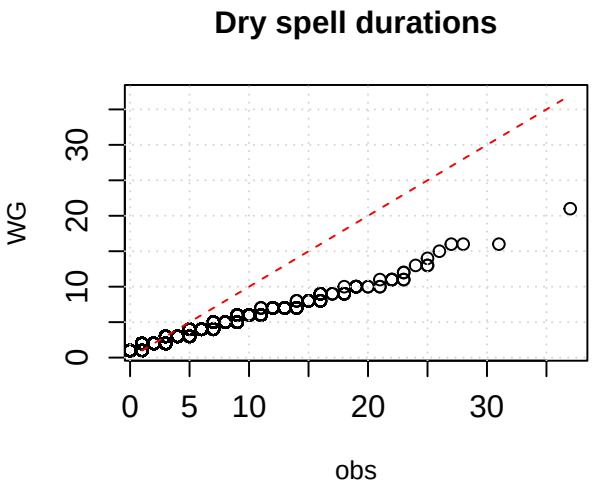


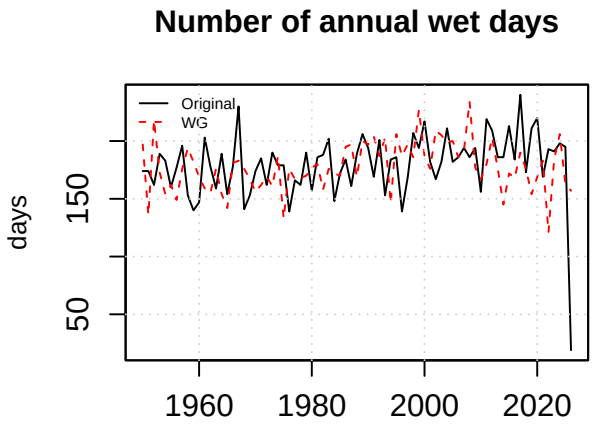

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for SVILAND"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: SVILAND"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3414
##  1st Qu.:1969   1st Qu.:0.4609
##  Median :1988   Median :0.4931
##  Mean   :1988   Mean   :0.4975
##  3rd Qu.:2007   3rd Qu.:0.5342
##  Max.   :2026   Max.   :0.6524
##      Index          c(mu)
##  Min.   :1950   Min.   : 8.066
##  1st Qu.:1969   1st Qu.: 9.662
##  Median :1988   Median :10.428
##  Mean   :1988   Mean   :10.341
##  3rd Qu.:2007   3rd Qu.:10.934
##  Max.   :2026   Max.   :13.258
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.5418751 n.wet= 198 = 198 mu= 10.5 = 10.5
## 2 1951 fw= 0.3830216 n.wet= 140 = 140 mu= 10.8 = 10.8
```

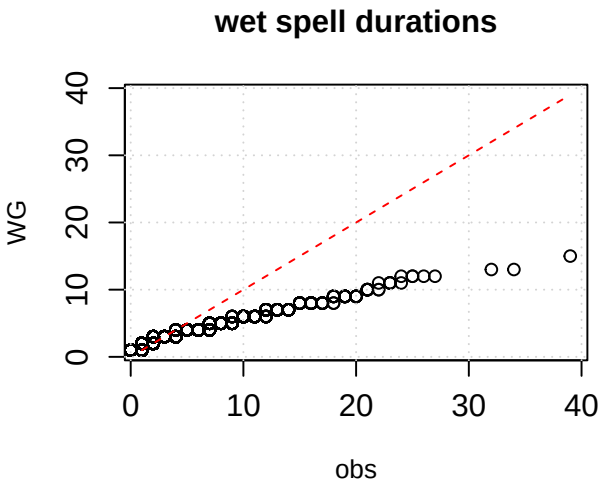
```
## 3 1952 fw= 0.6003978 n.wet= 219 = 219 mu= 10.5 = 10.5
## 4 1953 fw= 0.4881362 n.wet= 178 = 178 mu= 11.9 = 11.9
## 5 1954 fw= 0.4225015 n.wet= 154 = 154 mu= 10.6 = 10.6
## 6 1955 fw= 0.4531739 n.wet= 166 = 166 mu= 12.3 = 12.3
## 7 1956 fw= 0.4173756 n.wet= 152 = 152 mu= 11.2 = 11.2
## 8 1957 fw= 0.490209 n.wet= 179 = 179 mu= 11.2 = 11.2
## 9 1958 fw= 0.5320178 n.wet= 194 = 194 mu= 11.2 = 11.2
## 10 1959 fw= 0.5075229 n.wet= 185 = 185 mu= 10.6 = 10.6
## 11 1960 fw= 0.4727996 n.wet= 173 = 173 mu= 9.7 = 9.7
## 12 1961 fw= 0.4411932 n.wet= 161 = 161 mu= 11.7 = 11.7
## 13 1962 fw= 0.4294231 n.wet= 157 = 157 mu= 10.2 = 10.2
## 14 1963 fw= 0.4930998 n.wet= 180 = 180 mu= 10.3 = 10.3
## 15 1964 fw= 0.4316717 n.wet= 158 = 158 mu= 11 = 11
## 16 1965 fw= 0.3953263 n.wet= 144 = 144 mu= 10.5 = 10.5
## 17 1966 fw= 0.5149398 n.wet= 188 = 188 mu= 9.9 = 9.9
## 18 1967 fw= 0.5078907 n.wet= 186 = 186 mu= 9.2 = 9.2
## 19 1968 fw= 0.5031045 n.wet= 184 = 184 mu= 11.7 = 11.7
## 20 1969 fw= 0.4616649 n.wet= 169 = 169 mu= 13.3 = 13.3
## 21 1970 fw= 0.430527 n.wet= 157 = 157 mu= 10.8 = 10.8
## 22 1971 fw= 0.4504341 n.wet= 165 = 165 mu= 11.4 = 11.4
## 23 1972 fw= 0.4756853 n.wet= 174 = 174 mu= 9.3 = 9.3
## 24 1973 fw= 0.4522048 n.wet= 165 = 165 mu= 9.4 = 9.4
## 25 1974 fw= 0.5244677 n.wet= 192 = 192 mu= 10.4 = 10.4
## 26 1975 fw= 0.3845509 n.wet= 140 = 140 mu= 8.7 = 8.7
## 27 1976 fw= 0.4837635 n.wet= 177 = 177 mu= 9.1 = 9.1
## 28 1977 fw= 0.4618612 n.wet= 169 = 169 mu= 10.5 = 10.5
## 29 1978 fw= 0.4609476 n.wet= 168 = 168 mu= 10.5 = 10.5
## 30 1979 fw= 0.4846873 n.wet= 177 = 177 mu= 10.5 = 10.5
## 31 1980 fw= 0.4878978 n.wet= 178 = 178 mu= 11 = 11
## 32 1981 fw= 0.5102697 n.wet= 186 = 186 mu= 9.4 = 9.4
## 33 1982 fw= 0.4403982 n.wet= 161 = 161 mu= 11.4 = 11.4
## 34 1983 fw= 0.5006099 n.wet= 183 = 183 mu= 11.4 = 11.4
## 35 1984 fw= 0.491365 n.wet= 179 = 179 mu= 9 = 9
## 36 1985 fw= 0.4836638 n.wet= 177 = 177 mu= 10.4 = 10.4
## 37 1986 fw= 0.538686 n.wet= 197 = 197 mu= 8.8 = 8.8
## 38 1987 fw= 0.5567147 n.wet= 203 = 203 mu= 10.3 = 10.3
## 39 1988 fw= 0.4681758 n.wet= 171 = 171 mu= 9.7 = 9.7
## 40 1989 fw= 0.5556791 n.wet= 203 = 203 mu= 10.8 = 10.8
## 41 1990 fw= 0.5432927 n.wet= 198 = 198 mu= 10.3 = 10.3
## 42 1991 fw= 0.5676492 n.wet= 207 = 207 mu= 10.4 = 10.4
## 43 1992 fw= 0.5178345 n.wet= 189 = 189 mu= 9.7 = 9.7
## 44 1993 fw= 0.5817587 n.wet= 212 = 212 mu= 8.4 = 8.4
## 45 1994 fw= 0.4140575 n.wet= 151 = 151 mu= 10.6 = 10.6
## 46 1995 fw= 0.594342 n.wet= 217 = 217 mu= 10.5 = 10.5
## 47 1996 fw= 0.5342418 n.wet= 195 = 195 mu= 11.9 = 11.9
## 48 1997 fw= 0.5524467 n.wet= 202 = 202 mu= 10.4 = 10.4
## 49 1998 fw= 0.520208 n.wet= 190 = 190 mu= 10.3 = 10.3
## 50 1999 fw= 0.6267398 n.wet= 229 = 229 mu= 8.9 = 8.9
## 51 2000 fw= 0.5151896 n.wet= 188 = 188 mu= 8.1 = 8.1
## 52 2001 fw= 0.4929835 n.wet= 180 = 180 mu= 10 = 10
## 53 2002 fw= 0.5912443 n.wet= 216 = 216 mu= 9.2 = 9.2
## 54 2003 fw= 0.5781104 n.wet= 211 = 211 mu= 9.8 = 9.8
## 55 2004 fw= 0.563817 n.wet= 206 = 206 mu= 8.7 = 8.7
## 56 2005 fw= 0.5710635 n.wet= 209 = 209 mu= 9.6 = 9.6
```

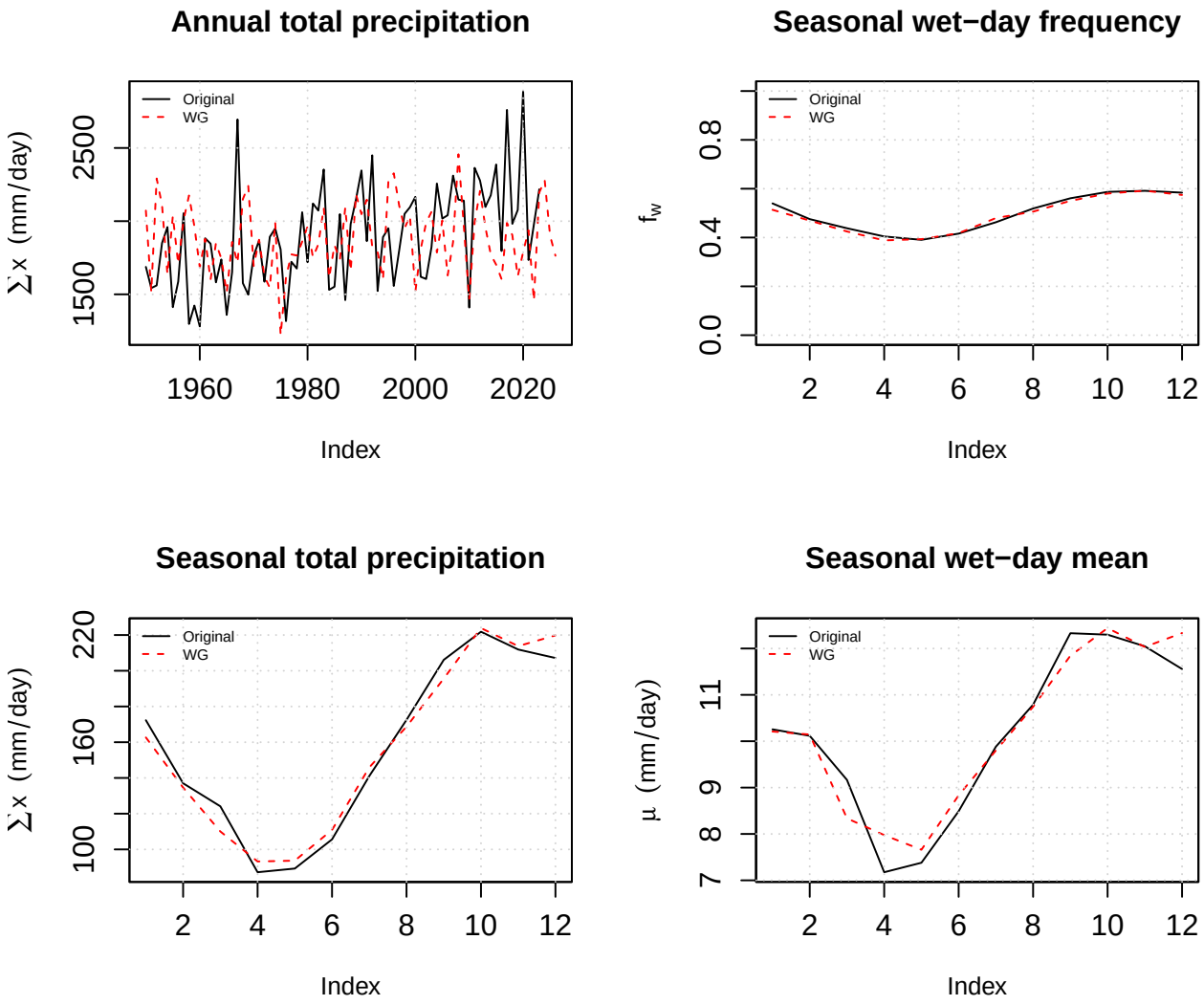
```
## 57 2006 fw= 0.5136991 n.wet= 188 = 188 mu= 8.7 = 8.7
## 58 2007 fw= 0.5391931 n.wet= 197 = 197 mu= 9.4 = 9.4
## 59 2008 fw= 0.6523871 n.wet= 238 = 238 mu= 10.3 = 10.3
## 60 2009 fw= 0.5061914 n.wet= 185 = 185 mu= 10.6 = 10.6
## 61 2010 fw= 0.468435 n.wet= 171 = 171 mu= 8.6 = 8.6
## 62 2011 fw= 0.5022561 n.wet= 183 = 183 mu= 10.9 = 10.9
## 63 2012 fw= 0.5733136 n.wet= 209 = 209 mu= 10.6 = 10.6
## 64 2013 fw= 0.4911029 n.wet= 179 = 179 mu= 10.9 = 10.9
## 65 2014 fw= 0.4153371 n.wet= 152 = 152 mu= 11.7 = 11.7
## 66 2015 fw= 0.4834562 n.wet= 177 = 177 mu= 9.6 = 9.6
## 67 2016 fw= 0.4611113 n.wet= 168 = 168 mu= 9.5 = 9.5
## 68 2017 fw= 0.5302689 n.wet= 194 = 194 mu= 10.2 = 10.2
## 69 2018 fw= 0.5186925 n.wet= 189 = 189 mu= 10.1 = 10.1
## 70 2019 fw= 0.4373169 n.wet= 160 = 160 mu= 10.1 = 10.1
## 71 2020 fw= 0.4706131 n.wet= 172 = 172 mu= 10.4 = 10.4
## 72 2021 fw= 0.503831 n.wet= 184 = 184 mu= 10.5 = 10.5
## 73 2022 fw= 0.3414245 n.wet= 125 = 125 mu= 11.6 = 11.7
## 74 2023 fw= 0.528706 n.wet= 193 = 193 mu= 11.4 = 11.4
## 75 2024 fw= 0.5841263 n.wet= 213 = 213 mu= 10.7 = 10.7
## 76 2025 fw= 0.4506654 n.wet= 165 = 165 mu= 11.5 = 11.5
## 77 2026 fw= 0.440251 n.wet= 161 = 161 mu= 11 = 11
## [1] "Sort precipitation magnitudes"
## [1] "13817 observed wet days and 13665 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan      -1       0     1.5   5.577     8.4    74.5       8
## Feb       0       0     0.7   4.859     6.5    71.5       4
## Mar       0       0     0.3   4.060     5.0    82.4       6
## Apr       0       0     0.1   2.948     3.4    62.0       2
## May       0       0     0.1   2.928     3.5    39.0       8
## Jun       0       0     0.2   3.575     4.5    59.9       6
## Jul       0       0     0.5   4.618     5.8   100.0       4
## Aug       0       0     1.1   5.645     7.9    90.5       3
## Sep       0       0     2.0   6.963    10.5    95.9       1
## Oct       0       0     2.4   7.259    11.0   129.0       3
## Nov       0       0     2.5   7.168    11.1   115.0       4
## Dec       0       0     2.2   6.787     9.9    83.0       6
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    1.2 5.247   7.100  86.0   NA
## Feb    0       0    0.0 4.765   6.400 111.2   NA
## Mar    0       0    0.0 3.549   4.150 100.0   NA
## Apr    0       0    0.0 3.107   3.400  66.4   NA
## May    0       0    0.0 3.022   3.300 117.0   NA
## Jun    0       0    0.0 3.696   4.700 108.7   NA
## Jul    0       0    0.0 4.707   6.400  78.9   NA
## Aug    0       0    1.1 5.441   7.500  88.4   NA
## Sep    0       0    2.2 6.520   8.975 108.8   NA
## Oct    0       0    2.8 7.222  10.200  93.3   NA
## Nov    0       0    2.9 7.126  10.275  96.8   NA
## Dec    0       0    2.7 7.090  10.200 120.2   NA
```


SVILAND wet−day amounts
WG amount (mm/day)
0
40
80
120
0
20
40
60
80
120
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
0
5
10
20
30
obs


Number of annual wet days
days
50
150
Original
WG
1960
1980
2000
2020

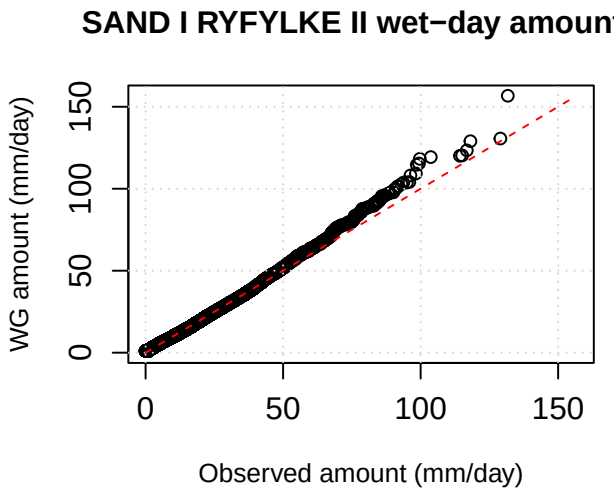

wet spell durations
WG
0
10
20
30
40
0
10
20
30
40
obs

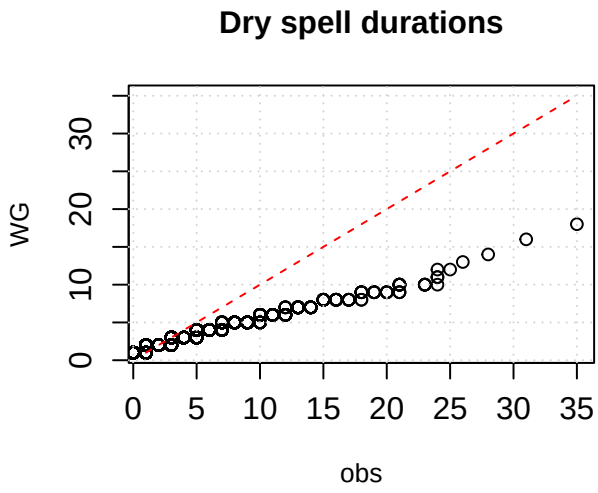


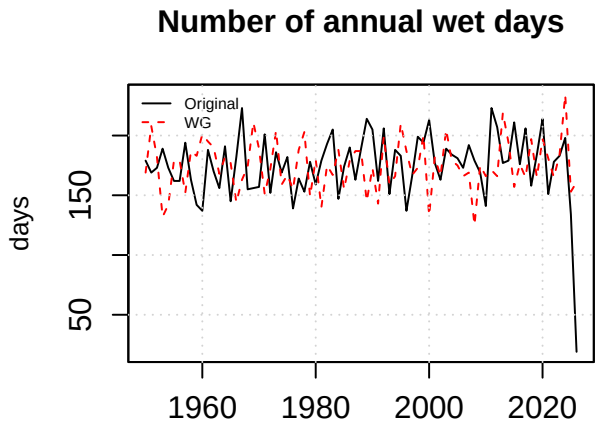

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for SAND I RYFYLKE II"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: SAND I RYFYLKE II"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3467
##  1st Qu.:1969   1st Qu.:0.4538
##  Median :1988   Median :0.4874
##  Mean   :1988   Mean   :0.4874
##  3rd Qu.:2007   3rd Qu.:0.5197
##  Max.   :2026   Max.   :0.6535
##      Index          c(mu)
##  Min.   :1950   Min.   : 8.621
##  1st Qu.:1969   1st Qu.:11.876
##  Median :1988   Median :12.876
##  Mean   :1988   Mean   :12.886
##  3rd Qu.:2007   3rd Qu.:13.621
##  Max.   :2026   Max.   :16.865
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.4662429 n.wet= 170 = 170 mu= 12.5 = 12.5
## 2 1951 fw= 0.5718332 n.wet= 209 = 209 mu= 15.1 = 15.1
```

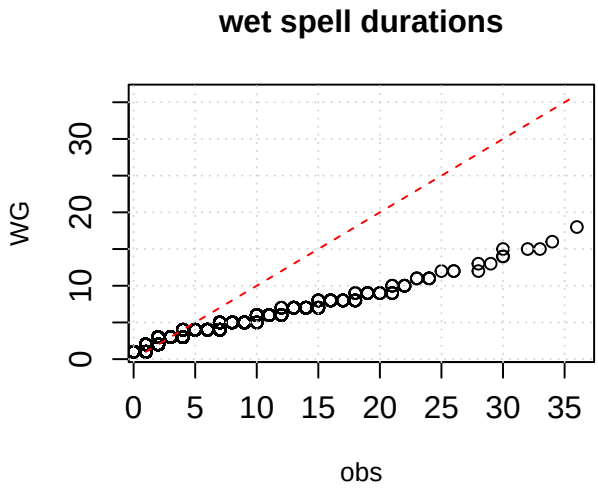
```
## 3 1952 fw= 0.5009191 n.wet= 183 = 183 mu= 15.8 = 15.8
## 4 1953 fw= 0.3672106 n.wet= 134 = 134 mu= 16.9 = 16.9
## 5 1954 fw= 0.3925953 n.wet= 143 = 143 mu= 14.3 = 14.3
## 6 1955 fw= 0.5072525 n.wet= 185 = 185 mu= 15.9 = 15.9
## 7 1956 fw= 0.4938135 n.wet= 180 = 180 mu= 13.9 = 13.9
## 8 1957 fw= 0.4193243 n.wet= 153 = 153 mu= 15.4 = 15.4
## 9 1958 fw= 0.5119131 n.wet= 187 = 187 mu= 15.1 = 15.1
## 10 1959 fw= 0.5149646 n.wet= 188 = 188 mu= 13.2 = 13.2
## 11 1960 fw= 0.5626253 n.wet= 205 = 205 mu= 14.5 = 14.5
## 12 1961 fw= 0.5537961 n.wet= 202 = 202 mu= 13 = 13
## 13 1962 fw= 0.5262029 n.wet= 192 = 192 mu= 14.8 = 14.8
## 14 1963 fw= 0.4646688 n.wet= 170 = 170 mu= 13.6 = 13.6
## 15 1964 fw= 0.5089431 n.wet= 186 = 186 mu= 14.3 = 14.3
## 16 1965 fw= 0.4883653 n.wet= 178 = 178 mu= 13.8 = 13.8
## 17 1966 fw= 0.4085318 n.wet= 149 = 149 mu= 12.9 = 12.9
## 18 1967 fw= 0.4519745 n.wet= 165 = 165 mu= 13.2 = 13.2
## 19 1968 fw= 0.4832712 n.wet= 177 = 177 mu= 12 = 12
## 20 1969 fw= 0.5871827 n.wet= 214 = 214 mu= 13.1 = 13.1
## 21 1970 fw= 0.5179426 n.wet= 189 = 189 mu= 15.3 = 15.3
## 22 1971 fw= 0.4181573 n.wet= 153 = 153 mu= 12.6 = 12.6
## 23 1972 fw= 0.4858632 n.wet= 177 = 177 mu= 12.3 = 12.3
## 24 1973 fw= 0.5661436 n.wet= 207 = 207 mu= 10.8 = 10.8
## 25 1974 fw= 0.4607521 n.wet= 168 = 168 mu= 11.2 = 11.2
## 26 1975 fw= 0.474406 n.wet= 173 = 173 mu= 11.8 = 11.8
## 27 1976 fw= 0.4240493 n.wet= 155 = 155 mu= 11.9 = 11.9
## 28 1977 fw= 0.5197428 n.wet= 190 = 190 mu= 11.6 = 11.6
## 29 1978 fw= 0.5700538 n.wet= 208 = 208 mu= 12.8 = 12.8
## 30 1979 fw= 0.414874 n.wet= 152 = 152 mu= 13 = 13
## 31 1980 fw= 0.5011369 n.wet= 183 = 183 mu= 13.1 = 13.1
## 32 1981 fw= 0.3994221 n.wet= 146 = 146 mu= 13.1 = 13.1
## 33 1982 fw= 0.5067808 n.wet= 185 = 185 mu= 8.6 = 8.6
## 34 1983 fw= 0.4602435 n.wet= 168 = 168 mu= 10.9 = 10.9
## 35 1984 fw= 0.5300409 n.wet= 194 = 194 mu= 9.2 = 9.2
## 36 1985 fw= 0.4278568 n.wet= 156 = 156 mu= 10.9 = 10.9
## 37 1986 fw= 0.4977966 n.wet= 182 = 182 mu= 12.8 = 12.8
## 38 1987 fw= 0.5311727 n.wet= 194 = 194 mu= 13.6 = 13.6
## 39 1988 fw= 0.5138745 n.wet= 188 = 188 mu= 12.6 = 12.6
## 40 1989 fw= 0.4165694 n.wet= 152 = 152 mu= 11.9 = 11.9
## 41 1990 fw= 0.4861737 n.wet= 178 = 178 mu= 9.7 = 9.7
## 42 1991 fw= 0.3992368 n.wet= 146 = 146 mu= 11.7 = 11.7
## 43 1992 fw= 0.5607005 n.wet= 205 = 205 mu= 12.9 = 12.9
## 44 1993 fw= 0.4355865 n.wet= 159 = 159 mu= 12.6 = 12.6
## 45 1994 fw= 0.4660126 n.wet= 170 = 170 mu= 13.5 = 13.5
## 46 1995 fw= 0.5930442 n.wet= 217 = 217 mu= 12.5 = 12.5
## 47 1996 fw= 0.5284313 n.wet= 193 = 193 mu= 12.6 = 12.6
## 48 1997 fw= 0.4728821 n.wet= 173 = 173 mu= 13.4 = 13.4
## 49 1998 fw= 0.4730365 n.wet= 173 = 173 mu= 11.2 = 11.2
## 50 1999 fw= 0.5560715 n.wet= 203 = 203 mu= 13.2 = 13.2
## 51 2000 fw= 0.3736755 n.wet= 136 = 136 mu= 13.3 = 13.3
## 52 2001 fw= 0.5027516 n.wet= 184 = 184 mu= 11.6 = 11.6
## 53 2002 fw= 0.4593586 n.wet= 168 = 168 mu= 13.6 = 13.6
## 54 2003 fw= 0.5721211 n.wet= 209 = 209 mu= 11.9 = 11.9
## 55 2004 fw= 0.4967963 n.wet= 181 = 181 mu= 12.9 = 12.9
## 56 2005 fw= 0.487443 n.wet= 178 = 178 mu= 14.2 = 14.2
```

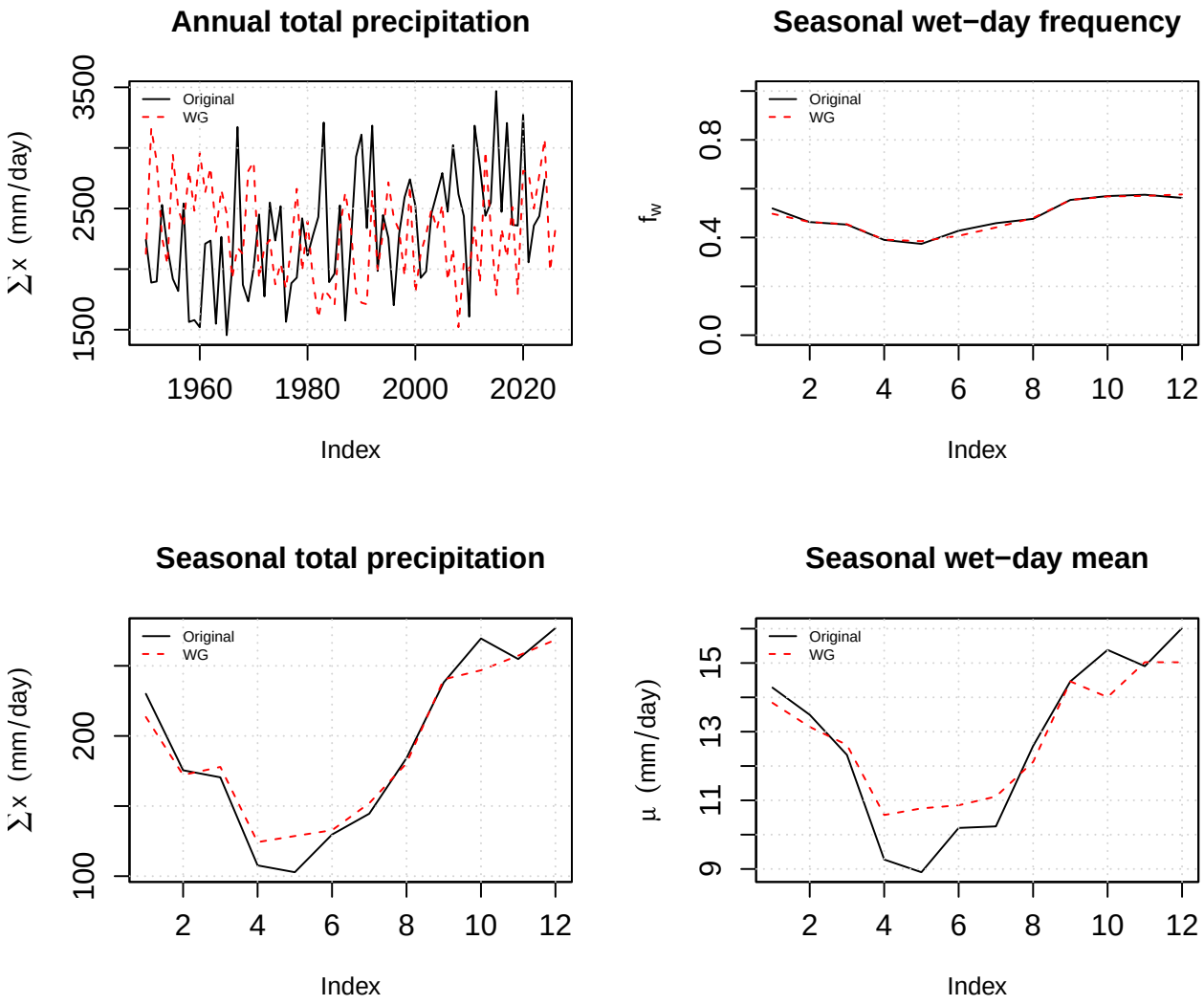
```
## 57 2006 fw= 0.4537602 n.wet= 166 = 166 mu= 11.5 = 11.5
## 58 2007 fw= 0.471013 n.wet= 172 = 172 mu= 12.6 = 12.6
## 59 2008 fw= 0.346725 n.wet= 127 = 127 mu= 12 = 12
## 60 2009 fw= 0.4900443 n.wet= 179 = 179 mu= 11.5 = 11.5
## 61 2010 fw= 0.4646434 n.wet= 170 = 170 mu= 11.7 = 11.7
## 62 2011 fw= 0.4880949 n.wet= 178 = 178 mu= 13.2 = 13.2
## 63 2012 fw= 0.4616743 n.wet= 169 = 169 mu= 11.2 = 11.2
## 64 2013 fw= 0.6066183 n.wet= 222 = 222 mu= 13.4 = 13.4
## 65 2014 fw= 0.5362946 n.wet= 196 = 196 mu= 12 = 12
## 66 2015 fw= 0.4297425 n.wet= 157 = 157 mu= 11.4 = 11.4
## 67 2016 fw= 0.4842984 n.wet= 177 = 177 mu= 13.2 = 13.2
## 68 2017 fw= 0.4599723 n.wet= 168 = 168 mu= 12.5 = 12.5
## 69 2018 fw= 0.5432689 n.wet= 198 = 198 mu= 12.7 = 12.7
## 70 2019 fw= 0.4612551 n.wet= 168 = 168 mu= 10.7 = 10.7
## 71 2020 fw= 0.5485883 n.wet= 200 = 200 mu= 14.1 = 14.1
## 72 2021 fw= 0.5071768 n.wet= 185 = 185 mu= 15.1 = 15.1
## 73 2022 fw= 0.4524379 n.wet= 165 = 165 mu= 15.1 = 15.1
## 74 2023 fw= 0.5147891 n.wet= 188 = 188 mu= 14.8 = 14.8
## 75 2024 fw= 0.6534701 n.wet= 239 = 239 mu= 12.9 = 12.9
## 76 2025 fw= 0.4243838 n.wet= 155 = 155 mu= 12.8 = 12.8
## 77 2026 fw= 0.4526236 n.wet= 165 = 165 mu= 14.2 = 14.2
## [1] "Sort precipitation magnitudes"
## [1] "13453 observed wet days and 13461 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0    1.40   7.452  11.300   114.3   10
## Feb       0       0    0.40   6.285   8.100    93.7   25
## Mar       0       0    0.30   5.614   7.400    98.6   22
## Apr       0       0    0.00   3.658   4.400    67.6   14
## May       0       0    0.00   3.371   4.000    53.6    8
## Jun       0       0    0.20   4.405   5.300    84.4   13
## Jul       0       0    0.50   4.744   5.700    75.3   10
## Aug       0       0    0.65   6.050   7.900    93.0   12
## Sep       0       0    1.80   8.058  11.425    96.3    4
## Oct       0       0    2.40   8.811  13.000   103.7    1
## Nov       0       0    2.30   8.610  12.300   131.7    1
## Dec       0       0    2.20   9.050  13.700   129.0   NA
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    0.9 6.887   9.550 120.3   NA
## Feb    0       0    0.0 6.094   8.150  96.0   NA
## Mar    0       0    0.0 5.738   7.400  94.1   NA
## Apr    0       0    0.0 4.142   4.675 102.8   NA
## May    0       0    0.0 4.149   4.800  87.8   NA
## Jun    0       0    0.0 4.425   5.000 101.5   NA
## Jul    0       0    0.0 4.905   5.800 103.8   NA
## Aug    0       0    0.0 5.821   7.800  97.8   NA
## Sep    0       0    2.2 8.012  10.700 129.0   NA
## Oct    0       0    2.7 7.962  11.300 123.4   NA
## Nov    0       0    2.9 8.575  11.975 156.7   NA
## Dec    0       0    3.3 8.663  11.900 130.6   NA
```


SAND I RYFYLKE II wet−day amounts
WG amount (mm/day)
0
50
100
150
0
50
100
150
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs


Number of annual wet days
days
50
150
Original
WG
1960
1980
2000
2020

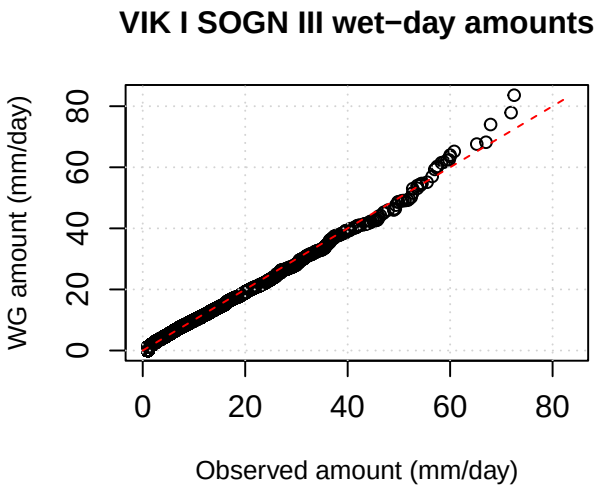

wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs

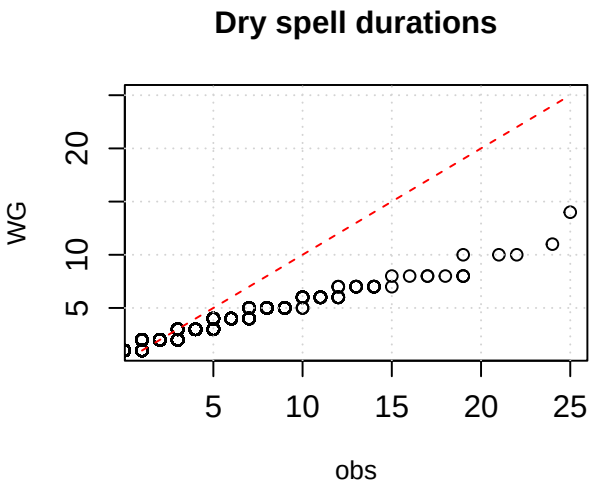


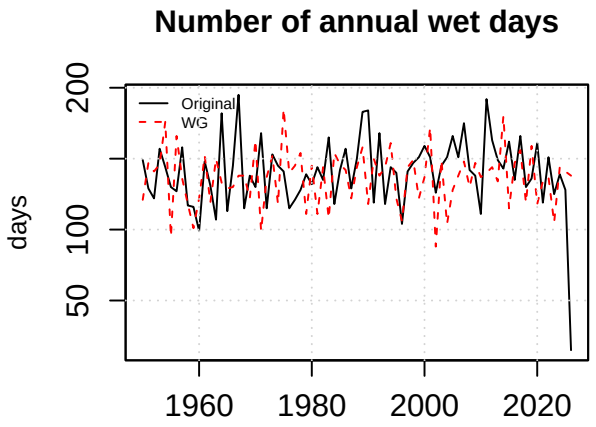

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for VIK I SOGN III"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: VIK I SOGN III"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2538
##  1st Qu.:1969   1st Qu.:0.3426
##  Median :1988   Median :0.3937
##  Mean   :1988   Mean   :0.3891
##  3rd Qu.:2007   3rd Qu.:0.4277
##  Max.   :2026   Max.   :0.5164
##      Index          c(mu)
##  Min.   :1950   Min.   :5.668
##  1st Qu.:1969   1st Qu.:6.958
##  Median :1988   Median :7.636
##  Mean   :1988   Mean   :7.556
##  3rd Qu.:2007   3rd Qu.:8.075
##  Max.   :2026   Max.   :9.681
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3337057 n.wet= 122 = 122 mu= 9.1 = 9.1
## 2 1951 fw= 0.4188684 n.wet= 153 = 153 mu= 7 = 7
```

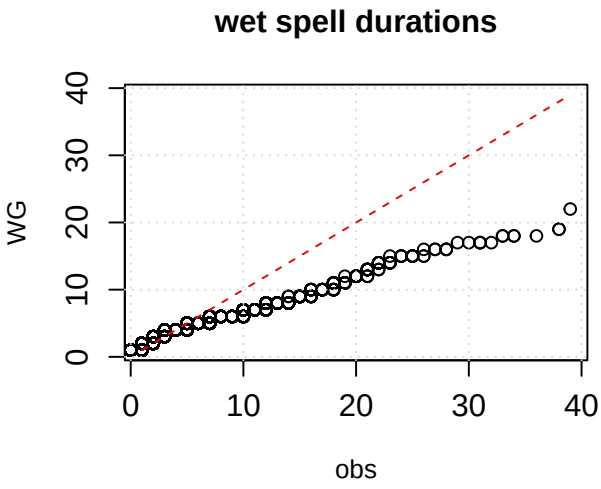
```
## 3 1952 fw= 0.3886932 n.wet= 142 = 142 mu= 8.1 = 8.1
## 4 1953 fw= 0.4187131 n.wet= 153 = 153 mu= 8 = 8
## 5 1954 fw= 0.5092007 n.wet= 186 = 186 mu= 8 = 7.9
## 6 1955 fw= 0.2891958 n.wet= 106 = 106 mu= 6.5 = 6.5
## 7 1956 fw= 0.4730023 n.wet= 173 = 173 mu= 6.3 = 6.3
## 8 1957 fw= 0.3926709 n.wet= 143 = 143 mu= 7.7 = 7.7
## 9 1958 fw= 0.3398407 n.wet= 124 = 124 mu= 9.4 = 9.4
## 10 1959 fw= 0.2863516 n.wet= 105 = 105 mu= 8.7 = 8.7
## 11 1960 fw= 0.3425998 n.wet= 125 = 125 mu= 9.7 = 9.7
## 12 1961 fw= 0.4308112 n.wet= 157 = 157 mu= 6.9 = 6.9
## 13 1962 fw= 0.3553235 n.wet= 130 = 130 mu= 7.8 = 7.8
## 14 1963 fw= 0.4291454 n.wet= 157 = 157 mu= 7.5 = 7.5
## 15 1964 fw= 0.3681764 n.wet= 134 = 134 mu= 7.6 = 7.6
## 16 1965 fw= 0.3795641 n.wet= 139 = 139 mu= 8.6 = 8.6
## 17 1966 fw= 0.3679571 n.wet= 134 = 134 mu= 7.5 = 7.5
## 18 1967 fw= 0.3936734 n.wet= 144 = 144 mu= 8 = 8
## 19 1968 fw= 0.3893994 n.wet= 142 = 142 mu= 7.4 = 7.4
## 20 1969 fw= 0.3599664 n.wet= 131 = 131 mu= 6.6 = 6.6
## 21 1970 fw= 0.460936 n.wet= 168 = 168 mu= 7 = 7
## 22 1971 fw= 0.2941762 n.wet= 107 = 107 mu= 6.7 = 6.7
## 23 1972 fw= 0.3840964 n.wet= 140 = 140 mu= 8.2 = 8.2
## 24 1973 fw= 0.4439144 n.wet= 162 = 162 mu= 6 = 6
## 25 1974 fw= 0.3342869 n.wet= 122 = 122 mu= 8.6 = 8.6
## 26 1975 fw= 0.5163696 n.wet= 189 = 189 mu= 7.2 = 7.2
## 27 1976 fw= 0.3990312 n.wet= 146 = 146 mu= 7.8 = 7.8
## 28 1977 fw= 0.4301941 n.wet= 157 = 157 mu= 6.4 = 6.4
## 29 1978 fw= 0.4325584 n.wet= 158 = 158 mu= 6.3 = 6.3
## 30 1979 fw= 0.3089196 n.wet= 113 = 113 mu= 8.4 = 8.4
## 31 1980 fw= 0.4196127 n.wet= 153 = 153 mu= 7.4 = 7.4
## 32 1981 fw= 0.3060792 n.wet= 112 = 112 mu= 7 = 7
## 33 1982 fw= 0.4093837 n.wet= 150 = 150 mu= 8.3 = 8.3
## 34 1983 fw= 0.3186058 n.wet= 116 = 116 mu= 6.6 = 6.6
## 35 1984 fw= 0.4286517 n.wet= 157 = 157 mu= 8.1 = 8.1
## 36 1985 fw= 0.4182103 n.wet= 153 = 153 mu= 7.7 = 7.7
## 37 1986 fw= 0.3974563 n.wet= 145 = 145 mu= 7.9 = 7.9
## 38 1987 fw= 0.3336678 n.wet= 122 = 122 mu= 7.8 = 7.8
## 39 1988 fw= 0.4298413 n.wet= 157 = 157 mu= 5.9 = 6
## 40 1989 fw= 0.4492727 n.wet= 164 = 164 mu= 7.6 = 7.6
## 41 1990 fw= 0.3225654 n.wet= 118 = 118 mu= 9.2 = 9.2
## 42 1991 fw= 0.4323373 n.wet= 158 = 158 mu= 7 = 7
## 43 1992 fw= 0.4009431 n.wet= 146 = 146 mu= 5.7 = 5.7
## 44 1993 fw= 0.4085382 n.wet= 149 = 149 mu= 7.8 = 7.8
## 45 1994 fw= 0.4713477 n.wet= 172 = 172 mu= 8.4 = 8.4
## 46 1995 fw= 0.3330626 n.wet= 122 = 122 mu= 9.4 = 9.4
## 47 1996 fw= 0.2984409 n.wet= 109 = 109 mu= 7.9 = 7.9
## 48 1997 fw= 0.399708 n.wet= 146 = 146 mu= 7.8 = 7.8
## 49 1998 fw= 0.4222431 n.wet= 154 = 154 mu= 7.6 = 7.6
## 50 1999 fw= 0.3397061 n.wet= 124 = 124 mu= 7.7 = 7.7
## 51 2000 fw= 0.3885758 n.wet= 142 = 142 mu= 7.6 = 7.6
## 52 2001 fw= 0.4914318 n.wet= 179 = 179 mu= 8.6 = 8.6
## 53 2002 fw= 0.2538146 n.wet= 93 = 93 mu= 8.2 = 8.2
## 54 2003 fw= 0.4277418 n.wet= 156 = 156 mu= 7.4 = 7.4
## 55 2004 fw= 0.3017617 n.wet= 110 = 110 mu= 8.1 = 8.1
## 56 2005 fw= 0.3604984 n.wet= 132 = 132 mu= 8.1 = 8.1
```

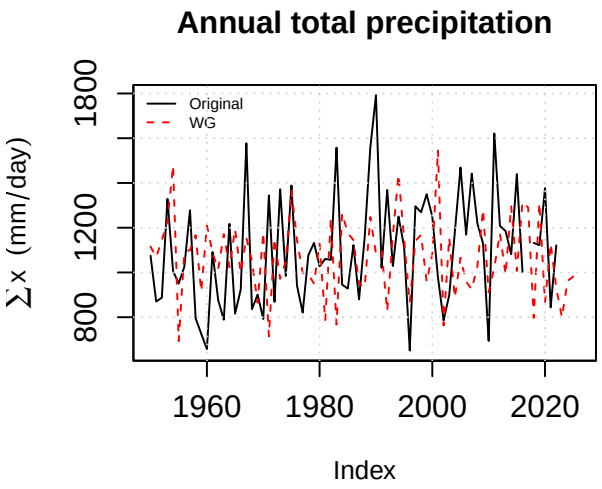
```
## 57 2006 fw= 0.3935946 n.wet= 144 = 144 mu= 6.7 = 6.7
## 58 2007 fw= 0.4290923 n.wet= 157 = 157 mu= 5.9 = 5.9
## 59 2008 fw= 0.3928629 n.wet= 143 = 143 mu= 7.2 = 7.2
## 60 2009 fw= 0.4171176 n.wet= 152 = 152 mu= 8.4 = 8.4
## 61 2010 fw= 0.3894469 n.wet= 142 = 142 mu= 6.4 = 6.4
## 62 2011 fw= 0.3984761 n.wet= 146 = 146 mu= 7 = 7
## 63 2012 fw= 0.40413 n.wet= 148 = 148 mu= 7.9 = 7.9
## 64 2013 fw= 0.3869648 n.wet= 141 = 141 mu= 7 = 7
## 65 2014 fw= 0.512251 n.wet= 187 = 187 mu= 6.9 = 6.9
## 66 2015 fw= 0.3215236 n.wet= 117 = 117 mu= 8.6 = 8.6
## 67 2016 fw= 0.417109 n.wet= 152 = 152 mu= 8.7 = 8.7
## 68 2017 fw= 0.43524 n.wet= 159 = 159 mu= 8.1 = 8.1
## 69 2018 fw= 0.3508503 n.wet= 128 = 128 mu= 6.2 = 6.2
## 70 2019 fw= 0.4564817 n.wet= 167 = 167 mu= 7.9 = 7.9
## 71 2020 fw= 0.3368548 n.wet= 123 = 123 mu= 7.1 = 7.1
## 72 2021 fw= 0.3715196 n.wet= 136 = 136 mu= 8.3 = 8.3
## 73 2022 fw= 0.4103996 n.wet= 150 = 150 mu= 6.2 = 6.2
## 74 2023 fw= 0.2930639 n.wet= 107 = 107 mu= 7.5 = 7.5
## 75 2024 fw= 0.4050228 n.wet= 148 = 148 mu= 6.5 = 6.5
## 76 2025 fw= 0.4191039 n.wet= 153 = 153 mu= 6.4 = 6.4
## 77 2026 fw= 0.3865237 n.wet= 141 = 141 mu= 7.2 = 7.2
## [1] "Sort precipitation magnitudes"
## [1] "10777 observed wet days and 10501 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.2   3.959   4.500    67.9      17
## Feb       0       0     0.1   3.079   3.125    52.7       7
## Mar       0       0     0.0   2.675   2.500    72.5       6
## Apr       0       0     0.0   1.560   1.100    47.9      11
## May       0       0     0.0   1.483   1.300    41.7      11
## Jun       0       0     0.0   1.909   2.100    33.9       2
## Jul       0       0     0.2   2.246   2.800    41.7      24
## Aug       0       0     0.3   2.637   3.200    54.2       8
## Sep       0       0     0.7   3.999   5.300    59.4      12
## Oct       0       0     0.6   4.331   5.600    54.5       6
## Nov       0       0     0.3   4.027   4.800    67.0       8
## Dec       0       0     0.5   4.468   6.000    58.3       7
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 3.648     4.7 77.9   NA
## Feb    0       0      0 2.754     3.5 46.3   NA
## Mar    0       0      0 2.488     2.6 51.6   NA
## Apr    0       0      0 1.574     1.1 41.0   NA
## May    0       0      0 1.500     1.3 41.3   NA
## Jun    0       0      0 1.932     2.1 62.3   NA
## Jul    0       0      0 2.441     3.0 49.1   NA
## Aug    0       0      0 2.778     3.6 46.0   NA
## Sep    0       0      0 3.605     4.9 65.2   NA
## Oct    0       0      0 4.231     6.1 83.6   NA
## Nov    0       0      0 4.019     5.5 67.6   NA
## Dec    0       0      0 4.120     5.4 74.0   NA
```

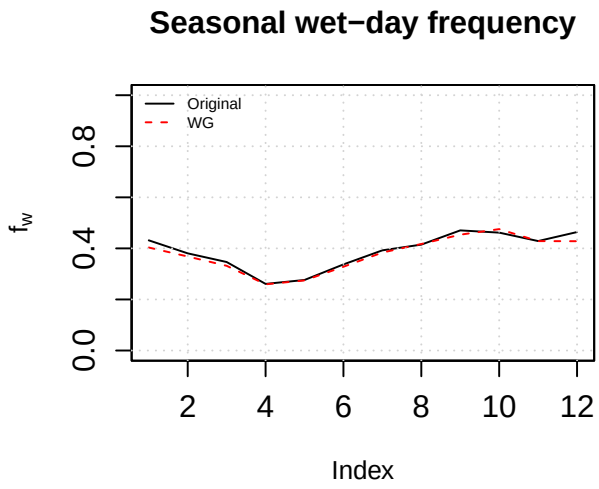

VIK I SOGN III wet−day amounts
WG amount (mm/day)
0
20
40
60
80
0
20
40
60
80
Observed amount (mm/day)

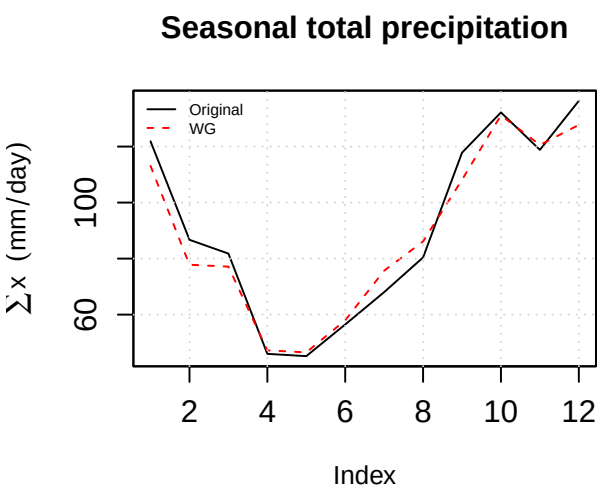

Dry spell durations
WG
5
10
20
5
10
15
20
25
obs

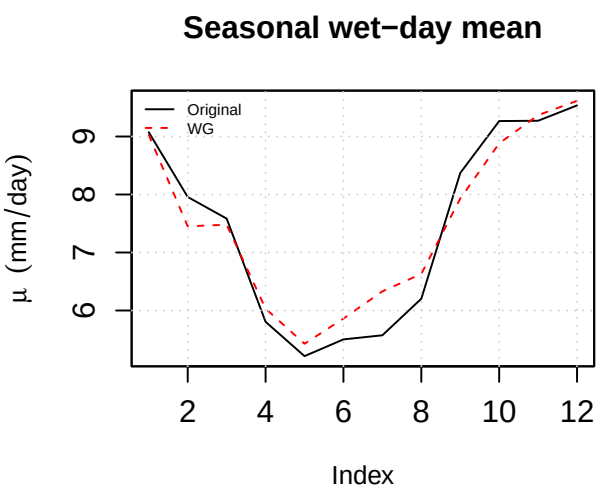

Number of annual wet days
days
50
100
200
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
40
0
10
20
30
40
obs





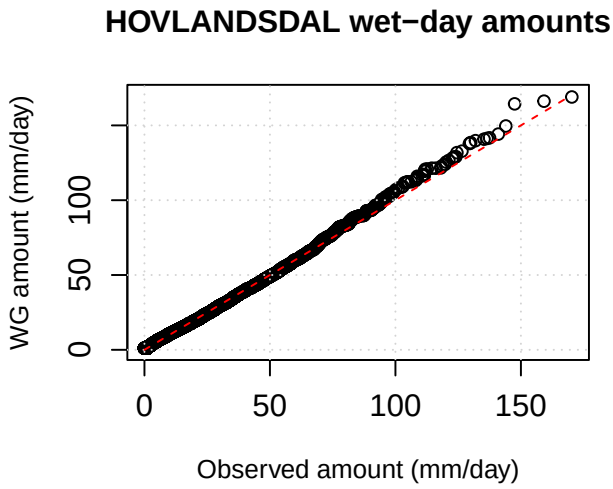


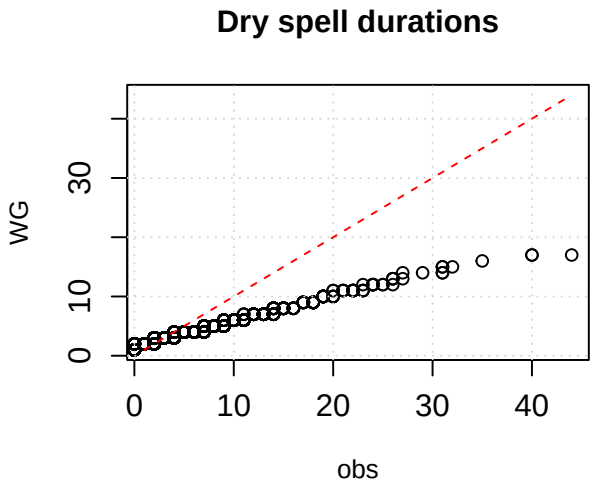


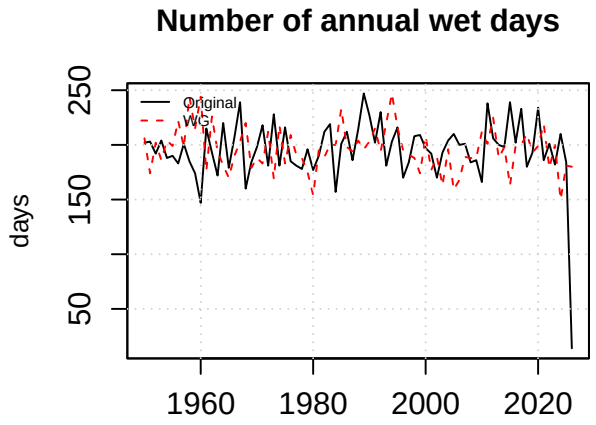

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for HOVLANDSDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: HOVLANDSDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.4124
##  1st Qu.:1969   1st Qu.:0.5113
##  Median :1988   Median :0.5450
##  Mean   :1988   Mean   :0.5427
##  3rd Qu.:2007   3rd Qu.:0.5730
##  Max.   :2026   Max.   :0.6859
##      Index          c(mu)
##  Min.   :1950   Min.   :11.68
##  1st Qu.:1969   1st Qu.:14.68
##  Median :1988   Median :15.77
##  Mean   :1988   Mean   :15.96
##  3rd Qu.:2007   3rd Qu.:17.51
##  Max.   :2026   Max.   :20.48
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.5705111 n.wet= 208 = 208 mu= 15.9 = 15.9
## 2 1951 fw= 0.4764741 n.wet= 174 = 174 mu= 17.4 = 17.4
```

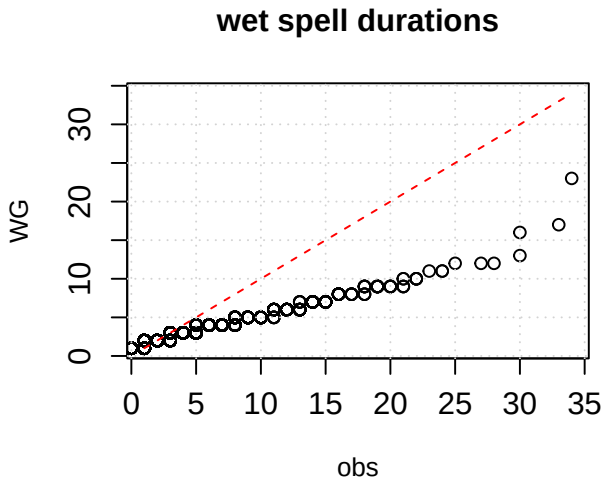
```
## 3 1952 fw= 0.5671374 n.wet= 207 = 207 mu= 14.8 = 14.8
## 4 1953 fw= 0.5116374 n.wet= 187 = 187 mu= 15.1 = 15.1
## 5 1954 fw= 0.561532 n.wet= 205 = 205 mu= 18.2 = 18.2
## 6 1955 fw= 0.5525085 n.wet= 202 = 202 mu= 17.7 = 17.7
## 7 1956 fw= 0.6123106 n.wet= 224 = 224 mu= 17.5 = 17.5
## 8 1957 fw= 0.5504951 n.wet= 201 = 201 mu= 15.9 = 15.9
## 9 1958 fw= 0.6709694 n.wet= 245 = 245 mu= 18.4 = 18.4
## 10 1959 fw= 0.5890494 n.wet= 215 = 215 mu= 15 = 15
## 11 1960 fw= 0.6858842 n.wet= 251 = 251 mu= 16 = 16
## 12 1961 fw= 0.5112913 n.wet= 187 = 187 mu= 15.2 = 15.2
## 13 1962 fw= 0.6260713 n.wet= 229 = 229 mu= 18.5 = 18.5
## 14 1963 fw= 0.539791 n.wet= 197 = 197 mu= 15.4 = 15.4
## 15 1964 fw= 0.5018447 n.wet= 183 = 183 mu= 13.5 = 13.5
## 16 1965 fw= 0.4697751 n.wet= 172 = 172 mu= 19.5 = 19.5
## 17 1966 fw= 0.5195266 n.wet= 190 = 190 mu= 19.3 = 19.3
## 18 1967 fw= 0.5571096 n.wet= 203 = 203 mu= 13 = 13
## 19 1968 fw= 0.6116162 n.wet= 223 = 223 mu= 14.4 = 14.4
## 20 1969 fw= 0.5001382 n.wet= 183 = 183 mu= 14.8 = 14.8
## 21 1970 fw= 0.5253239 n.wet= 192 = 192 mu= 17.6 = 17.6
## 22 1971 fw= 0.5022333 n.wet= 183 = 183 mu= 12.8 = 12.8
## 23 1972 fw= 0.5950577 n.wet= 217 = 217 mu= 16 = 16
## 24 1973 fw= 0.4769702 n.wet= 174 = 174 mu= 16 = 16
## 25 1974 fw= 0.5985598 n.wet= 219 = 219 mu= 14.7 = 14.7
## 26 1975 fw= 0.5022372 n.wet= 183 = 183 mu= 17.3 = 17.3
## 27 1976 fw= 0.5850871 n.wet= 214 = 214 mu= 15.8 = 15.8
## 28 1977 fw= 0.5295732 n.wet= 193 = 193 mu= 15.4 = 15.4
## 29 1978 fw= 0.5150253 n.wet= 188 = 188 mu= 13.6 = 13.6
## 30 1979 fw= 0.4869419 n.wet= 178 = 178 mu= 15.3 = 15.3
## 31 1980 fw= 0.4350338 n.wet= 159 = 159 mu= 15.8 = 15.8
## 32 1981 fw= 0.5503371 n.wet= 201 = 201 mu= 16.2 = 16.2
## 33 1982 fw= 0.5253872 n.wet= 192 = 192 mu= 12.4 = 12.4
## 34 1983 fw= 0.5529472 n.wet= 202 = 202 mu= 13.6 = 13.6
## 35 1984 fw= 0.5484732 n.wet= 200 = 200 mu= 15.9 = 15.9
## 36 1985 fw= 0.6389309 n.wet= 233 = 233 mu= 11.7 = 11.7
## 37 1986 fw= 0.5551313 n.wet= 203 = 203 mu= 14.5 = 14.5
## 38 1987 fw= 0.5332395 n.wet= 195 = 195 mu= 18.1 = 18.1
## 39 1988 fw= 0.5730017 n.wet= 209 = 209 mu= 14.9 = 14.9
## 40 1989 fw= 0.5389287 n.wet= 197 = 197 mu= 14.6 = 14.6
## 41 1990 fw= 0.5717177 n.wet= 209 = 209 mu= 15.2 = 15.2
## 42 1991 fw= 0.5900733 n.wet= 216 = 216 mu= 17.7 = 17.7
## 43 1992 fw= 0.5451587 n.wet= 199 = 199 mu= 18.1 = 18.1
## 44 1993 fw= 0.6019077 n.wet= 220 = 220 mu= 14.1 = 14.1
## 45 1994 fw= 0.6785948 n.wet= 248 = 248 mu= 16.5 = 16.5
## 46 1995 fw= 0.5967319 n.wet= 218 = 218 mu= 15 = 15
## 47 1996 fw= 0.5392368 n.wet= 197 = 197 mu= 20.5 = 20.5
## 48 1997 fw= 0.5253307 n.wet= 192 = 192 mu= 16.3 = 16.3
## 49 1998 fw= 0.516662 n.wet= 189 = 189 mu= 20.1 = 20.1
## 50 1999 fw= 0.4798983 n.wet= 175 = 175 mu= 19.6 = 19.6
## 51 2000 fw= 0.5753075 n.wet= 210 = 210 mu= 15.8 = 15.8
## 52 2001 fw= 0.4867182 n.wet= 178 = 178 mu= 13.7 = 13.7
## 53 2002 fw= 0.5162479 n.wet= 189 = 189 mu= 19.2 = 19.2
## 54 2003 fw= 0.4539736 n.wet= 166 = 166 mu= 14.5 = 14.5
## 55 2004 fw= 0.5469515 n.wet= 200 = 200 mu= 12.9 = 12.9
## 56 2005 fw= 0.4364893 n.wet= 159 = 159 mu= 12.3 = 12.3
```

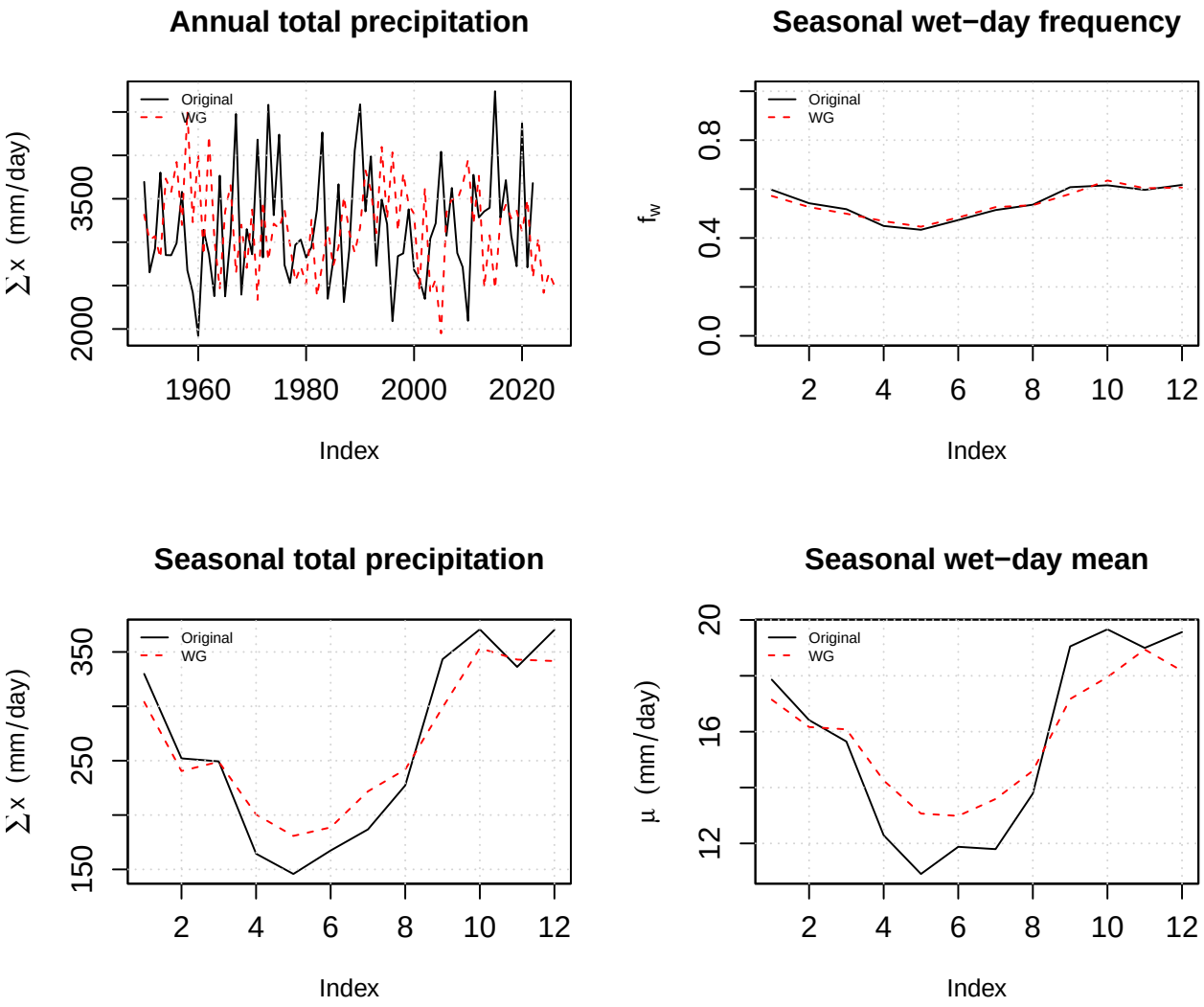
```
## 57 2006 fw= 0.46664 n.wet= 170 = 170 mu= 19.7 = 19.7
## 58 2007 fw= 0.5217948 n.wet= 191 = 191 mu= 18.3 = 18.3
## 59 2008 fw= 0.5211637 n.wet= 190 = 190 mu= 18.3 = 18.3
## 60 2009 fw= 0.5171726 n.wet= 189 = 189 mu= 19.4 = 19.4
## 61 2010 fw= 0.5917133 n.wet= 216 = 216 mu= 18.3 = 18.3
## 62 2011 fw= 0.5611517 n.wet= 205 = 205 mu= 15.7 = 15.7
## 63 2012 fw= 0.628446 n.wet= 230 = 230 mu= 16.4 = 16.4
## 64 2013 fw= 0.5244704 n.wet= 192 = 192 mu= 12.9 = 12.9
## 65 2014 fw= 0.5557326 n.wet= 203 = 203 mu= 15.2 = 15.2
## 66 2015 fw= 0.448352 n.wet= 164 = 164 mu= 15 = 15
## 67 2016 fw= 0.5450002 n.wet= 199 = 199 mu= 16.4 = 16.4
## 68 2017 fw= 0.5616639 n.wet= 205 = 205 mu= 16.7 = 16.7
## 69 2018 fw= 0.580289 n.wet= 212 = 212 mu= 15.4 = 15.4
## 70 2019 fw= 0.5354276 n.wet= 196 = 196 mu= 17.2 = 17.2
## 71 2020 fw= 0.5564373 n.wet= 203 = 203 mu= 15.4 = 15.4
## 72 2021 fw= 0.6131192 n.wet= 224 = 224 mu= 15.6 = 15.6
## 73 2022 fw= 0.491705 n.wet= 180 = 180 mu= 14.4 = 14.4
## 74 2023 fw= 0.548047 n.wet= 200 = 200 mu= 15.2 = 15.2
## 75 2024 fw= 0.4123933 n.wet= 151 = 151 mu= 16 = 16
## 76 2025 fw= 0.4982178 n.wet= 182 = 182 mu= 14.5 = 14.5
## 77 2026 fw= 0.4956862 n.wet= 181 = 181 mu= 13.8 = 13.8
## [1] "Sort precipitation magnitudes"
## [1] "15048 observed wet days and 15077 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0     0.0     3.1  10.700  14.970   141.0      13
## Feb       0     0.0     1.7   8.933  12.500   147.5       2
## Mar       0     0.0     1.4   8.136  10.300   136.5      NA
## Apr       0     0.0     0.4   5.565   6.300   103.0       5
## May       0     0.0     0.2   4.773   5.500    93.8       4
## Jun       0     0.0     0.6   5.657   6.500   123.2       2
## Jul       0     0.0     1.2   6.112   8.400   118.3       3
## Aug       0     0.0     1.4   7.439   9.825    94.4       4
## Sep       0     0.1     3.4  11.620  16.980   170.3       6
## Oct       0     0.1     4.0  12.140  18.350   131.9       5
## Nov       0     0.0     3.4  11.380  16.700   129.5       4
## Dec       0     0.0     4.2  12.110  17.700   137.5       1
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu.  Max. NA's
## Jan    0       0    3.1  9.807   13.20 141.7   NA
## Feb    0       0    1.8  8.513   11.30 144.2   NA
## Mar    0       0    0.9  8.033   11.35 128.9   NA
## Apr    0       0    0.0  6.684    8.40 128.0   NA
## May    0       0    0.0  5.832    7.10 132.8   NA
## Jun    0       0    0.0  6.287    7.80 112.2   NA
## Jul    0       0    1.5  7.154    9.80 108.7   NA
## Aug    0       0    1.7  7.801   10.10 139.8   NA
## Sep    0       0    3.2  9.964   13.30 149.6   NA
## Oct    0       0    5.0 11.400   16.35 164.4   NA
## Nov    0       0    4.5 11.430   15.00 169.0   NA
## Dec    0       0    4.4 11.020   15.45 138.2   NA
```


HOVLANDSDAL wet−day amounts
WG amount (mm/day)
0
50
100
0
50
100
150
Observed amount (mm/day)


Dry spell durations
WG
0
10
30
0
10
20
30
40
obs


Number of annual wet days
days
50
150
250
Original
WG
1960
1980
2000
2020

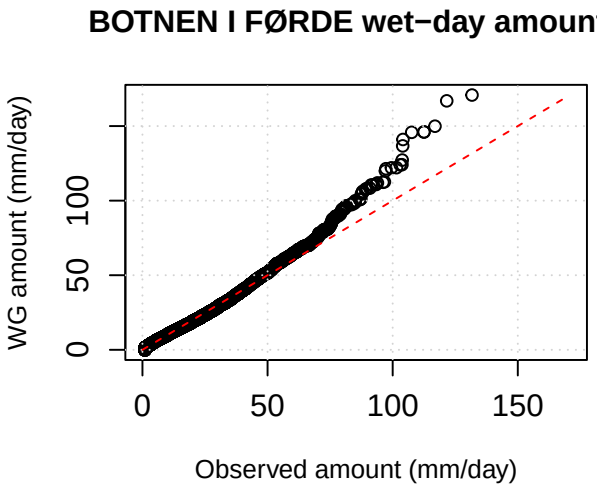

wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs

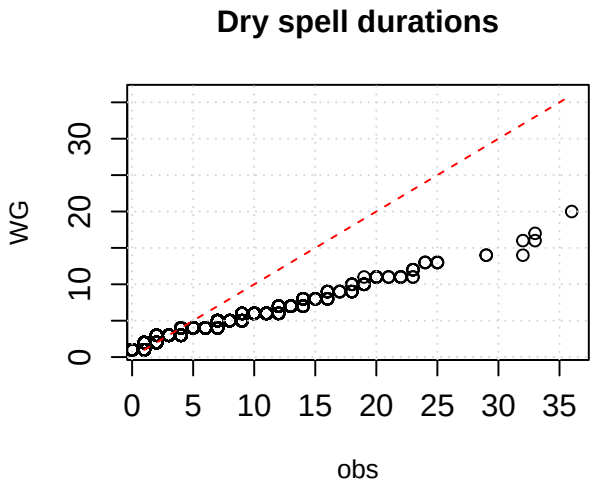


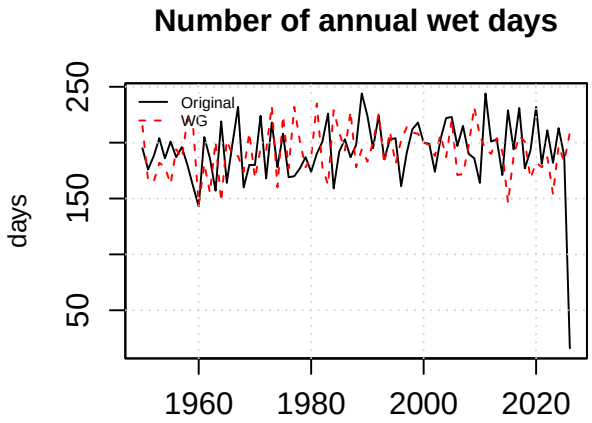

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for BOTNEN I FØRDE"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: BOTNEN I FØRDE"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3960
##  1st Qu.:1969   1st Qu.:0.4929
##  Median :1988   Median :0.5330
##  Mean   :1988   Mean   :0.5336
##  3rd Qu.:2007   3rd Qu.:0.5752
##  Max.   :2026   Max.   :0.6517
##      Index          c(mu)
##  Min.   :1950   Min.   :10.32
##  1st Qu.:1969   1st Qu.:12.54
##  Median :1988   Median :13.54
##  Mean   :1988   Mean   :13.63
##  3rd Qu.:2007   3rd Qu.:14.78
##  Max.   :2026   Max.   :17.11
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.5905878 n.wet= 216 = 216 mu= 16.4 = 16.4
## 2 1951 fw= 0.4558569 n.wet= 167 = 167 mu= 16.6 = 16.6
```

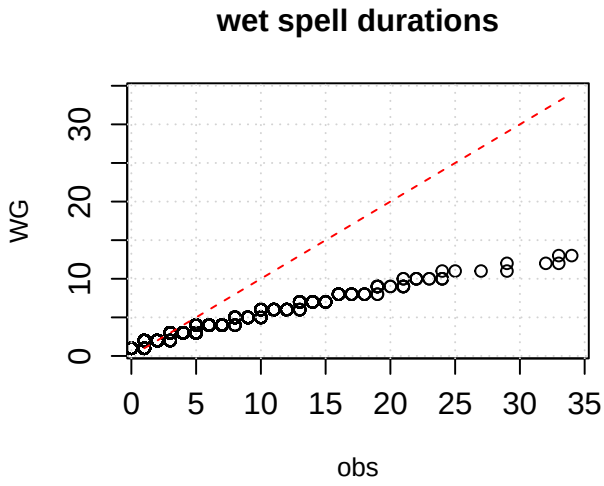
```
## 3 1952 fw= 0.4624887 n.wet= 169 = 169 mu= 12.9 = 12.9
## 4 1953 fw= 0.5116917 n.wet= 187 = 187 mu= 13.8 = 13.8
## 5 1954 fw= 0.4914675 n.wet= 180 = 180 mu= 15.3 = 15.3
## 6 1955 fw= 0.4607973 n.wet= 168 = 168 mu= 15.5 = 15.5
## 7 1956 fw= 0.536565 n.wet= 196 = 196 mu= 14.5 = 14.5
## 8 1957 fw= 0.5130998 n.wet= 187 = 187 mu= 14.4 = 14.4
## 9 1958 fw= 0.6053362 n.wet= 221 = 221 mu= 16 = 16
## 10 1959 fw= 0.5936733 n.wet= 217 = 217 mu= 14.3 = 14.3
## 11 1960 fw= 0.3959772 n.wet= 145 = 145 mu= 10.8 = 10.8
## 12 1961 fw= 0.5034165 n.wet= 184 = 184 mu= 11.2 = 11.2
## 13 1962 fw= 0.4354481 n.wet= 159 = 159 mu= 13.1 = 13.1
## 14 1963 fw= 0.5665424 n.wet= 207 = 207 mu= 12.7 = 12.7
## 15 1964 fw= 0.4061726 n.wet= 148 = 148 mu= 12.3 = 12.3
## 16 1965 fw= 0.5592021 n.wet= 204 = 204 mu= 14.9 = 14.9
## 17 1966 fw= 0.5222458 n.wet= 191 = 191 mu= 13.3 = 13.3
## 18 1967 fw= 0.5220689 n.wet= 191 = 191 mu= 11.9 = 11.9
## 19 1968 fw= 0.4823419 n.wet= 176 = 176 mu= 11.4 = 11.4
## 20 1969 fw= 0.5747991 n.wet= 210 = 210 mu= 14.2 = 14.2
## 21 1970 fw= 0.4740336 n.wet= 173 = 173 mu= 13.2 = 13.2
## 22 1971 fw= 0.5439724 n.wet= 199 = 199 mu= 10.3 = 10.3
## 23 1972 fw= 0.5329912 n.wet= 195 = 195 mu= 14.1 = 14.1
## 24 1973 fw= 0.6416995 n.wet= 234 = 234 mu= 13.7 = 13.7
## 25 1974 fw= 0.447601 n.wet= 163 = 163 mu= 15.7 = 15.7
## 26 1975 fw= 0.6304289 n.wet= 230 = 230 mu= 12.4 = 12.4
## 27 1976 fw= 0.4925842 n.wet= 180 = 180 mu= 13.5 = 13.5
## 28 1977 fw= 0.6447595 n.wet= 235 = 235 mu= 12.7 = 12.7
## 29 1978 fw= 0.5492269 n.wet= 201 = 201 mu= 13 = 13
## 30 1979 fw= 0.490115 n.wet= 179 = 179 mu= 13.9 = 13.9
## 31 1980 fw= 0.5237721 n.wet= 191 = 191 mu= 12.2 = 12.2
## 32 1981 fw= 0.6517126 n.wet= 238 = 238 mu= 12.5 = 12.5
## 33 1982 fw= 0.4923271 n.wet= 180 = 180 mu= 10.9 = 10.9
## 34 1983 fw= 0.4499218 n.wet= 164 = 164 mu= 15.1 = 15.1
## 35 1984 fw= 0.6311404 n.wet= 231 = 231 mu= 15.3 = 15.3
## 36 1985 fw= 0.5793206 n.wet= 212 = 212 mu= 13.4 = 13.4
## 37 1986 fw= 0.5390879 n.wet= 197 = 197 mu= 12.3 = 12.3
## 38 1987 fw= 0.6281333 n.wet= 229 = 229 mu= 12.7 = 12.7
## 39 1988 fw= 0.4928914 n.wet= 180 = 180 mu= 12.9 = 12.9
## 40 1989 fw= 0.5453482 n.wet= 199 = 199 mu= 11.6 = 11.6
## 41 1990 fw= 0.5092942 n.wet= 186 = 186 mu= 13.8 = 13.8
## 42 1991 fw= 0.5548554 n.wet= 203 = 203 mu= 16.4 = 16.4
## 43 1992 fw= 0.6268306 n.wet= 229 = 229 mu= 14 = 14
## 44 1993 fw= 0.49566 n.wet= 181 = 181 mu= 14.8 = 14.8
## 45 1994 fw= 0.5794093 n.wet= 212 = 212 mu= 13.4 = 13.4
## 46 1995 fw= 0.5001898 n.wet= 183 = 183 mu= 14.5 = 14.5
## 47 1996 fw= 0.5589944 n.wet= 204 = 204 mu= 13 = 13
## 48 1997 fw= 0.5992392 n.wet= 219 = 219 mu= 12.5 = 12.5
## 49 1998 fw= 0.5803667 n.wet= 212 = 212 mu= 14.4 = 14.4
## 50 1999 fw= 0.5764002 n.wet= 211 = 211 mu= 13.3 = 13.3
## 51 2000 fw= 0.553292 n.wet= 202 = 202 mu= 15.6 = 15.6
## 52 2001 fw= 0.5528145 n.wet= 202 = 202 mu= 12.5 = 12.5
## 53 2002 fw= 0.5241546 n.wet= 191 = 191 mu= 15.6 = 15.6
## 54 2003 fw= 0.5763786 n.wet= 211 = 211 mu= 12.7 = 12.7
## 55 2004 fw= 0.514689 n.wet= 188 = 188 mu= 11.3 = 11.3
## 56 2005 fw= 0.6227444 n.wet= 227 = 227 mu= 14.6 = 14.6
```

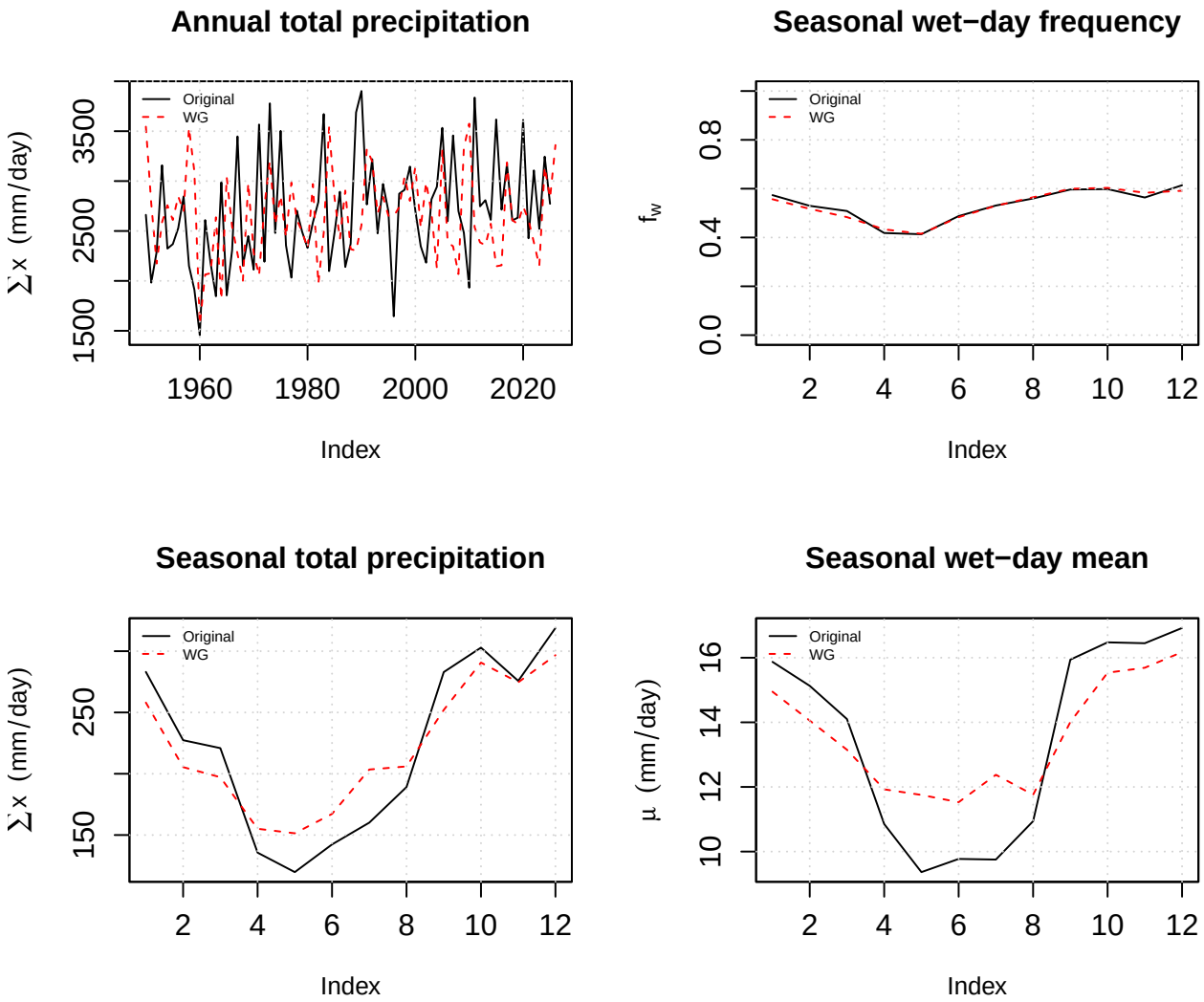
```
## 57 2006 fw= 0.4786125 n.wet= 175 = 175 mu= 13.7 = 13.7
## 58 2007 fw= 0.478998 n.wet= 175 = 175 mu= 13.4 = 13.4
## 59 2008 fw= 0.548921 n.wet= 200 = 200 mu= 10.3 = 10.3
## 60 2009 fw= 0.6435226 n.wet= 235 = 235 mu= 14.2 = 14.2
## 61 2010 fw= 0.5720438 n.wet= 209 = 209 mu= 17.1 = 17.1
## 62 2011 fw= 0.5390275 n.wet= 197 = 197 mu= 12.9 = 12.9
## 63 2012 fw= 0.5245783 n.wet= 192 = 192 mu= 12.4 = 12.4
## 64 2013 fw= 0.5601453 n.wet= 205 = 205 mu= 11.5 = 11.5
## 65 2014 fw= 0.5300165 n.wet= 194 = 194 mu= 13.3 = 13.3
## 66 2015 fw= 0.4002349 n.wet= 146 = 146 mu= 14.7 = 14.7
## 67 2016 fw= 0.5250417 n.wet= 192 = 192 mu= 11.2 = 11.2
## 68 2017 fw= 0.5751525 n.wet= 210 = 210 mu= 15.2 = 15.2
## 69 2018 fw= 0.5546522 n.wet= 203 = 203 mu= 12.8 = 12.8
## 70 2019 fw= 0.4681006 n.wet= 171 = 171 mu= 15 = 15
## 71 2020 fw= 0.5048228 n.wet= 184 = 184 mu= 14.9 = 14.9
## 72 2021 fw= 0.4970515 n.wet= 182 = 182 mu= 14.3 = 14.3
## 73 2022 fw= 0.5232378 n.wet= 191 = 191 mu= 12.5 = 12.5
## 74 2023 fw= 0.4273555 n.wet= 156 = 156 mu= 13.8 = 13.8
## 75 2024 fw= 0.5459348 n.wet= 199 = 199 mu= 15.8 = 15.8
## 76 2025 fw= 0.5130594 n.wet= 187 = 187 mu= 15.1 = 15.1
## 77 2026 fw= 0.5795187 n.wet= 212 = 212 mu= 15.9 = 15.9
## [1] "Sort precipitation magnitudes"
## [1] "14828 observed wet days and 14801 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0     0.0     2.5   9.139  13.700   131.7       2
## Feb       0     0.0     1.5   8.049  11.150    93.9      NA
## Mar       0     0.0     1.2   7.207   9.300   116.9      NA
## Apr       0     0.0     0.2   4.584   5.200    88.0       2
## May       0     0.0     0.1   3.914   4.700    69.4      NA
## Jun       0     0.0     0.7   4.806   6.225    75.9      NA
## Jul       0     0.0     1.4   5.233   7.400    92.0      NA
## Aug       0     0.0     1.8   6.181   8.800    70.0      NA
## Sep       0     0.1     3.0   9.563  13.575    96.7       2
## Oct       0     0.1     3.2   9.903  13.900   112.5       1
## Nov       0     0.0     2.4   9.316  13.900   104.0       1
## Dec       0     0.0     3.5  10.430  16.000   112.5       1
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    2.4 8.324  12.000 146.1   NA
## Feb    0       0    1.3 7.271   9.700 122.1   NA
## Mar    0       0    0.0 6.360   8.300 110.8   NA
## Apr    0       0    0.0 5.170   6.275 149.9   NA
## May    0       0    0.0 4.884   5.650 166.9   NA
## Jun    0       0    0.0 5.574   7.375  95.9   NA
## Jul    0       0    1.5 6.562   8.350 146.0   NA
## Aug    0       0    2.0 6.644   9.000 145.8   NA
## Sep    0       0    3.2 8.402  11.600 121.4   NA
## Oct    0       0    3.4 9.376  13.000 170.8   NA
## Nov    0       0    3.3 9.152  12.500 108.0   NA
## Dec    0       0    3.7 9.571  13.400 127.2   NA
```


BOTNEN I FØRDE wet−day amounts
WG amount (mm/day)
0
50
100
0
50
100
150
Observed amount (mm/day)


Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs


Number of annual wet days
days
50
150
250
Original
WG
1960
1980
2000
2020

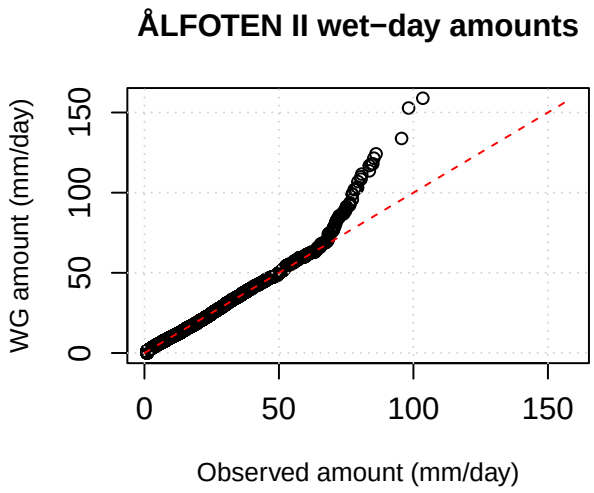

wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs

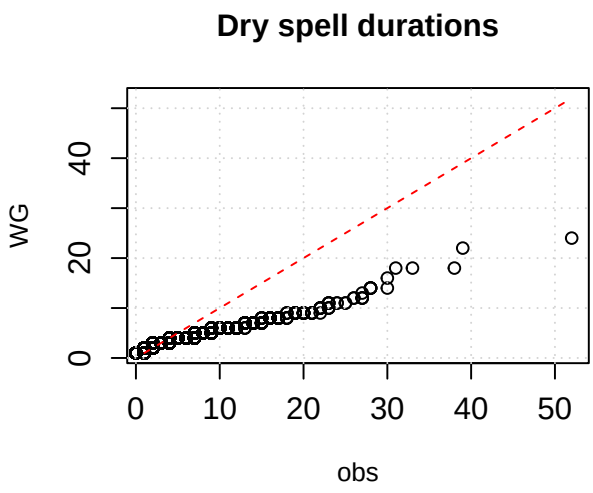


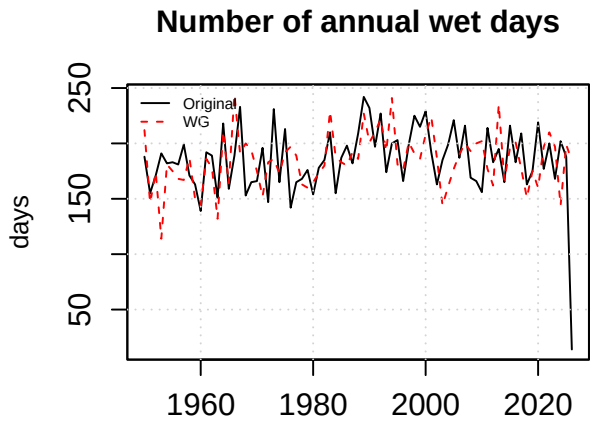

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for ÅLFOTEN II"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: ÅLFOTEN II"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3215
##  1st Qu.:1969   1st Qu.:0.4788
##  Median :1988   Median :0.5202
##  Mean   :1988   Mean   :0.5145
##  3rd Qu.:2007   3rd Qu.:0.5523
##  Max.   :2026   Max.   :0.6744
##      Index          c(mu)
##  Min.   :1950   Min.   : 8.998
##  1st Qu.:1969   1st Qu.:10.909
##  Median :1988   Median :11.906
##  Mean   :1988   Mean   :11.942
##  3rd Qu.:2007   3rd Qu.:12.755
##  Max.   :2026   Max.   :15.001
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.5807344 n.wet= 212 = 212 mu= 12.4 = 12.4
## 2 1951 fw= 0.4104151 n.wet= 150 = 150 mu= 10.7 = 10.7
```

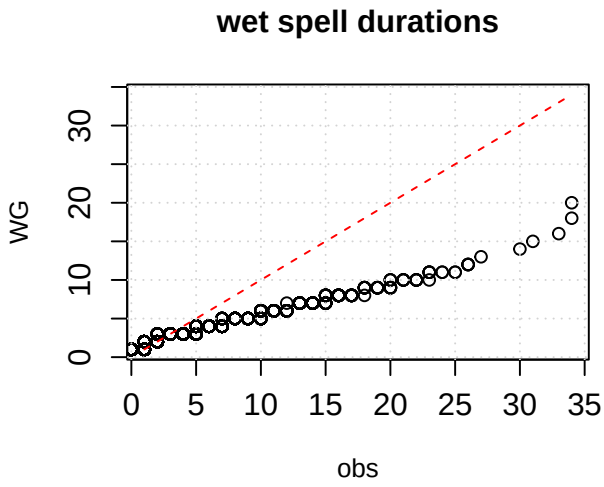
```
## 3 1952 fw= 0.4832405 n.wet= 177 = 177 mu= 15 = 15
## 4 1953 fw= 0.3214874 n.wet= 117 = 117 mu= 12.4 = 12.4
## 5 1954 fw= 0.5102599 n.wet= 186 = 186 mu= 13.9 = 13.9
## 6 1955 fw= 0.4850844 n.wet= 177 = 177 mu= 12.1 = 12.1
## 7 1956 fw= 0.4801246 n.wet= 175 = 175 mu= 11.9 = 11.9
## 8 1957 fw= 0.4625363 n.wet= 169 = 169 mu= 11.6 = 11.6
## 9 1958 fw= 0.5197771 n.wet= 190 = 190 mu= 11.4 = 11.4
## 10 1959 fw= 0.4254615 n.wet= 155 = 155 mu= 13.4 = 13.4
## 11 1960 fw= 0.4140245 n.wet= 151 = 151 mu= 10.7 = 10.7
## 12 1961 fw= 0.5378751 n.wet= 196 = 196 mu= 11.5 = 11.5
## 13 1962 fw= 0.4908148 n.wet= 179 = 179 mu= 13.2 = 13.2
## 14 1963 fw= 0.3654138 n.wet= 133 = 133 mu= 12.4 = 12.4
## 15 1964 fw= 0.5840226 n.wet= 213 = 213 mu= 9.6 = 9.6
## 16 1965 fw= 0.4493314 n.wet= 164 = 164 mu= 11.3 = 11.3
## 17 1966 fw= 0.6743579 n.wet= 246 = 246 mu= 12.7 = 12.7
## 18 1967 fw= 0.5254146 n.wet= 192 = 192 mu= 11.3 = 11.3
## 19 1968 fw= 0.558339 n.wet= 204 = 204 mu= 10.9 = 10.9
## 20 1969 fw= 0.5399236 n.wet= 197 = 197 mu= 13.6 = 13.6
## 21 1970 fw= 0.4787984 n.wet= 175 = 175 mu= 14.2 = 14.2
## 22 1971 fw= 0.4235561 n.wet= 155 = 155 mu= 13.6 = 13.6
## 23 1972 fw= 0.5099196 n.wet= 186 = 186 mu= 10.2 = 10.2
## 24 1973 fw= 0.5266792 n.wet= 192 = 192 mu= 13.6 = 13.6
## 25 1974 fw= 0.4744843 n.wet= 173 = 173 mu= 12.7 = 12.7
## 26 1975 fw= 0.5449853 n.wet= 199 = 199 mu= 11.9 = 11.9
## 27 1976 fw= 0.5489438 n.wet= 201 = 201 mu= 12.1 = 12.1
## 28 1977 fw= 0.5201874 n.wet= 190 = 190 mu= 12.1 = 12.1
## 29 1978 fw= 0.4486795 n.wet= 164 = 164 mu= 13.4 = 13.4
## 30 1979 fw= 0.4684766 n.wet= 171 = 171 mu= 10.6 = 10.6
## 31 1980 fw= 0.4527857 n.wet= 165 = 165 mu= 12.7 = 12.7
## 32 1981 fw= 0.4798896 n.wet= 175 = 175 mu= 11.5 = 11.5
## 33 1982 fw= 0.4924765 n.wet= 180 = 180 mu= 11.7 = 11.7
## 34 1983 fw= 0.632263 n.wet= 231 = 231 mu= 10.4 = 10.4
## 35 1984 fw= 0.5341132 n.wet= 195 = 195 mu= 11.2 = 11.2
## 36 1985 fw= 0.5234867 n.wet= 191 = 191 mu= 12.8 = 12.8
## 37 1986 fw= 0.4998947 n.wet= 183 = 183 mu= 9.7 = 9.7
## 38 1987 fw= 0.5259795 n.wet= 192 = 192 mu= 11.6 = 11.6
## 39 1988 fw= 0.5244363 n.wet= 192 = 192 mu= 10.9 = 10.9
## 40 1989 fw= 0.6279461 n.wet= 229 = 229 mu= 11.4 = 11.4
## 41 1990 fw= 0.564708 n.wet= 206 = 206 mu= 10.8 = 10.8
## 42 1991 fw= 0.5822087 n.wet= 213 = 213 mu= 11.7 = 11.7
## 43 1992 fw= 0.6182285 n.wet= 226 = 226 mu= 13.4 = 13.4
## 44 1993 fw= 0.5391788 n.wet= 197 = 197 mu= 10.5 = 10.5
## 45 1994 fw= 0.6707921 n.wet= 245 = 245 mu= 12.1 = 12.1
## 46 1995 fw= 0.4998426 n.wet= 183 = 183 mu= 11.7 = 11.7
## 47 1996 fw= 0.4955816 n.wet= 181 = 181 mu= 11.7 = 11.7
## 48 1997 fw= 0.5591723 n.wet= 204 = 204 mu= 9.3 = 9.3
## 49 1998 fw= 0.5446942 n.wet= 199 = 199 mu= 10.4 = 10.4
## 50 1999 fw= 0.5296194 n.wet= 193 = 193 mu= 12.3 = 12.3
## 51 2000 fw= 0.5809627 n.wet= 212 = 212 mu= 11.5 = 11.5
## 52 2001 fw= 0.6155262 n.wet= 225 = 225 mu= 9 = 9
## 53 2002 fw= 0.5176593 n.wet= 189 = 189 mu= 9.7 = 9.7
## 54 2003 fw= 0.4111076 n.wet= 150 = 150 mu= 10.5 = 10.5
## 55 2004 fw= 0.4433552 n.wet= 162 = 162 mu= 11.9 = 11.9
## 56 2005 fw= 0.4895215 n.wet= 179 = 179 mu= 9.9 = 9.9
```

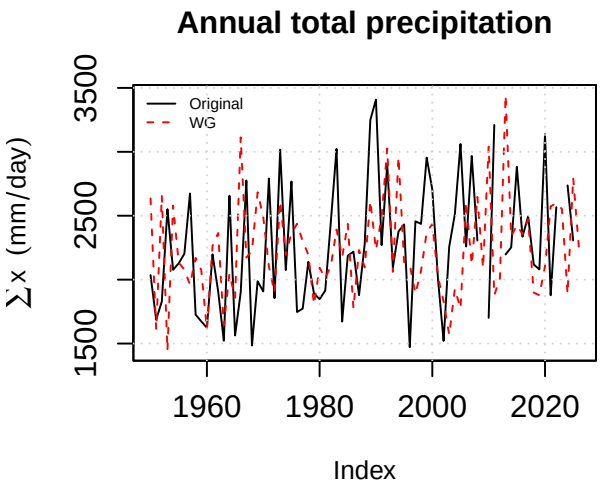
```
## 57 2006 fw= 0.5264246 n.wet= 192 = 192 mu= 13.6 = 13.6
## 58 2007 fw= 0.5509371 n.wet= 201 = 201 mu= 10.5 = 10.5
## 59 2008 fw= 0.5408009 n.wet= 198 = 198 mu= 13.4 = 13.4
## 60 2009 fw= 0.5566677 n.wet= 203 = 203 mu= 10.3 = 10.3
## 61 2010 fw= 0.5672838 n.wet= 207 = 207 mu= 14.7 = 14.7
## 62 2011 fw= 0.4837378 n.wet= 177 = 177 mu= 10.6 = 10.6
## 63 2012 fw= 0.4481265 n.wet= 164 = 164 mu= 12.3 = 12.3
## 64 2013 fw= 0.6473412 n.wet= 236 = 236 mu= 14.6 = 14.6
## 65 2014 fw= 0.4594715 n.wet= 168 = 168 mu= 13.9 = 13.9
## 66 2015 fw= 0.5359153 n.wet= 196 = 196 mu= 12.4 = 12.4
## 67 2016 fw= 0.5565678 n.wet= 203 = 203 mu= 11.6 = 11.6
## 68 2017 fw= 0.4884995 n.wet= 178 = 178 mu= 13.9 = 13.9
## 69 2018 fw= 0.4319294 n.wet= 158 = 158 mu= 12 = 12
## 70 2019 fw= 0.4889223 n.wet= 179 = 179 mu= 10.5 = 10.5
## 71 2020 fw= 0.4428371 n.wet= 162 = 162 mu= 13 = 13
## 72 2021 fw= 0.5523119 n.wet= 202 = 202 mu= 12.7 = 12.7
## 73 2022 fw= 0.5980963 n.wet= 218 = 218 mu= 11.9 = 11.9
## 74 2023 fw= 0.5524823 n.wet= 202 = 202 mu= 12.6 = 12.6
## 75 2024 fw= 0.4056428 n.wet= 148 = 148 mu= 12.8 = 12.8
## 76 2025 fw= 0.5479136 n.wet= 200 = 200 mu= 14 = 14
## 77 2026 fw= 0.5173478 n.wet= 189 = 189 mu= 11.9 = 11.9
## [1] "Sort precipitation magnitudes"
## [1] "14233 observed wet days and 14211 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0    2.40   8.182   12.50    98.2       7
## Feb       0       0    1.50   7.029   10.10    80.5      NA
## Mar       0       0    0.85   5.947    8.40    85.3       4
## Apr       0       0    0.10   3.900    4.90    80.8      NA
## May       0       0    0.00   3.075    3.30    57.1      14
## Jun       0       0    0.10   3.265    3.90    58.8      NA
## Jul       0       0    0.35   3.235    4.20    70.2       6
## Aug       0       0    0.80   4.570    5.70    74.0       1
## Sep       0       0    2.30   7.880   10.95   103.5       1
## Oct       0       0    2.90   8.768   12.80    83.6      NA
## Nov       0       0    3.15   8.787   13.40    84.9      NA
## Dec       0       0    3.90   9.507   15.00    79.2       6
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    2.3 7.426   9.900 158.9   NA
## Feb    0       0    1.4 6.712   9.250  88.5   NA
## Mar    0       0    0.0 5.521   7.500 118.0   NA
## Apr    0       0    0.0 4.416   5.375  86.9   NA
## May    0       0    0.0 4.086   4.800 152.8   NA
## Jun    0       0    0.0 4.021   4.975  83.6   NA
## Jul    0       0    0.0 4.548   5.300 102.2   NA
## Aug    0       0    0.0 5.281   6.700 116.9   NA
## Sep    0       0    2.4 6.675   9.600  99.1   NA
## Oct    0       0    3.5 8.276  11.800  92.4   NA
## Nov    0       0    3.3 8.371  11.975 124.2   NA
## Dec    0       0    3.8 8.307  12.050 121.5   NA
```

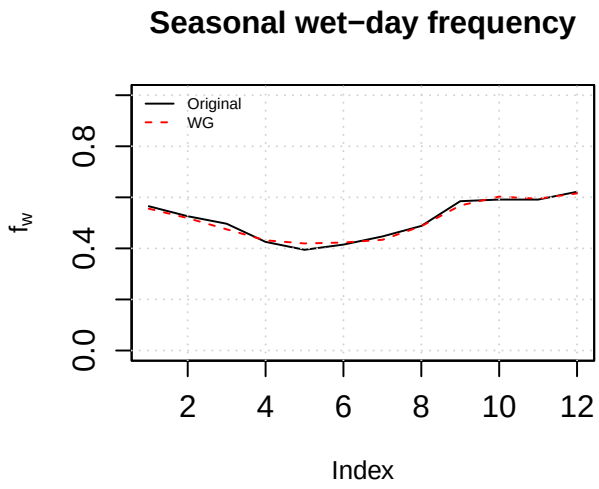

ÅLFOTEN II wet−day amounts
WG amount (mm/day)
0
50
100
150
0
50
100
150
Observed amount (mm/day)

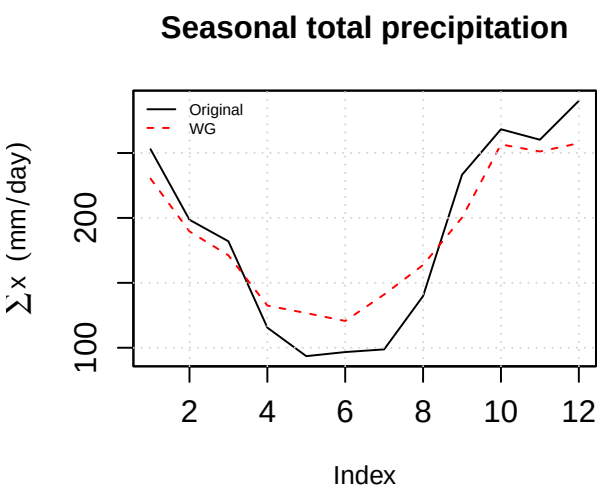

Dry spell durations
WG
0
20
40
0
10
20
30
40
50
obs

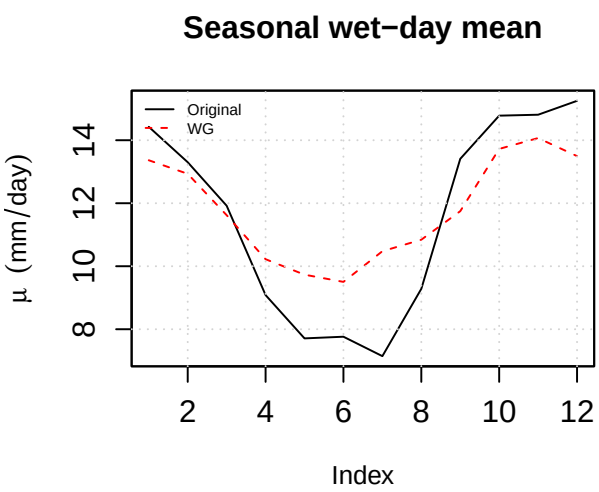

Number of annual wet days
days
50
150
250
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs





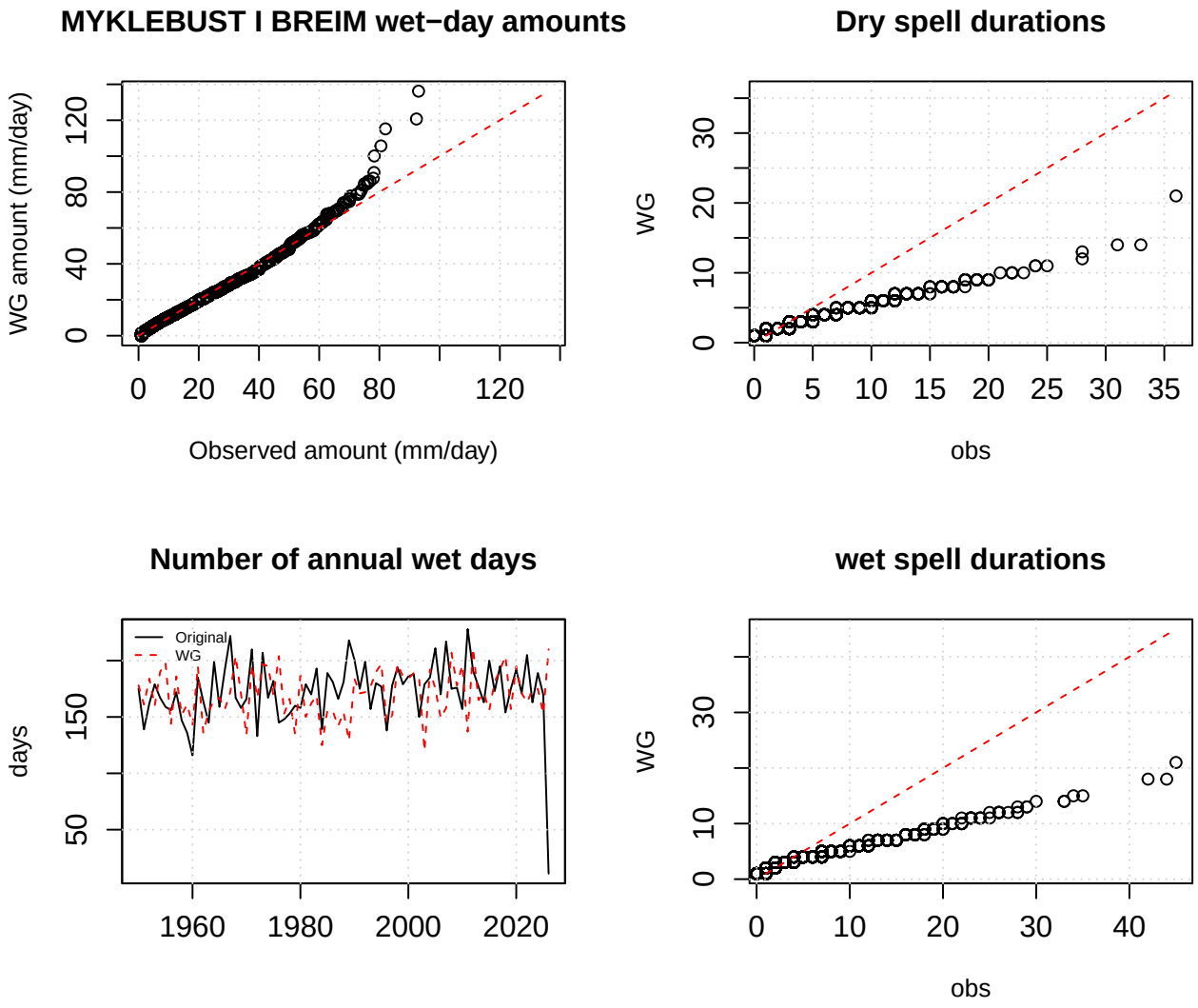


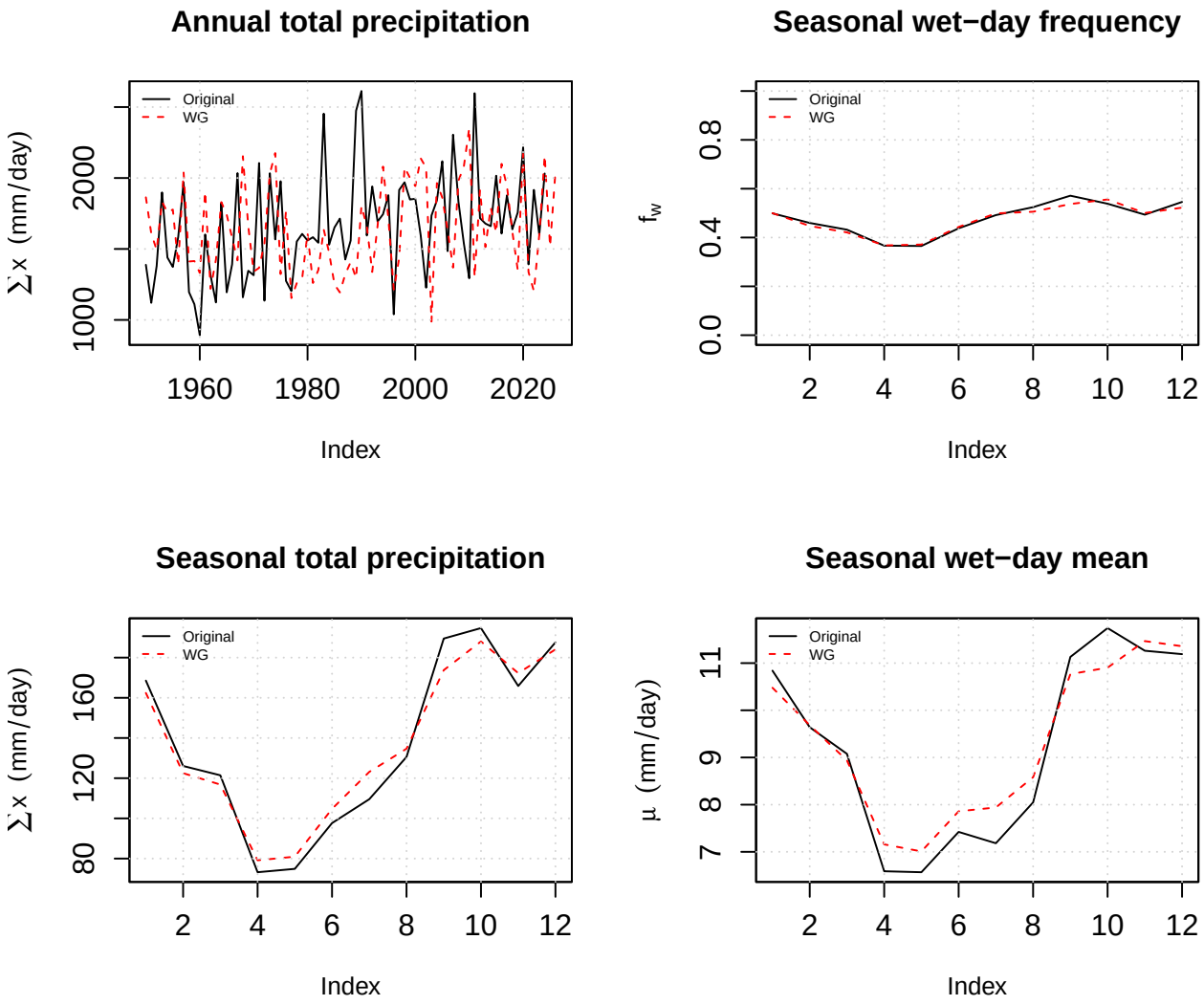



```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for MYKLEBUST I BREIM"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: MYKLEBUST I BREIM"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3365
##  1st Qu.:1969   1st Qu.:0.4349
##  Median :1988   Median :0.4801
##  Mean   :1988   Mean   :0.4791
##  3rd Qu.:2007   3rd Qu.:0.5277
##  Max.   :2026   Max.   :0.5922
##      Index          c(mu)
##  Min.   :1950   Min.   : 6.666
##  1st Qu.:1969   1st Qu.: 8.457
##  Median :1988   Median : 9.469
##  Mean   :1988   Mean   : 9.369
##  3rd Qu.:2007   3rd Qu.:10.219
##  Max.   :2026   Max.   :12.060
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.4922957 n.wet= 180 = 180 mu= 10.4 = 10.4
## 2 1951 fw= 0.4498556 n.wet= 164 = 164 mu= 9.8 = 9.8
```

```
## 3 1952 fw= 0.51249 n.wet= 187 = 187 mu= 8 = 8
## 4 1953 fw= 0.4486373 n.wet= 164 = 164 mu= 11.2 = 11.2
## 5 1954 fw= 0.5277417 n.wet= 193 = 193 mu= 9.1 = 9.1
## 6 1955 fw= 0.5443331 n.wet= 199 = 199 mu= 8.9 = 8.9
## 7 1956 fw= 0.3990542 n.wet= 146 = 146 mu= 9.5 = 9.5
## 8 1957 fw= 0.5240499 n.wet= 191 = 191 mu= 10.7 = 10.7
## 9 1958 fw= 0.4336228 n.wet= 158 = 158 mu= 8.9 = 8.9
## 10 1959 fw= 0.4475353 n.wet= 163 = 163 mu= 8.7 = 8.7
## 11 1960 fw= 0.4011061 n.wet= 147 = 147 mu= 9.1 = 9.1
## 12 1961 fw= 0.5406718 n.wet= 197 = 197 mu= 9.7 = 9.7
## 13 1962 fw= 0.383051 n.wet= 140 = 140 mu= 8.7 = 8.7
## 14 1963 fw= 0.4506888 n.wet= 165 = 165 mu= 8.6 = 8.6
## 15 1964 fw= 0.45812 n.wet= 167 = 167 mu= 11 = 11
## 16 1965 fw= 0.4728441 n.wet= 173 = 173 mu= 10.1 = 10.1
## 17 1966 fw= 0.4328516 n.wet= 158 = 158 mu= 10 = 10
## 18 1967 fw= 0.4882561 n.wet= 178 = 178 mu= 8 = 8
## 19 1968 fw= 0.5612571 n.wet= 205 = 205 mu= 10.5 = 10.5
## 20 1969 fw= 0.4773975 n.wet= 174 = 174 mu= 9.5 = 9.5
## 21 1970 fw= 0.3709053 n.wet= 135 = 135 mu= 9.9 = 9.9
## 22 1971 fw= 0.5625679 n.wet= 205 = 205 mu= 6.7 = 6.7
## 23 1972 fw= 0.4651284 n.wet= 170 = 170 mu= 9 = 9.1
## 24 1973 fw= 0.5428347 n.wet= 198 = 198 mu= 10.3 = 10.3
## 25 1974 fw= 0.5517046 n.wet= 202 = 202 mu= 10.8 = 10.8
## 26 1975 fw= 0.4694248 n.wet= 171 = 171 mu= 7.7 = 7.7
## 27 1976 fw= 0.5735107 n.wet= 209 = 209 mu= 8.5 = 8.5
## 28 1977 fw= 0.439679 n.wet= 161 = 161 mu= 7.2 = 7.2
## 29 1978 fw= 0.4630051 n.wet= 169 = 169 mu= 7.5 = 7.5
## 30 1979 fw= 0.3692477 n.wet= 135 = 135 mu= 9.6 = 9.6
## 31 1980 fw= 0.5256271 n.wet= 192 = 192 mu= 8.4 = 8.4
## 32 1981 fw= 0.4245626 n.wet= 155 = 155 mu= 8.1 = 8.1
## 33 1982 fw= 0.4652568 n.wet= 170 = 170 mu= 8 = 8
## 34 1983 fw= 0.4680789 n.wet= 171 = 171 mu= 9.6 = 9.6
## 35 1984 fw= 0.3519307 n.wet= 129 = 129 mu= 11.4 = 11.4
## 36 1985 fw= 0.4416835 n.wet= 161 = 161 mu= 7.8 = 7.8
## 37 1986 fw= 0.4349083 n.wet= 159 = 159 mu= 7.5 = 7.5
## 38 1987 fw= 0.3926928 n.wet= 143 = 143 mu= 9.2 = 9.2
## 39 1988 fw= 0.4246786 n.wet= 155 = 155 mu= 9.1 = 9.1
## 40 1989 fw= 0.3600867 n.wet= 132 = 132 mu= 9.8 = 9.8
## 41 1990 fw= 0.5075846 n.wet= 185 = 185 mu= 9.7 = 9.7
## 42 1991 fw= 0.4856341 n.wet= 177 = 177 mu= 9.4 = 9.4
## 43 1992 fw= 0.4822568 n.wet= 176 = 176 mu= 7.6 = 7.6
## 44 1993 fw= 0.5004586 n.wet= 183 = 183 mu= 9.1 = 9.1
## 45 1994 fw= 0.5254329 n.wet= 192 = 192 mu= 10.8 = 10.8
## 46 1995 fw= 0.5582616 n.wet= 204 = 204 mu= 8.4 = 8.4
## 47 1996 fw= 0.4148889 n.wet= 152 = 152 mu= 8 = 8
## 48 1997 fw= 0.4298231 n.wet= 157 = 157 mu= 9.1 = 9.1
## 49 1998 fw= 0.5544724 n.wet= 203 = 203 mu= 10.2 = 10.2
## 50 1999 fw= 0.5407809 n.wet= 198 = 198 mu= 10.1 = 10.1
## 51 2000 fw= 0.5283053 n.wet= 193 = 193 mu= 10.1 = 10.1
## 52 2001 fw= 0.5220052 n.wet= 191 = 191 mu= 11.2 = 11.2
## 53 2002 fw= 0.5171251 n.wet= 189 = 189 mu= 11 = 11
## 54 2003 fw= 0.3365202 n.wet= 123 = 123 mu= 8 = 8
## 55 2004 fw= 0.5399982 n.wet= 197 = 197 mu= 10 = 10
## 56 2005 fw= 0.4899148 n.wet= 179 = 179 mu= 10.4 = 10.4
```

```
## 57 2006 fw= 0.413017 n.wet= 151 = 151 mu= 10.8 = 10.8
## 58 2007 fw= 0.4416831 n.wet= 161 = 161 mu= 8.5 = 8.5
## 59 2008 fw= 0.5730771 n.wet= 209 = 209 mu= 9.5 = 9.5
## 60 2009 fw= 0.504033 n.wet= 184 = 184 mu= 11.3 = 11.3
## 61 2010 fw= 0.537987 n.wet= 196 = 196 mu= 12 = 12
## 62 2011 fw= 0.3903267 n.wet= 143 = 143 mu= 9.1 = 9.1
## 63 2012 fw= 0.5914406 n.wet= 216 = 216 mu= 8.9 = 8.9
## 64 2013 fw= 0.4581878 n.wet= 167 = 167 mu= 9.1 = 9.1
## 65 2014 fw= 0.484706 n.wet= 177 = 177 mu= 10.1 = 10.1
## 66 2015 fw= 0.4328167 n.wet= 158 = 158 mu= 10.2 = 10.2
## 67 2016 fw= 0.5090922 n.wet= 186 = 186 mu= 11.3 = 11.3
## 68 2017 fw= 0.5341409 n.wet= 195 = 195 mu= 10 = 10
## 69 2018 fw= 0.5813666 n.wet= 212 = 212 mu= 7.7 = 7.7
## 70 2019 fw= 0.4505841 n.wet= 165 = 165 mu= 8.2 = 8.2
## 71 2020 fw= 0.549186 n.wet= 201 = 201 mu= 10.8 = 10.8
## 72 2021 fw= 0.4988051 n.wet= 182 = 182 mu= 7.4 = 7.3
## 73 2022 fw= 0.4785111 n.wet= 175 = 175 mu= 6.9 = 6.9
## 74 2023 fw= 0.4801273 n.wet= 175 = 175 mu= 9.2 = 9.2
## 75 2024 fw= 0.4887433 n.wet= 179 = 179 mu= 12.1 = 12.1
## 76 2025 fw= 0.4252884 n.wet= 155 = 155 mu= 9.8 = 9.8
## 77 2026 fw= 0.5921913 n.wet= 216 = 216 mu= 9.5 = 9.5
## [1] "Sort precipitation magnitudes"
## [1] "13273 observed wet days and 13140 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.9   5.448   6.800    93.0       5
## Feb       0       0     0.5   4.471   5.500    73.2       4
## Mar       0       0     0.2   3.965   4.275    82.0       2
## Apr       0       0     0.1   2.472   2.800    78.0      NA
## May      -1       0     0.1   2.447   2.800    45.0      NA
## Jun       0       0     0.3   3.300   4.175    65.5       2
## Jul       0       0     0.8   3.580   4.600    60.3      NA
## Aug       0       0     1.2   4.269   5.800    63.3       1
## Sep       0       0     2.0   6.401   8.300    70.1       1
## Oct       0       0     1.4   6.365   8.000    92.3       1
## Nov       0       0     0.8   5.604   6.800    80.5       1
## Dec       0       0     1.5   6.138   8.100    76.9       3
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0   0.90 5.239   7.000 136.2   NA
## Feb    0       0   0.00 4.336   5.500  90.9   NA
## Mar    0       0   0.00 3.768   4.600  60.8   NA
## Apr    0       0   0.00 2.638   3.100  51.6   NA
## May    0       0   0.00 2.611   2.900  62.3   NA
## Jun    0       0   0.00 3.490   4.300  58.4   NA
## Jul    0       0   0.90 3.972   5.400  69.6   NA
## Aug    0       0   1.00 4.343   5.700  76.3   NA
## Sep    0       0   1.65 5.792   7.975 120.7   NA
## Oct    0       0   2.30 6.065   8.900  77.8   NA
## Nov    0       0   1.00 5.742   8.000  86.1   NA
## Dec    0       0   1.30 5.937   8.450  83.8   NA
```

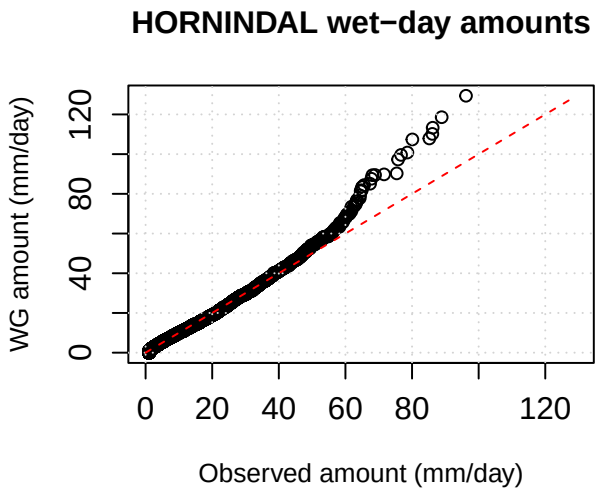

MYKLEBUST I BREIM wet−day amounts
WG amount (mm/day)
0
40
80
120
0
20
40
60
80
120
Observed amount (mm/day)
Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs
Number of annual wet days
days
50
150
Original
WG
1960
1980
2000
2020
wet spell durations
WG
0
10
30
0
10
20
30
40
obs

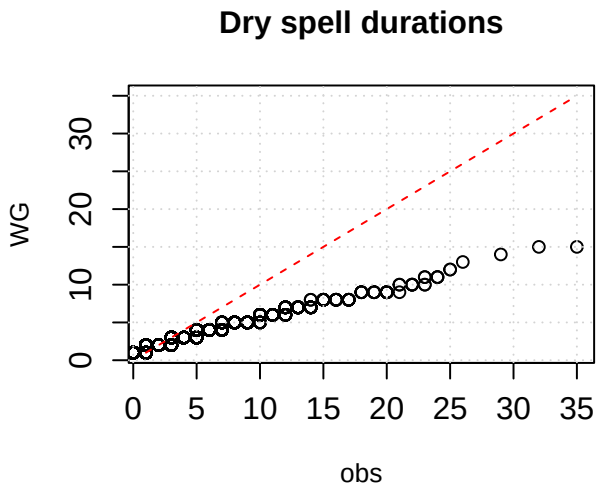


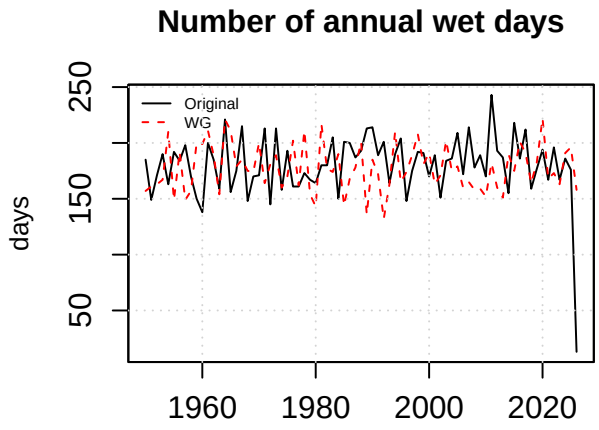

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for HORNINDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: HORNINDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3646
##  1st Qu.:1969   1st Qu.:0.4565
##  Median :1988   Median :0.4895
##  Mean   :1988   Mean   :0.4985
##  3rd Qu.:2007   3rd Qu.:0.5400
##  Max.   :2026   Max.   :0.6345
##      Index          c(mu)
##  Min.   :1950   Min.   : 5.249
##  1st Qu.:1969   1st Qu.: 9.473
##  Median :1988   Median :10.292
##  Mean   :1988   Mean   :10.229
##  3rd Qu.:2007   3rd Qu.:11.068
##  Max.   :2026   Max.   :12.581
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.4454313 n.wet= 163 = 163 mu= 7.4 = 7.4
## 2 1951 fw= 0.451717 n.wet= 165 = 165 mu= 10.5 = 10.5
```

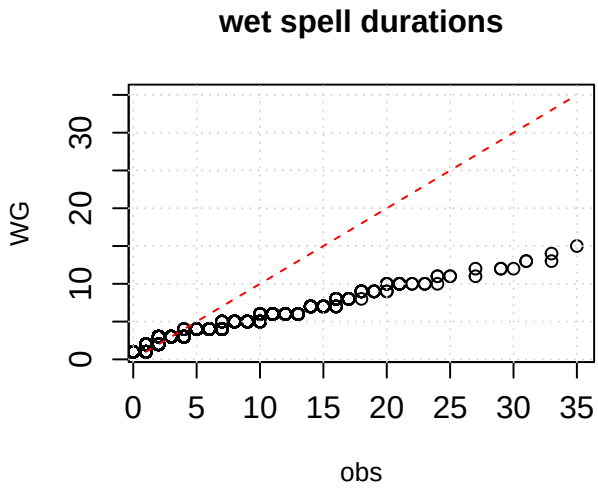
```
## 3 1952 fw= 0.4565295 n.wet= 167 = 167 mu= 12.4 = 12.4
## 4 1953 fw= 0.4668703 n.wet= 171 = 171 mu= 9.4 = 9.4
## 5 1954 fw= 0.5992939 n.wet= 219 = 219 mu= 9.9 = 9.9
## 6 1955 fw= 0.4208661 n.wet= 154 = 154 mu= 8.9 = 8.9
## 7 1956 fw= 0.5374317 n.wet= 196 = 196 mu= 10.7 = 10.7
## 8 1957 fw= 0.4298803 n.wet= 157 = 157 mu= 8.5 = 8.6
## 9 1958 fw= 0.4442598 n.wet= 162 = 162 mu= 9.7 = 9.7
## 10 1959 fw= 0.5631697 n.wet= 206 = 206 mu= 10.1 = 10.1
## 11 1960 fw= 0.5536722 n.wet= 202 = 202 mu= 10.5 = 10.5
## 12 1961 fw= 0.5856623 n.wet= 214 = 214 mu= 9.5 = 9.5
## 13 1962 fw= 0.5255915 n.wet= 192 = 192 mu= 11.8 = 11.8
## 14 1963 fw= 0.4288213 n.wet= 157 = 157 mu= 12.4 = 12.4
## 15 1964 fw= 0.6088132 n.wet= 222 = 222 mu= 10.4 = 10.4
## 16 1965 fw= 0.5888038 n.wet= 215 = 215 mu= 9.9 = 9.9
## 17 1966 fw= 0.4963279 n.wet= 181 = 181 mu= 11.2 = 11.2
## 18 1967 fw= 0.5084445 n.wet= 186 = 186 mu= 11.5 = 11.5
## 19 1968 fw= 0.4940589 n.wet= 180 = 180 mu= 9.5 = 9.5
## 20 1969 fw= 0.4858553 n.wet= 177 = 177 mu= 8.9 = 8.9
## 21 1970 fw= 0.5580279 n.wet= 204 = 204 mu= 12.2 = 12.2
## 22 1971 fw= 0.472688 n.wet= 173 = 173 mu= 9.4 = 9.4
## 23 1972 fw= 0.5009387 n.wet= 183 = 183 mu= 11.3 = 11.3
## 24 1973 fw= 0.5400223 n.wet= 197 = 197 mu= 11.5 = 11.5
## 25 1974 fw= 0.4420248 n.wet= 161 = 161 mu= 12 = 12
## 26 1975 fw= 0.4820873 n.wet= 176 = 176 mu= 8.7 = 8.7
## 27 1976 fw= 0.5654447 n.wet= 207 = 207 mu= 9.9 = 9.9
## 28 1977 fw= 0.4604922 n.wet= 168 = 168 mu= 10.9 = 10.9
## 29 1978 fw= 0.5915639 n.wet= 216 = 216 mu= 10.9 = 10.9
## 30 1979 fw= 0.4285891 n.wet= 157 = 157 mu= 9.5 = 9.5
## 31 1980 fw= 0.3942038 n.wet= 144 = 144 mu= 10.4 = 10.4
## 32 1981 fw= 0.6191491 n.wet= 226 = 226 mu= 11.3 = 11.3
## 33 1982 fw= 0.4958389 n.wet= 181 = 181 mu= 10.2 = 10.2
## 34 1983 fw= 0.501973 n.wet= 183 = 183 mu= 8.9 = 8.9
## 35 1984 fw= 0.540494 n.wet= 197 = 197 mu= 11.5 = 11.5
## 36 1985 fw= 0.4105745 n.wet= 150 = 150 mu= 8 = 8
## 37 1986 fw= 0.4801205 n.wet= 175 = 175 mu= 10.1 = 10.1
## 38 1987 fw= 0.5030373 n.wet= 184 = 184 mu= 8.3 = 8.3
## 39 1988 fw= 0.5636272 n.wet= 206 = 206 mu= 10.8 = 10.8
## 40 1989 fw= 0.383057 n.wet= 140 = 140 mu= 10.9 = 10.9
## 41 1990 fw= 0.5208542 n.wet= 190 = 190 mu= 8.7 = 8.7
## 42 1991 fw= 0.4819148 n.wet= 176 = 176 mu= 9.4 = 9.4
## 43 1992 fw= 0.3645956 n.wet= 133 = 133 mu= 9.9 = 9.9
## 44 1993 fw= 0.4656114 n.wet= 170 = 170 mu= 10.1 = 10.1
## 45 1994 fw= 0.5974073 n.wet= 218 = 218 mu= 9.4 = 9.4
## 46 1995 fw= 0.4647905 n.wet= 170 = 170 mu= 9.1 = 9.1
## 47 1996 fw= 0.4892799 n.wet= 179 = 179 mu= 10.4 = 10.4
## 48 1997 fw= 0.5297807 n.wet= 194 = 194 mu= 10.8 = 10.8
## 49 1998 fw= 0.5784488 n.wet= 211 = 211 mu= 9.7 = 9.7
## 50 1999 fw= 0.5185444 n.wet= 189 = 189 mu= 10.6 = 10.6
## 51 2000 fw= 0.5371938 n.wet= 196 = 196 mu= 11.6 = 11.6
## 52 2001 fw= 0.4618714 n.wet= 169 = 169 mu= 8.6 = 8.6
## 53 2002 fw= 0.4894826 n.wet= 179 = 179 mu= 11 = 11
## 54 2003 fw= 0.5639325 n.wet= 206 = 206 mu= 11.6 = 11.6
## 55 2004 fw= 0.4850571 n.wet= 177 = 177 mu= 11.2 = 11.2
## 56 2005 fw= 0.5048118 n.wet= 184 = 184 mu= 10.5 = 10.5
```

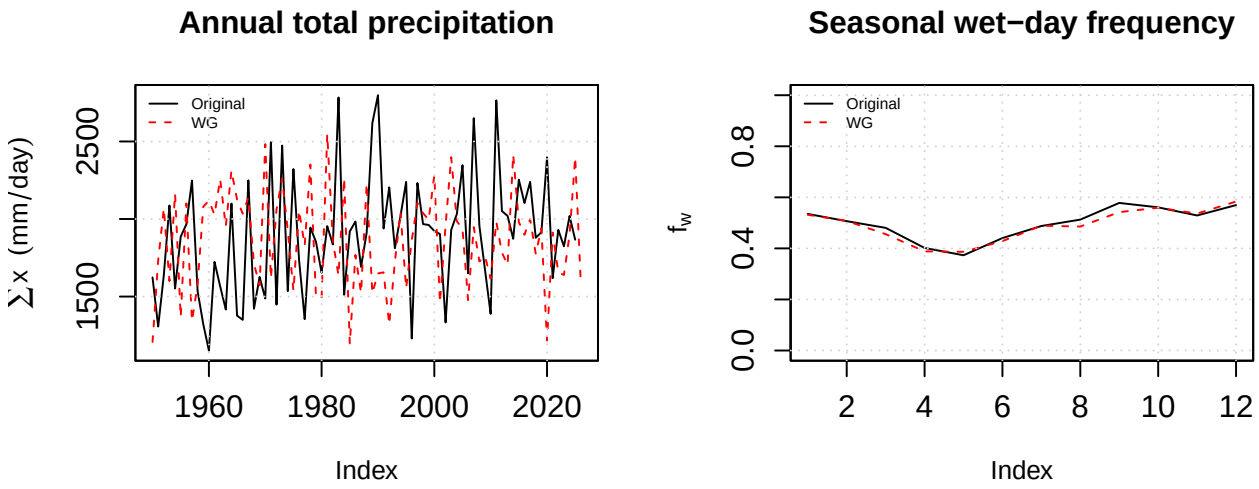
```
## 57 2006 fw= 0.4491859 n.wet= 164 = 164 mu= 9 = 9
## 58 2007 fw= 0.4568248 n.wet= 167 = 167 mu= 11.7 = 11.7
## 59 2008 fw= 0.4426368 n.wet= 162 = 162 mu= 10.7 = 10.7
## 60 2009 fw= 0.4343763 n.wet= 159 = 159 mu= 11.1 = 11.1
## 61 2010 fw= 0.4299798 n.wet= 157 = 157 mu= 10.3 = 10.3
## 62 2011 fw= 0.5020505 n.wet= 183 = 183 mu= 10.8 = 10.8
## 63 2012 fw= 0.4487778 n.wet= 164 = 164 mu= 10.9 = 10.9
## 64 2013 fw= 0.4295675 n.wet= 157 = 157 mu= 10.9 = 10.9
## 65 2014 fw= 0.5269968 n.wet= 192 = 192 mu= 12.6 = 12.6
## 66 2015 fw= 0.4869012 n.wet= 178 = 178 mu= 11.1 = 11.1
## 67 2016 fw= 0.5661483 n.wet= 207 = 207 mu= 9.2 = 9.2
## 68 2017 fw= 0.5439685 n.wet= 199 = 199 mu= 10 = 10
## 69 2018 fw= 0.477947 n.wet= 175 = 175 mu= 10.1 = 10.1
## 70 2019 fw= 0.5226965 n.wet= 191 = 191 mu= 10.2 = 10.2
## 71 2020 fw= 0.6345085 n.wet= 232 = 232 mu= 5.2 = 5.2
## 72 2021 fw= 0.4647049 n.wet= 170 = 170 mu= 11.2 = 11.2
## 73 2022 fw= 0.4858009 n.wet= 177 = 177 mu= 9.4 = 9.4
## 74 2023 fw= 0.4728533 n.wet= 173 = 173 mu= 9.5 = 9.5
## 75 2024 fw= 0.5341869 n.wet= 195 = 195 mu= 9.7 = 9.7
## 76 2025 fw= 0.5516576 n.wet= 201 = 201 mu= 11.9 = 11.9
## 77 2026 fw= 0.4425883 n.wet= 162 = 162 mu= 9.8 = 9.8
## [1] "Sort precipitation magnitudes"
## [1] "13856 observed wet days and 13646 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0    1.60   6.698   9.950    96.2   NA
## Feb       0       0    1.10   5.771   8.000    68.1   NA
## Mar       0       0    0.60   5.117   6.800    76.7   NA
## Apr       0       0    0.00   3.289   3.700    56.3   NA
## May       0       0    0.00   2.483   2.900    47.3   NA
## Jun       0       0    0.40   3.152   4.100    47.3   NA
## Jul       0       0    0.80   3.492   4.600    63.5   NA
## Aug       0       0    1.10   4.106   5.325    60.1   NA
## Sep       0       0    2.05   6.640   9.025    86.1   NA
## Oct       0       0    2.00   7.100   9.100    86.2   NA
## Nov       0       0    1.45   6.706   9.925    85.2   NA
## Dec       0       0    2.10   7.419  12.300    88.9   NA
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu.  Max. NA's
## Jan    0       0    1.6 6.134    8.60  99.6   NA
## Feb    0       0    1.2 5.485    7.50  73.5   NA
## Mar    0       0    0.0 4.593    6.10 107.9   NA
## Apr    0       0    0.0 3.334    3.80 100.8   NA
## May    0       0    0.0 3.092    3.60  61.5   NA
## Jun    0       0    0.0 3.693    4.50 118.6   NA
## Jul    0       0    0.0 4.322    5.60 113.3   NA
## Aug    0       0    0.0 4.353    5.85  74.5   NA
## Sep    0       0    1.9 5.859    8.20  89.5   NA
## Oct    0       0    2.2 6.611    9.40  83.4   NA
## Nov    0       0    1.9 6.559    9.40 110.2   NA
## Dec    0       0    2.8 7.162   10.25 129.4   NA
```

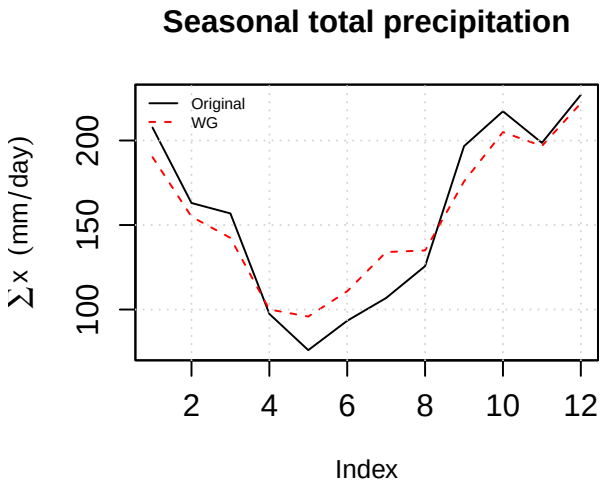

HORNINDAL wet−day amounts
WG amount (mm/day)
0
40
80
120
0
20
40
60
80
120
Observed amount (mm/day)

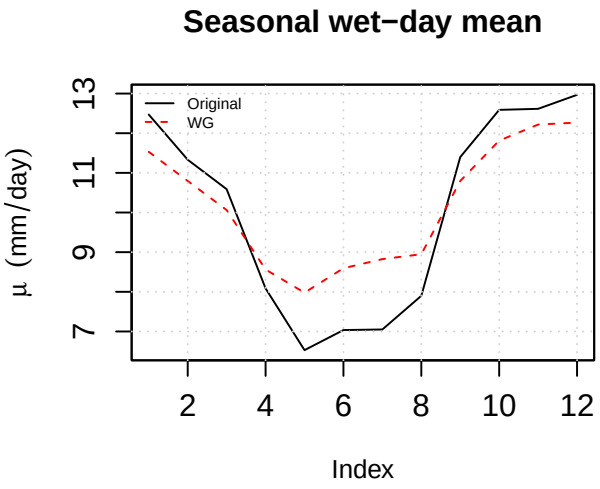

Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs


Number of annual wet days
days
50
150
250
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs



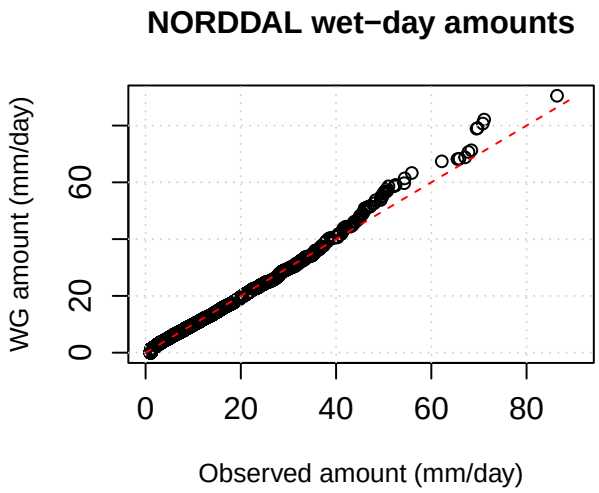


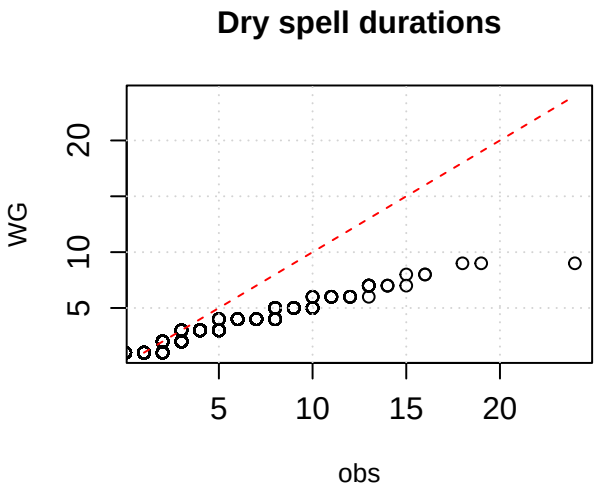


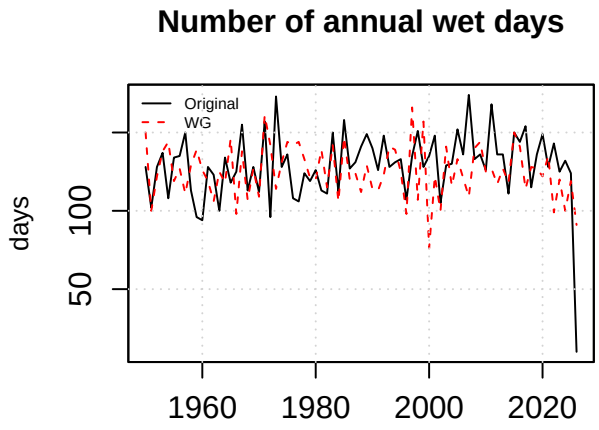

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for NORDDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: NORDDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2154
##  1st Qu.:1969   1st Qu.:0.3278
##  Median :1988   Median :0.3531
##  Mean   :1988   Mean   :0.3568
##  3rd Qu.:2007   3rd Qu.:0.3924
##  Max.   :2026   Max.   :0.4762
##      Index          c(mu)
##  Min.   :1950   Min.   :4.653
##  1st Qu.:1969   1st Qu.:6.794
##  Median :1988   Median :7.651
##  Mean   :1988   Mean   :7.600
##  3rd Qu.:2007   3rd Qu.:8.345
##  Max.   :2026   Max.   :9.473
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.415283 n.wet= 152 = 152 mu= 7.3 = 7.3
## 2 1951 fw= 0.2902031 n.wet= 106 = 106 mu= 7.4 = 7.4
```

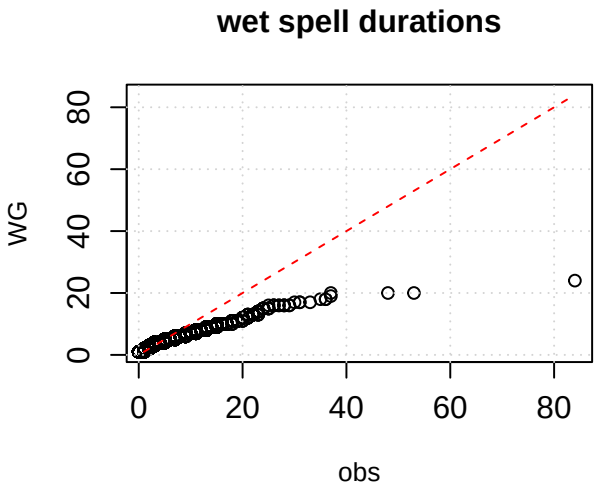
```
## 3 1952 fw= 0.3411337 n.wet= 125 = 125 mu= 6.2 = 6.1
## 4 1953 fw= 0.4026749 n.wet= 147 = 147 mu= 7.3 = 7.3
## 5 1954 fw= 0.4125111 n.wet= 151 = 151 mu= 7.8 = 7.8
## 6 1955 fw= 0.34287 n.wet= 125 = 125 mu= 7.4 = 7.4
## 7 1956 fw= 0.3610353 n.wet= 132 = 132 mu= 6.5 = 6.5
## 8 1957 fw= 0.3293862 n.wet= 120 = 120 mu= 6.5 = 6.5
## 9 1958 fw= 0.3718384 n.wet= 136 = 136 mu= 6.7 = 6.7
## 10 1959 fw= 0.3853741 n.wet= 141 = 141 mu= 9.1 = 9.1
## 11 1960 fw= 0.3520696 n.wet= 129 = 129 mu= 6.7 = 6.7
## 12 1961 fw= 0.338414 n.wet= 124 = 124 mu= 6.3 = 6.3
## 13 1962 fw= 0.3000845 n.wet= 110 = 110 mu= 9 = 9
## 14 1963 fw= 0.3531112 n.wet= 129 = 129 mu= 8 = 8
## 15 1964 fw= 0.3468257 n.wet= 127 = 127 mu= 6.7 = 6.7
## 16 1965 fw= 0.4296104 n.wet= 157 = 157 mu= 6.1 = 6.1
## 17 1966 fw= 0.2840469 n.wet= 104 = 104 mu= 9 = 8.9
## 18 1967 fw= 0.3969434 n.wet= 145 = 145 mu= 6.8 = 6.8
## 19 1968 fw= 0.3014034 n.wet= 110 = 110 mu= 5.5 = 5.5
## 20 1969 fw= 0.3672096 n.wet= 134 = 134 mu= 7.5 = 7.5
## 21 1970 fw= 0.3164063 n.wet= 116 = 116 mu= 7.4 = 7.4
## 22 1971 fw= 0.4561728 n.wet= 167 = 167 mu= 7.7 = 7.7
## 23 1972 fw= 0.4122883 n.wet= 151 = 151 mu= 7.4 = 7.4
## 24 1973 fw= 0.3180198 n.wet= 116 = 116 mu= 8.7 = 8.7
## 25 1974 fw= 0.3602978 n.wet= 132 = 132 mu= 8.2 = 8.2
## 26 1975 fw= 0.4166418 n.wet= 152 = 152 mu= 8.9 = 8.9
## 27 1976 fw= 0.4031662 n.wet= 147 = 147 mu= 8 = 8
## 28 1977 fw= 0.404017 n.wet= 148 = 148 mu= 8.3 = 8.3
## 29 1978 fw= 0.3791858 n.wet= 138 = 138 mu= 7.5 = 7.5
## 30 1979 fw= 0.3482303 n.wet= 127 = 127 mu= 5.7 = 5.7
## 31 1980 fw= 0.3363358 n.wet= 123 = 123 mu= 8.4 = 8.4
## 32 1981 fw= 0.400271 n.wet= 146 = 146 mu= 7.8 = 7.8
## 33 1982 fw= 0.3644285 n.wet= 133 = 133 mu= 4.7 = 4.7
## 34 1983 fw= 0.4275671 n.wet= 156 = 156 mu= 5.8 = 5.8
## 35 1984 fw= 0.3133724 n.wet= 114 = 114 mu= 6.8 = 6.8
## 36 1985 fw= 0.416658 n.wet= 152 = 152 mu= 6.6 = 6.6
## 37 1986 fw= 0.3331822 n.wet= 122 = 122 mu= 6.8 = 6.8
## 38 1987 fw= 0.3419847 n.wet= 125 = 125 mu= 9.2 = 9.2
## 39 1988 fw= 0.320129 n.wet= 117 = 117 mu= 8.5 = 8.5
## 40 1989 fw= 0.3769917 n.wet= 138 = 138 mu= 8.3 = 8.3
## 41 1990 fw= 0.3265601 n.wet= 119 = 119 mu= 8.7 = 8.7
## 42 1991 fw= 0.3262882 n.wet= 119 = 119 mu= 6.6 = 6.6
## 43 1992 fw= 0.3401171 n.wet= 124 = 124 mu= 9 = 9
## 44 1993 fw= 0.3913419 n.wet= 143 = 143 mu= 7.5 = 7.5
## 45 1994 fw= 0.3906812 n.wet= 143 = 143 mu= 8.5 = 8.5
## 46 1995 fw= 0.3526835 n.wet= 129 = 129 mu= 9.4 = 9.4
## 47 1996 fw= 0.2764627 n.wet= 101 = 101 mu= 6.8 = 6.8
## 48 1997 fw= 0.4762369 n.wet= 174 = 174 mu= 8 = 8
## 49 1998 fw= 0.2959864 n.wet= 108 = 108 mu= 7.7 = 7.7
## 50 1999 fw= 0.4308076 n.wet= 157 = 157 mu= 8.6 = 8.6
## 51 2000 fw= 0.2154194 n.wet= 79 = 79 mu= 7.3 = 7.3
## 52 2001 fw= 0.3562385 n.wet= 130 = 130 mu= 7 = 7
## 53 2002 fw= 0.2828917 n.wet= 103 = 103 mu= 8.2 = 8.2
## 54 2003 fw= 0.4072406 n.wet= 149 = 149 mu= 7.9 = 7.9
## 55 2004 fw= 0.3399811 n.wet= 124 = 124 mu= 7.5 = 7.5
## 56 2005 fw= 0.3762962 n.wet= 137 = 137 mu= 7.7 = 7.7
```

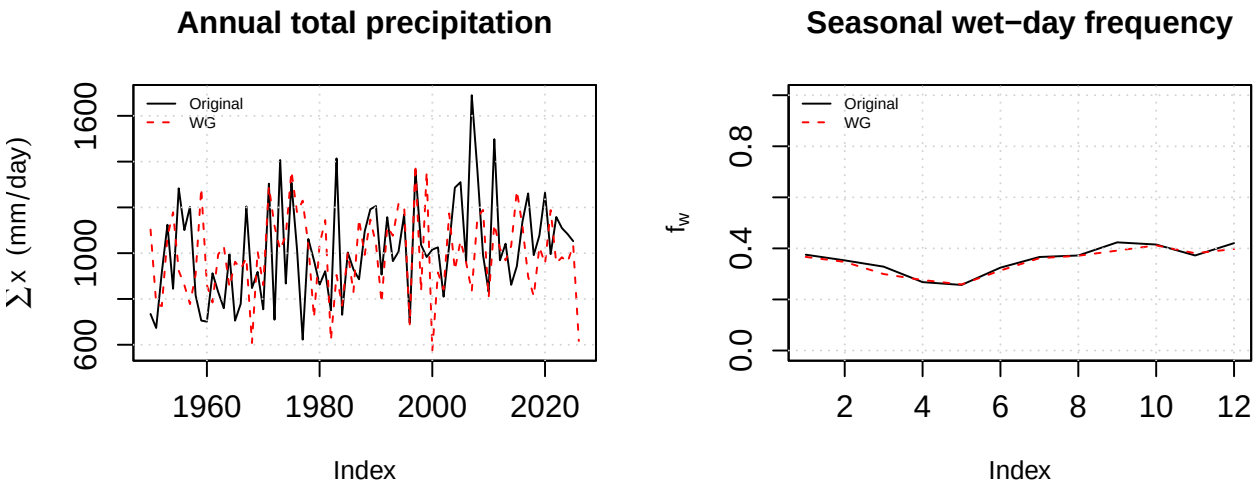
```
## 57 2006 fw= 0.34822 n.wet= 127 = 127 mu= 7.6 = 7.6
## 58 2007 fw= 0.3245919 n.wet= 119 = 119 mu= 7 = 7
## 59 2008 fw= 0.3924056 n.wet= 143 = 143 mu= 8.1 = 8.1
## 60 2009 fw= 0.4122775 n.wet= 151 = 151 mu= 7.9 = 7.9
## 61 2010 fw= 0.3683403 n.wet= 135 = 135 mu= 6 = 6
## 62 2011 fw= 0.369273 n.wet= 135 = 135 mu= 8.3 = 8.3
## 63 2012 fw= 0.3278023 n.wet= 120 = 120 mu= 8.5 = 8.5
## 64 2013 fw= 0.3567131 n.wet= 130 = 130 mu= 7.5 = 7.5
## 65 2014 fw= 0.3305407 n.wet= 121 = 121 mu= 8.5 = 8.5
## 66 2015 fw= 0.4322434 n.wet= 158 = 158 mu= 8.1 = 8.1
## 67 2016 fw= 0.3989583 n.wet= 146 = 146 mu= 7.7 = 7.7
## 68 2017 fw= 0.3296548 n.wet= 120 = 120 mu= 7.5 = 7.5
## 69 2018 fw= 0.355541 n.wet= 130 = 130 mu= 6.2 = 6.2
## 70 2019 fw= 0.3642006 n.wet= 133 = 133 mu= 7.7 = 7.7
## 71 2020 fw= 0.3464086 n.wet= 127 = 127 mu= 7.5 = 7.5
## 72 2021 fw= 0.3789333 n.wet= 138 = 138 mu= 8.6 = 8.6
## 73 2022 fw= 0.2771482 n.wet= 101 = 101 mu= 9.5 = 9.5
## 74 2023 fw= 0.3327963 n.wet= 122 = 122 mu= 8 = 8.1
## 75 2024 fw= 0.290778 n.wet= 106 = 106 mu= 9.1 = 9.1
## 76 2025 fw= 0.3247015 n.wet= 119 = 119 mu= 8.7 = 8.7
## 77 2026 fw= 0.2565658 n.wet= 94 = 94 mu= 6.6 = 6.6
## [1] "Sort precipitation magnitudes"
## [1] "9918 observed wet days and 9629 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.0   3.445     4.0    62.2    2
## Feb       0       0     0.0   2.978     3.3    67.1   NA
## Mar       0       0     0.0   2.631     2.4    69.5   NA
## Apr       0       0     0.0   1.805     1.2    36.8   NA
## May       0       0     0.0   1.386     1.1    31.9   NA
## Jun       0       0     0.1   1.736     1.8    40.5   NA
## Jul       0       0     0.1   2.067     2.3    44.8   NA
## Aug       0       0     0.2   2.306     2.4    67.8   NA
## Sep       0       0     0.4   3.499     4.0    70.8   NA
## Oct       0       0     0.2   3.750     4.1    71.1   NA
## Nov       0       0     0.0   3.707     3.9    86.4   NA
## Dec       0       0     0.1   3.964     5.1    65.5   NA
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 3.190     3.9 82.1   NA
## Feb    0       0      0 3.057     3.4 68.3   NA
## Mar    0       0      0 2.425     2.1 80.7   NA
## Apr    0       0      0 1.864     1.4 70.7   NA
## May    0       0      0 1.426     1.0 36.0   NA
## Jun    0       0      0 1.755     1.8 51.6   NA
## Jul    0       0      0 2.185     2.5 57.8   NA
## Aug    0       0      0 2.280     2.7 41.7   NA
## Sep    0       0      0 2.983     3.8 78.9   NA
## Oct    0       0      0 3.674     4.7 90.5   NA
## Nov    0       0      0 3.761     5.0 79.1   NA
## Dec    0       0      0 3.947     5.2 71.3   NA
```

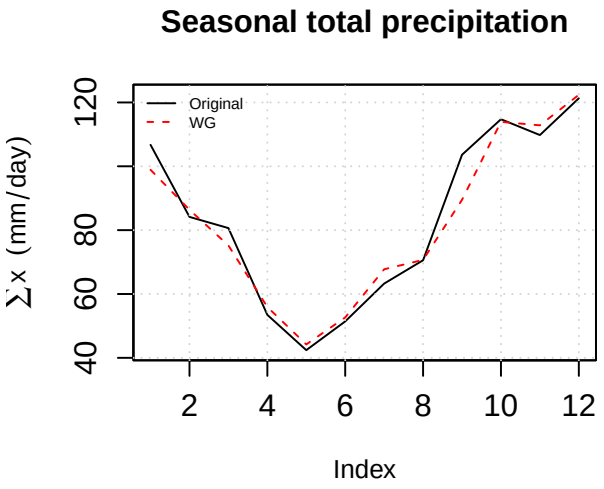

NORDDAL wet−day amounts
WG amount (mm/day)
0
20
60
0
20
40
60
80
Observed amount (mm/day)

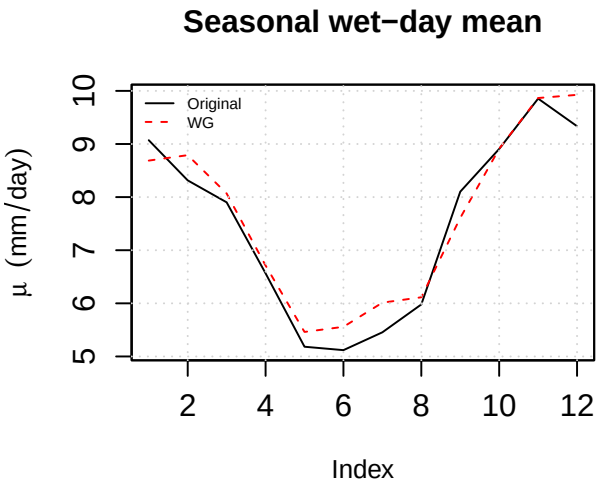

Dry spell durations
WG
5
10
20
5
10
15
20
obs


Number of annual wet days
days
50
100
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
40
60
80
0
20
40
60
80
obs



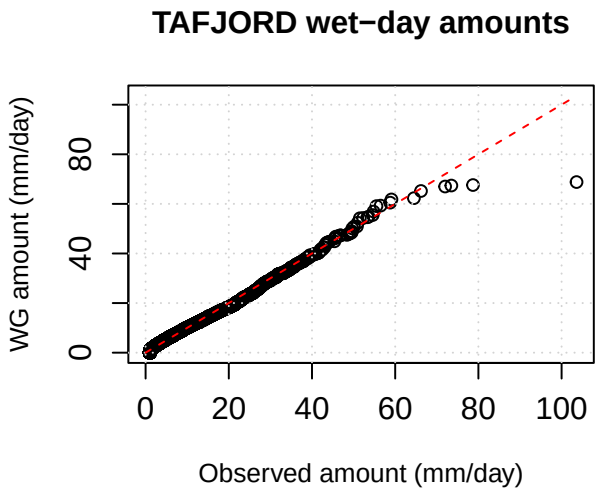


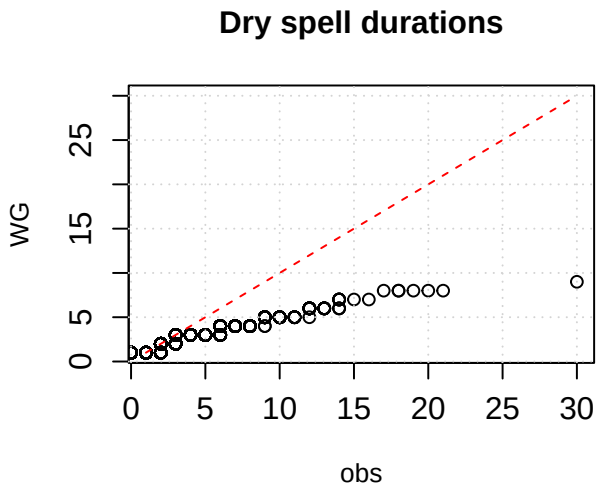


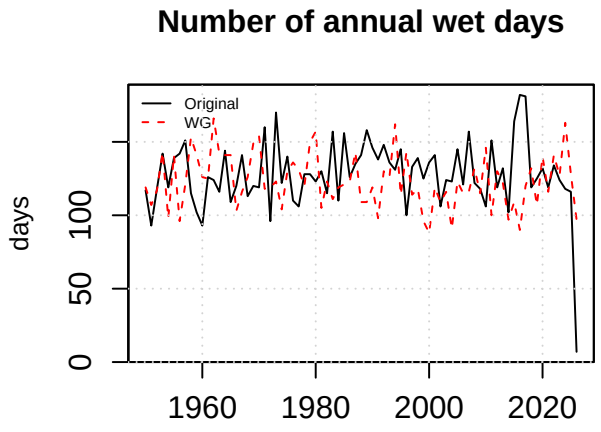

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for TAFJORD"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: TAFJORD"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2522
##  1st Qu.:1969   1st Qu.:0.3181
##  Median :1988   Median :0.3461
##  Mean   :1988   Mean   :0.3534
##  3rd Qu.:2007   3rd Qu.:0.3920
##  Max.   :2026   Max.   :0.4758
##      Index          c(mu)
##  Min.   :1950   Min.   :4.758
##  1st Qu.:1969   1st Qu.:6.684
##  Median :1988   Median :7.313
##  Mean   :1988   Mean   :7.281
##  3rd Qu.:2007   3rd Qu.:7.862
##  Max.   :2026   Max.   :9.344
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3422646 n.wet= 125 = 125 mu= 7.6 = 7.6
## 2 1951 fw= 0.3179226 n.wet= 116 = 116 mu= 5.8 = 5.8
```

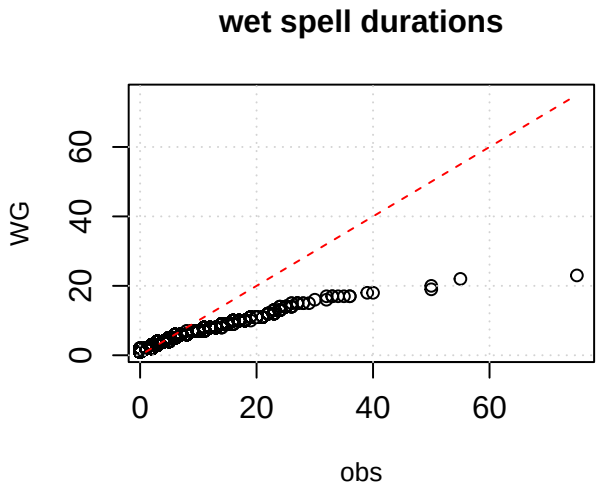
```
## 3 1952 fw= 0.329144 n.wet= 120 = 120 mu= 8.2 = 8.2
## 4 1953 fw= 0.4032092 n.wet= 147 = 147 mu= 7.2 = 7.2
## 5 1954 fw= 0.2860582 n.wet= 104 = 104 mu= 6.5 = 6.5
## 6 1955 fw= 0.4045023 n.wet= 148 = 148 mu= 6.5 = 6.5
## 7 1956 fw= 0.2747735 n.wet= 100 = 100 mu= 5.9 = 5.9
## 8 1957 fw= 0.3533515 n.wet= 129 = 129 mu= 7.9 = 7.9
## 9 1958 fw= 0.4490696 n.wet= 164 = 164 mu= 6.4 = 6.4
## 10 1959 fw= 0.4062778 n.wet= 148 = 148 mu= 9.2 = 9.2
## 11 1960 fw= 0.3632892 n.wet= 133 = 133 mu= 7.6 = 7.6
## 12 1961 fw= 0.3580439 n.wet= 131 = 131 mu= 8.6 = 8.6
## 13 1962 fw= 0.4757708 n.wet= 174 = 174 mu= 7.3 = 7.3
## 14 1963 fw= 0.3946474 n.wet= 144 = 144 mu= 7.3 = 7.3
## 15 1964 fw= 0.4010104 n.wet= 146 = 146 mu= 7.3 = 7.3
## 16 1965 fw= 0.4014346 n.wet= 147 = 147 mu= 6.2 = 6.2
## 17 1966 fw= 0.286544 n.wet= 105 = 105 mu= 7.6 = 7.6
## 18 1967 fw= 0.3214179 n.wet= 117 = 117 mu= 8.2 = 8.2
## 19 1968 fw= 0.3756052 n.wet= 137 = 137 mu= 4.8 = 4.8
## 20 1969 fw= 0.4111869 n.wet= 150 = 150 mu= 8.5 = 8.5
## 21 1970 fw= 0.4402852 n.wet= 161 = 161 mu= 7.3 = 7.3
## 22 1971 fw= 0.3342723 n.wet= 122 = 122 mu= 7.1 = 7.1
## 23 1972 fw= 0.352184 n.wet= 129 = 129 mu= 6.1 = 6.1
## 24 1973 fw= 0.3417141 n.wet= 125 = 125 mu= 6.8 = 6.8
## 25 1974 fw= 0.3001109 n.wet= 110 = 110 mu= 8 = 8
## 26 1975 fw= 0.3756366 n.wet= 137 = 137 mu= 6.7 = 6.7
## 27 1976 fw= 0.3714061 n.wet= 136 = 136 mu= 7.1 = 7.1
## 28 1977 fw= 0.3694893 n.wet= 135 = 135 mu= 7.5 = 7.5
## 29 1978 fw= 0.3413919 n.wet= 125 = 125 mu= 8.6 = 8.6
## 30 1979 fw= 0.4255434 n.wet= 155 = 155 mu= 7.9 = 7.9
## 31 1980 fw= 0.4440845 n.wet= 162 = 162 mu= 7.1 = 7.1
## 32 1981 fw= 0.2946905 n.wet= 108 = 108 mu= 9.3 = 9.3
## 33 1982 fw= 0.3460722 n.wet= 126 = 126 mu= 7.5 = 7.5
## 34 1983 fw= 0.3376009 n.wet= 123 = 123 mu= 7.1 = 7.1
## 35 1984 fw= 0.3379734 n.wet= 123 = 123 mu= 8.3 = 8.3
## 36 1985 fw= 0.3434518 n.wet= 125 = 125 mu= 7 = 7
## 37 1986 fw= 0.356927 n.wet= 130 = 130 mu= 7.6 = 7.6
## 38 1987 fw= 0.4027369 n.wet= 147 = 147 mu= 9.3 = 9.3
## 39 1988 fw= 0.3082051 n.wet= 113 = 113 mu= 7.8 = 7.8
## 40 1989 fw= 0.3110728 n.wet= 114 = 114 mu= 7.7 = 7.7
## 41 1990 fw= 0.3457217 n.wet= 126 = 126 mu= 7.2 = 7.2
## 42 1991 fw= 0.2963055 n.wet= 108 = 108 mu= 8 = 8
## 43 1992 fw= 0.3916676 n.wet= 143 = 143 mu= 5.5 = 5.5
## 44 1993 fw= 0.369398 n.wet= 135 = 135 mu= 5.8 = 5.8
## 45 1994 fw= 0.4568658 n.wet= 167 = 167 mu= 9.1 = 9.1
## 46 1995 fw= 0.3191427 n.wet= 117 = 117 mu= 8.6 = 8.6
## 47 1996 fw= 0.4042069 n.wet= 148 = 148 mu= 6.3 = 6.3
## 48 1997 fw= 0.3191785 n.wet= 117 = 117 mu= 5.8 = 5.8
## 49 1998 fw= 0.3449349 n.wet= 126 = 126 mu= 7.3 = 7.3
## 50 1999 fw= 0.2798391 n.wet= 102 = 102 mu= 7.7 = 7.7
## 51 2000 fw= 0.2522411 n.wet= 92 = 92 mu= 6.4 = 6.4
## 52 2001 fw= 0.3519393 n.wet= 129 = 129 mu= 6.7 = 6.7
## 53 2002 fw= 0.3062312 n.wet= 112 = 112 mu= 6.9 = 6.9
## 54 2003 fw= 0.3298144 n.wet= 120 = 120 mu= 7.1 = 7.1
## 55 2004 fw= 0.2660721 n.wet= 97 = 97 mu= 7 = 7
## 56 2005 fw= 0.3558051 n.wet= 130 = 130 mu= 7.2 = 7.2
```

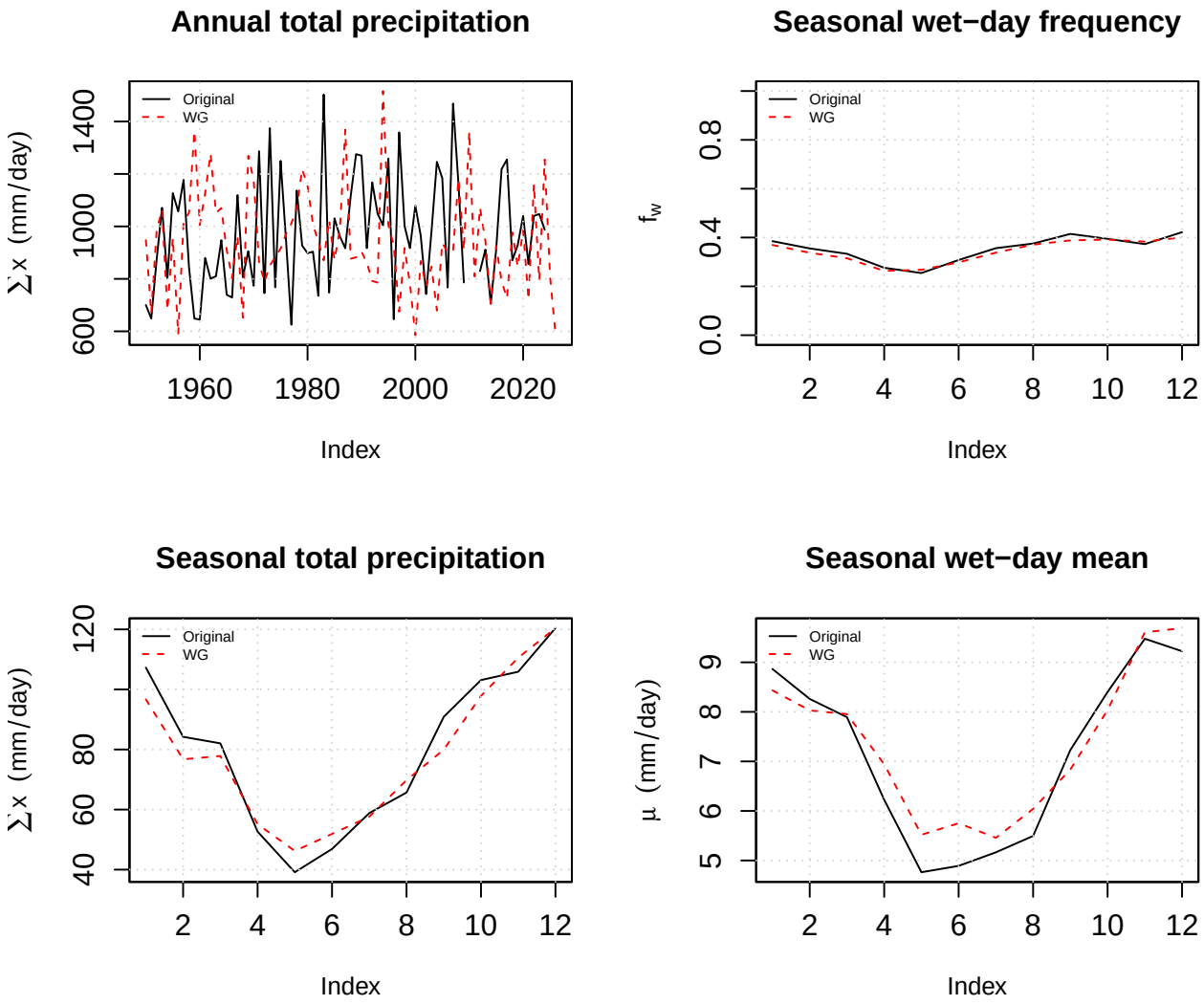
```
## 57 2006 fw= 0.3284565 n.wet= 120 = 120 mu= 7.5 = 7.5
## 58 2007 fw= 0.3387018 n.wet= 124 = 124 mu= 7.3 = 7.3
## 59 2008 fw= 0.3901507 n.wet= 143 = 143 mu= 8.3 = 8.3
## 60 2009 fw= 0.3173945 n.wet= 116 = 116 mu= 7.8 = 7.8
## 61 2010 fw= 0.4028671 n.wet= 147 = 147 mu= 9.3 = 9.3
## 62 2011 fw= 0.2841656 n.wet= 104 = 104 mu= 7.8 = 7.8
## 63 2012 fw= 0.357851 n.wet= 131 = 131 mu= 8.2 = 8.2
## 64 2013 fw= 0.3541555 n.wet= 129 = 129 mu= 7.3 = 7.3
## 65 2014 fw= 0.2695124 n.wet= 98 = 98 mu= 7.2 = 7.2
## 66 2015 fw= 0.3180894 n.wet= 116 = 116 mu= 8 = 8
## 67 2016 fw= 0.264235 n.wet= 97 = 97 mu= 8.2 = 8.2
## 68 2017 fw= 0.3403085 n.wet= 124 = 124 mu= 5.9 = 5.9
## 69 2018 fw= 0.3920165 n.wet= 143 = 143 mu= 6.8 = 6.8
## 70 2019 fw= 0.3075238 n.wet= 112 = 112 mu= 7.6 = 7.6
## 71 2020 fw= 0.4132089 n.wet= 151 = 151 mu= 6.5 = 6.5
## 72 2021 fw= 0.3448526 n.wet= 126 = 126 mu= 5.7 = 5.7
## 73 2022 fw= 0.4207312 n.wet= 154 = 154 mu= 7.5 = 7.5
## 74 2023 fw= 0.3707445 n.wet= 135 = 135 mu= 5.9 = 5.9
## 75 2024 fw= 0.4599909 n.wet= 168 = 168 mu= 7.5 = 7.5
## 76 2025 fw= 0.377921 n.wet= 138 = 138 mu= 5.9 = 5.9
## 77 2026 fw= 0.2787302 n.wet= 102 = 102 mu= 5.8 = 5.8
## [1] "Sort precipitation magnitudes"
## [1] "9839 observed wet days and 9485 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.1   3.464     3.9    55.5       3
## Feb       0       0     0.0   2.984     3.1    53.6       2
## Mar       0       0     0.0   2.679     2.4    54.6       2
## Apr       0       0     0.0   1.780     1.3    48.9       2
## May       0       0     0.0   1.280     1.0    35.2       2
## Jun       0       0     0.1   1.585     1.6    33.0       3
## Jul       0       0     0.2   1.925     2.1    42.2       4
## Aug       0       0     0.3   2.149     2.2    53.3       3
## Sep       0       0     0.4   3.074     3.2   103.6       4
## Oct       0       0     0.2   3.380     3.5    78.7       7
## Nov       0       0     0.1   3.582     3.4    66.2       4
## Dec       0       0     0.2   3.939     4.7    72.0       2
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 3.119   3.750 48.2   NA
## Feb    0       0      0 2.716   3.100 54.2   NA
## Mar    0       0      0 2.511   2.400 65.2   NA
## Apr    0       0      0 1.837   1.175 48.0   NA
## May    0       0      0 1.490   1.100 61.8   NA
## Jun    0       0      0 1.729   1.600 46.0   NA
## Jul    0       0      0 1.858   2.100 48.0   NA
## Aug    0       0      0 2.251   2.700 47.5   NA
## Sep    0       0      0 2.664   3.400 60.5   NA
## Oct    0       0      0 3.155   4.100 67.4   NA
## Nov    0       0      0 3.685   4.400 67.6   NA
## Dec    0       0      0 3.884   5.200 68.8   NA
```


TAFJORD wet−day amounts
WG amount (mm/day)
0
40
80
0
20
40
60
80
100
Observed amount (mm/day)


Dry spell durations
WG
0
5
15
25
0
5
10
15
20
25
30
obs


Number of annual wet days
days
0
50
100
Original
WG
1960
1980
2000
2020

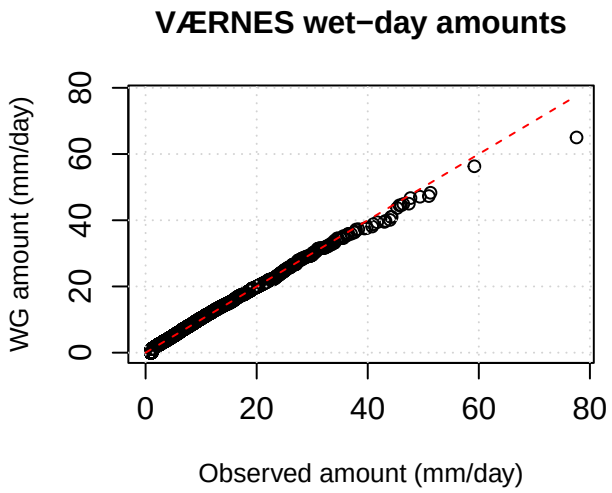

wet spell durations
WG
0
20
40
60
0
20
40
60
obs

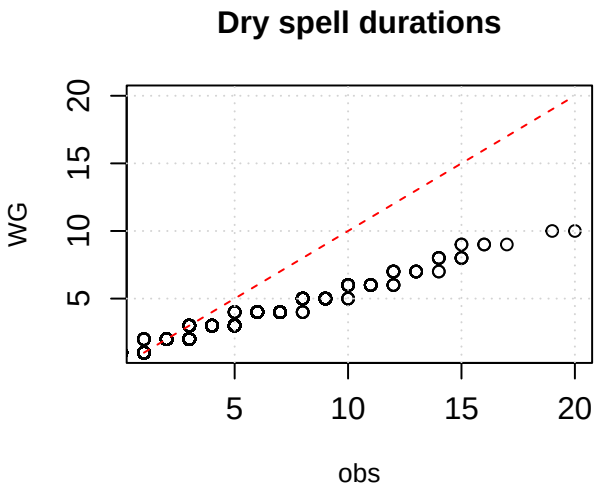


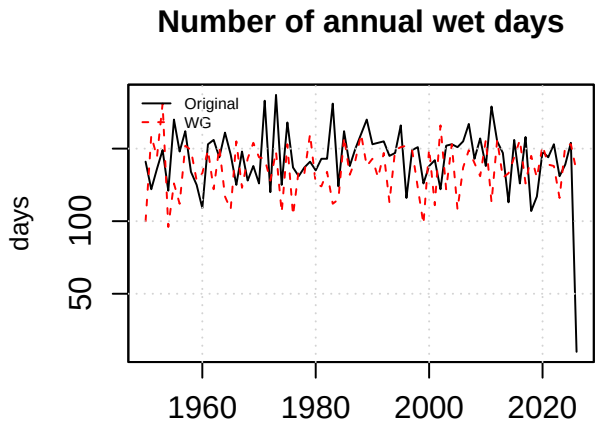

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for VÆRNES"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: VÆRNES"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2963
##  1st Qu.:1969   1st Qu.:0.3644
##  Median :1988   Median :0.4050
##  Mean   :1988   Mean   :0.3977
##  3rd Qu.:2007   3rd Qu.:0.4305
##  Max.   :2026   Max.   :0.5109
##      Index          c(mu)
##  Min.   :1950   Min.   :4.198
##  1st Qu.:1969   1st Qu.:5.270
##  Median :1988   Median :5.643
##  Mean   :1988   Mean   :5.692
##  3rd Qu.:2007   3rd Qu.:6.036
##  Max.   :2026   Max.   :7.837
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.2962957 n.wet= 108 = 108 mu= 6 = 6
## 2 1951 fw= 0.4672616 n.wet= 171 = 171 mu= 5.6 = 5.6
```

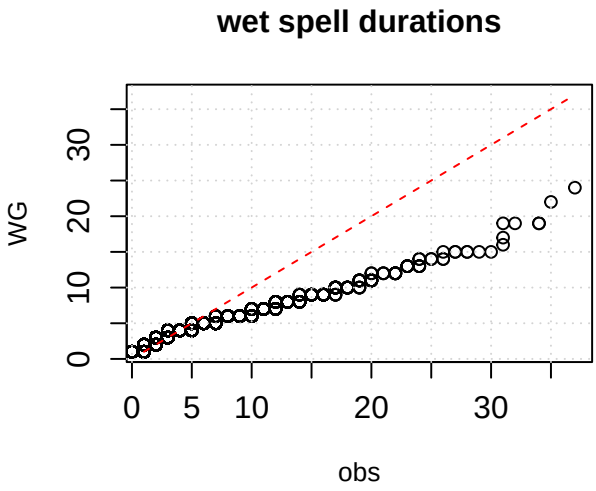
```
## 3 1952 fw= 0.4211387 n.wet= 154 = 154 mu= 5.6 = 5.6
## 4 1953 fw= 0.5109418 n.wet= 187 = 187 mu= 5.2 = 5.2
## 5 1954 fw= 0.3013246 n.wet= 110 = 110 mu= 5.8 = 5.8
## 6 1955 fw= 0.364353 n.wet= 133 = 133 mu= 6.6 = 6.6
## 7 1956 fw= 0.3262542 n.wet= 119 = 119 mu= 6.2 = 6.2
## 8 1957 fw= 0.4298746 n.wet= 157 = 157 mu= 5.9 = 5.9
## 9 1958 fw= 0.4216842 n.wet= 154 = 154 mu= 6.5 = 6.5
## 10 1959 fw= 0.3576021 n.wet= 131 = 131 mu= 6.5 = 6.5
## 11 1960 fw= 0.3995722 n.wet= 146 = 146 mu= 5.9 = 5.9
## 12 1961 fw= 0.4318714 n.wet= 158 = 158 mu= 6.2 = 6.2
## 13 1962 fw= 0.3686536 n.wet= 135 = 135 mu= 5.3 = 5.3
## 14 1963 fw= 0.4294641 n.wet= 157 = 157 mu= 5.9 = 5.9
## 15 1964 fw= 0.3347197 n.wet= 122 = 122 mu= 5.3 = 5.3
## 16 1965 fw= 0.3399436 n.wet= 124 = 124 mu= 5 = 5
## 17 1966 fw= 0.4471293 n.wet= 163 = 163 mu= 5.5 = 5.5
## 18 1967 fw= 0.3804331 n.wet= 139 = 139 mu= 5.7 = 5.7
## 19 1968 fw= 0.4049861 n.wet= 148 = 148 mu= 5 = 5
## 20 1969 fw= 0.4405398 n.wet= 161 = 161 mu= 6.4 = 6.4
## 21 1970 fw= 0.4332614 n.wet= 158 = 158 mu= 6 = 6
## 22 1971 fw= 0.4204682 n.wet= 154 = 154 mu= 5.1 = 5.1
## 23 1972 fw= 0.3695327 n.wet= 135 = 135 mu= 6 = 6
## 24 1973 fw= 0.4270059 n.wet= 156 = 156 mu= 6 = 6
## 25 1974 fw= 0.3187799 n.wet= 116 = 116 mu= 5.7 = 5.7
## 26 1975 fw= 0.4545949 n.wet= 166 = 166 mu= 4.8 = 4.8
## 27 1976 fw= 0.3127659 n.wet= 114 = 114 mu= 5.1 = 5.1
## 28 1977 fw= 0.3830641 n.wet= 140 = 140 mu= 5.1 = 5.1
## 29 1978 fw= 0.3846974 n.wet= 141 = 141 mu= 6.4 = 6.4
## 30 1979 fw= 0.4403284 n.wet= 161 = 161 mu= 5.7 = 5.7
## 31 1980 fw= 0.3808829 n.wet= 139 = 139 mu= 5.4 = 5.4
## 32 1981 fw= 0.3625796 n.wet= 132 = 132 mu= 5.7 = 5.7
## 33 1982 fw= 0.3896021 n.wet= 142 = 142 mu= 5.4 = 5.4
## 34 1983 fw= 0.3268929 n.wet= 119 = 119 mu= 5.2 = 5.2
## 35 1984 fw= 0.3367638 n.wet= 123 = 123 mu= 6.6 = 6.6
## 36 1985 fw= 0.4482111 n.wet= 164 = 164 mu= 5.6 = 5.6
## 37 1986 fw= 0.389255 n.wet= 142 = 142 mu= 5.9 = 5.9
## 38 1987 fw= 0.4148709 n.wet= 152 = 152 mu= 5.2 = 5.2
## 39 1988 fw= 0.4596792 n.wet= 168 = 168 mu= 5.3 = 5.3
## 40 1989 fw= 0.4120622 n.wet= 151 = 151 mu= 4.2 = 4.2
## 41 1990 fw= 0.4065211 n.wet= 148 = 148 mu= 5 = 5
## 42 1991 fw= 0.4113422 n.wet= 150 = 150 mu= 4.3 = 4.3
## 43 1992 fw= 0.4302752 n.wet= 157 = 157 mu= 5.8 = 5.8
## 44 1993 fw= 0.3360135 n.wet= 123 = 123 mu= 5.3 = 5.3
## 45 1994 fw= 0.4518168 n.wet= 165 = 165 mu= 5.3 = 5.3
## 46 1995 fw= 0.429793 n.wet= 157 = 157 mu= 5.2 = 5.2
## 47 1996 fw= 0.4346509 n.wet= 159 = 159 mu= 6.8 = 6.8
## 48 1997 fw= 0.4271799 n.wet= 156 = 156 mu= 5.5 = 5.5
## 49 1998 fw= 0.3698303 n.wet= 135 = 135 mu= 6 = 6
## 50 1999 fw= 0.3095286 n.wet= 113 = 113 mu= 5 = 5
## 51 2000 fw= 0.4339898 n.wet= 159 = 159 mu= 6.3 = 6.3
## 52 2001 fw= 0.3302463 n.wet= 121 = 121 mu= 5.8 = 5.8
## 53 2002 fw= 0.4647332 n.wet= 170 = 170 mu= 6.4 = 6.4
## 54 2003 fw= 0.3485403 n.wet= 127 = 127 mu= 5 = 5
## 55 2004 fw= 0.4240729 n.wet= 155 = 155 mu= 6.4 = 6.4
## 56 2005 fw= 0.3281263 n.wet= 120 = 120 mu= 5.7 = 5.7
```

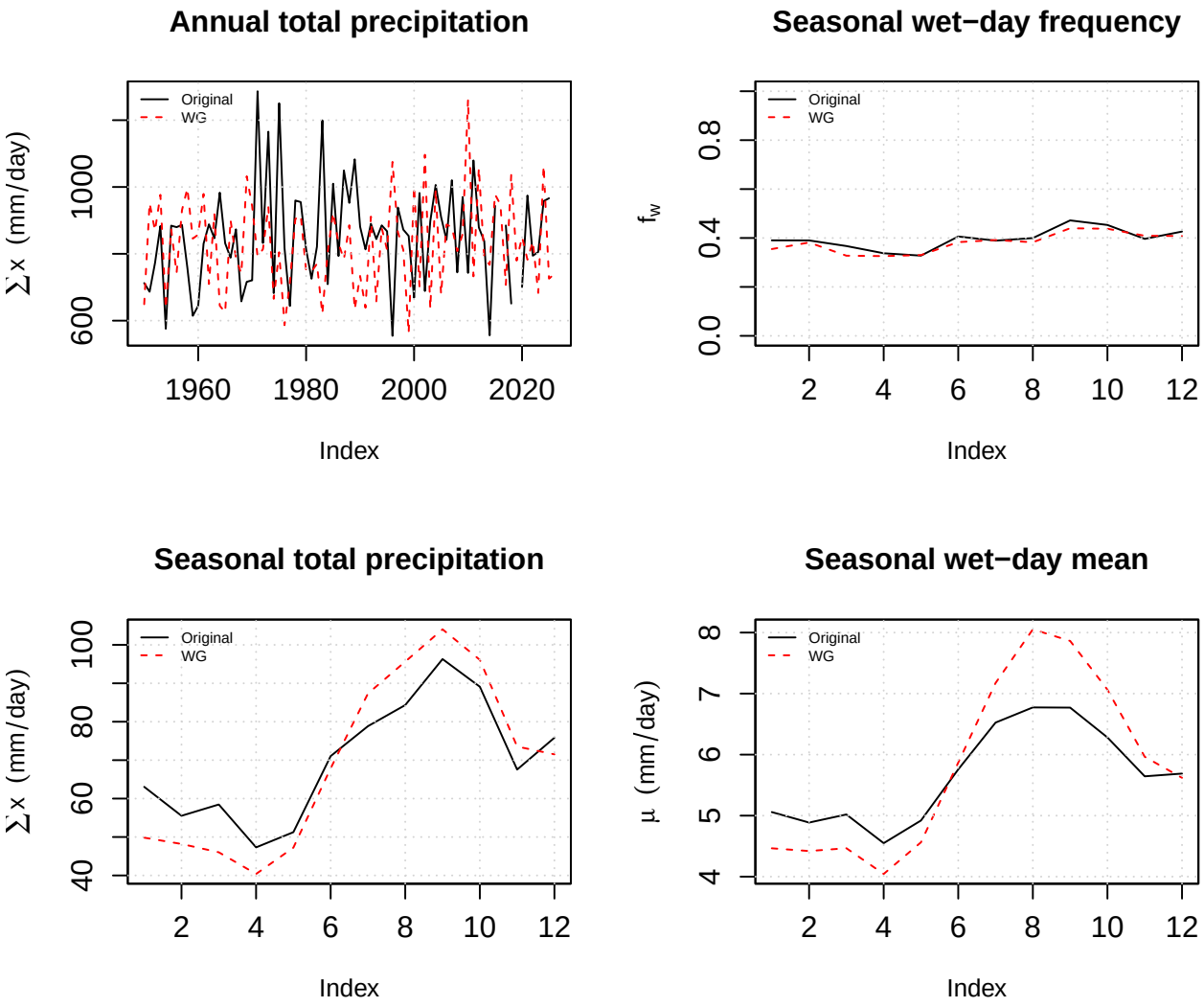
```
## 57 2006 fw= 0.4028789 n.wet= 147 = 147 mu= 6 = 6
## 58 2007 fw= 0.4301683 n.wet= 157 = 157 mu= 5.6 = 5.6
## 59 2008 fw= 0.4270028 n.wet= 156 = 156 mu= 5.2 = 5.2
## 60 2009 fw= 0.3712441 n.wet= 136 = 136 mu= 6.3 = 6.3
## 61 2010 fw= 0.4411055 n.wet= 161 = 161 mu= 7.8 = 7.8
## 62 2011 fw= 0.3580368 n.wet= 131 = 131 mu= 5.6 = 5.6
## 63 2012 fw= 0.4497782 n.wet= 164 = 164 mu= 6.4 = 6.4
## 64 2013 fw= 0.3957349 n.wet= 145 = 145 mu= 5.4 = 5.4
## 65 2014 fw= 0.389082 n.wet= 142 = 142 mu= 5.4 = 5.4
## 66 2015 fw= 0.4216208 n.wet= 154 = 154 mu= 6.3 = 6.3
## 67 2016 fw= 0.473682 n.wet= 173 = 173 mu= 5.5 = 5.5
## 68 2017 fw= 0.3615507 n.wet= 132 = 132 mu= 5.4 = 5.4
## 69 2018 fw= 0.4166034 n.wet= 152 = 152 mu= 6.8 = 6.8
## 70 2019 fw= 0.3708262 n.wet= 135 = 135 mu= 5.8 = 5.8
## 71 2020 fw= 0.4305343 n.wet= 157 = 157 mu= 5.4 = 5.4
## 72 2021 fw= 0.3946042 n.wet= 144 = 144 mu= 5.4 = 5.4
## 73 2022 fw= 0.3943551 n.wet= 144 = 144 mu= 5.8 = 5.8
## 74 2023 fw= 0.3405101 n.wet= 124 = 124 mu= 5.5 = 5.5
## 75 2024 fw= 0.4387938 n.wet= 160 = 160 mu= 6.6 = 6.6
## 76 2025 fw= 0.4492483 n.wet= 164 = 164 mu= 4.4 = 4.4
## 77 2026 fw= 0.3919509 n.wet= 143 = 143 mu= 5.2 = 5.2
## [1] "Sort precipitation magnitudes"
## [1] "10994 observed wet days and 10492 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.2   2.035     2.6    46.0       2
## Feb       0       0     0.2   1.966     2.5    39.4       1
## Mar       0       0     0.1   1.908     2.2    49.4       1
## Apr       0       0     0.1   1.598     1.9    45.3       2
## May       0       0     0.0   1.676     2.0    45.7       2
## Jun       0       0     0.3   2.401     2.9    51.3       2
## Jul       0       0     0.2   2.611     2.9    51.0      31
## Aug       0       0     0.2   2.770     3.1    59.2      12
## Sep       0       0     0.7   3.254     4.5    77.6       2
## Oct       0       0     0.5   2.914     3.8    43.0       2
## Nov       0       0     0.2   2.293     3.0    41.0      12
## Dec       0       0     0.4   2.488     3.3    41.7      10
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.607     2.0 32.5   NA
## Feb    0       0      0 1.706     2.3 37.6   NA
## Mar    0       0      0 1.484     1.6 33.2   NA
## Apr    0       0      0 1.346     1.5 26.6   NA
## May    0       0      0 1.523     1.8 30.2   NA
## Jun    0       0      0 2.262     3.0 32.6   NA
## Jul    0       0      0 2.817     3.9 44.9   NA
## Aug    0       0      0 3.084     4.3 65.0   NA
## Sep    0       0      0 3.467     5.3 44.5   NA
## Oct    0       0      0 3.100     4.4 47.3   NA
## Nov    0       0      0 2.451     3.2 46.7   NA
## Dec    0       0      0 2.306     3.0 56.3   NA
```


VÆRNES wet−day amounts
WG amount (mm/day)
Observed amount (mm/day)
0
20
40
60
80


Dry spell durations
WG
obs
5
10
15
20


Number of annual wet days
days
Original
WG
50
100
1960
1980
2000
2020

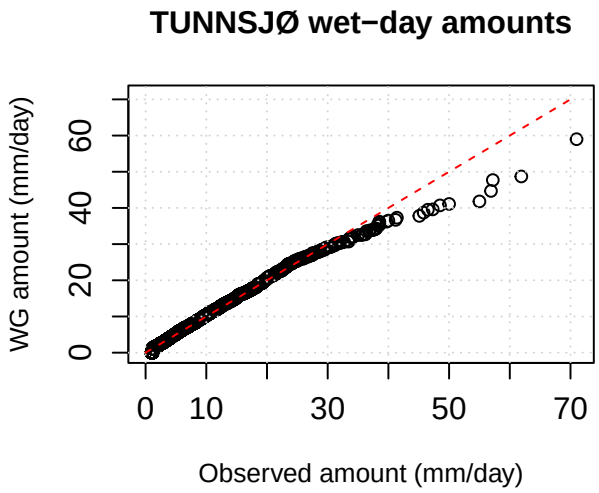

wet spell durations
WG
obs
0
10
20
30

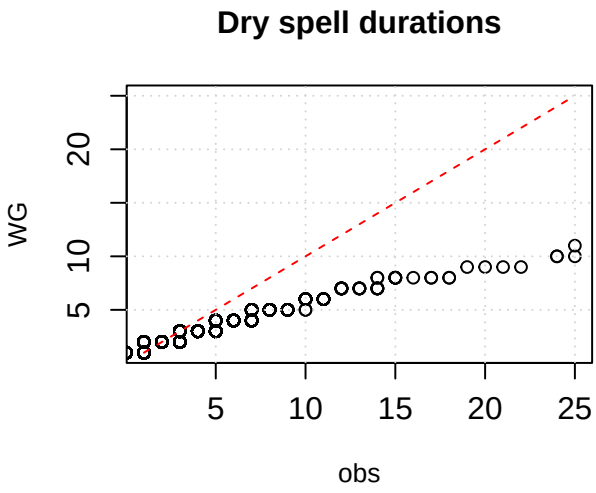


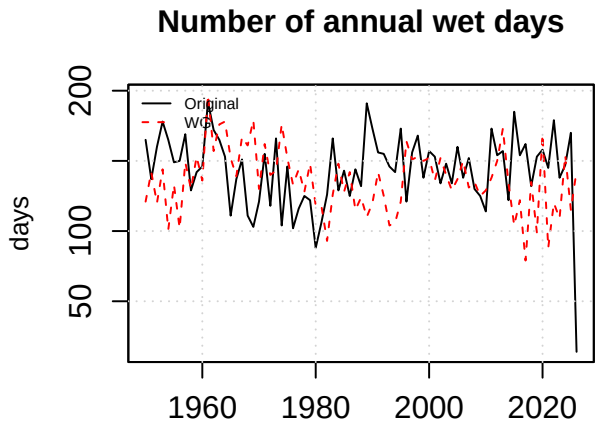

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for TUNNSJØ"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: TUNNSJØ"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2366
##  1st Qu.:1969   1st Qu.:0.3654
##  Median :1988   Median :0.4018
##  Mean   :1988   Mean   :0.4009
##  3rd Qu.:2007   3rd Qu.:0.4348
##  Max.   :2026   Max.   :0.5634
##      Index          c(mu)
##  Min.   :1950   Min.   :3.927
##  1st Qu.:1969   1st Qu.:4.933
##  Median :1988   Median :5.329
##  Mean   :1988   Mean   :5.354
##  3rd Qu.:2007   3rd Qu.:5.785
##  Max.   :2026   Max.   :7.003
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3463607 n.wet= 127 = 127 mu= 5.8 = 5.8
## 2 1951 fw= 0.4068637 n.wet= 149 = 149 mu= 5.9 = 5.9
```

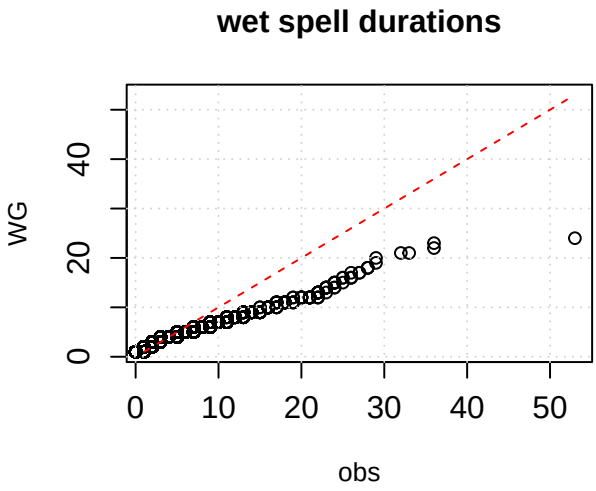
```
## 3 1952 fw= 0.3610199 n.wet= 132 = 132 mu= 5.8 = 5.8
## 4 1953 fw= 0.4135899 n.wet= 151 = 151 mu= 6.1 = 6.1
## 5 1954 fw= 0.2941669 n.wet= 107 = 107 mu= 5.2 = 5.2
## 6 1955 fw= 0.3806954 n.wet= 139 = 139 mu= 6.5 = 6.5
## 7 1956 fw= 0.2924838 n.wet= 107 = 107 mu= 5.1 = 5.1
## 8 1957 fw= 0.422086 n.wet= 154 = 154 mu= 6.6 = 6.6
## 9 1958 fw= 0.3609139 n.wet= 132 = 132 mu= 7 = 7
## 10 1959 fw= 0.4410398 n.wet= 161 = 161 mu= 5 = 5
## 11 1960 fw= 0.3880249 n.wet= 142 = 142 mu= 5.9 = 5.9
## 12 1961 fw= 0.5634238 n.wet= 206 = 206 mu= 6.6 = 6.6
## 13 1962 fw= 0.4761209 n.wet= 174 = 174 mu= 6 = 6
## 14 1963 fw= 0.5121816 n.wet= 187 = 187 mu= 5.4 = 5.4
## 15 1964 fw= 0.4962911 n.wet= 181 = 181 mu= 5.2 = 5.3
## 16 1965 fw= 0.4464722 n.wet= 163 = 163 mu= 5.7 = 5.7
## 17 1966 fw= 0.4078297 n.wet= 149 = 149 mu= 5.7 = 5.7
## 18 1967 fw= 0.4801399 n.wet= 175 = 175 mu= 6 = 6
## 19 1968 fw= 0.4648277 n.wet= 170 = 170 mu= 5.9 = 5.9
## 20 1969 fw= 0.5333026 n.wet= 195 = 195 mu= 5.2 = 5.2
## 21 1970 fw= 0.4273054 n.wet= 156 = 156 mu= 3.9 = 3.9
## 22 1971 fw= 0.4894119 n.wet= 179 = 179 mu= 4.3 = 4.3
## 23 1972 fw= 0.4149769 n.wet= 152 = 152 mu= 5.3 = 5.3
## 24 1973 fw= 0.4321941 n.wet= 158 = 158 mu= 4.8 = 4.8
## 25 1974 fw= 0.5150943 n.wet= 188 = 188 mu= 5 = 5
## 26 1975 fw= 0.4510747 n.wet= 165 = 165 mu= 5.5 = 5.5
## 27 1976 fw= 0.4017676 n.wet= 147 = 147 mu= 4.7 = 4.7
## 28 1977 fw= 0.4283109 n.wet= 156 = 156 mu= 4.9 = 4.9
## 29 1978 fw= 0.3700863 n.wet= 135 = 135 mu= 4.8 = 4.8
## 30 1979 fw= 0.4366281 n.wet= 159 = 159 mu= 5.3 = 5.3
## 31 1980 fw= 0.3533138 n.wet= 129 = 129 mu= 4.1 = 4.1
## 32 1981 fw= 0.358778 n.wet= 131 = 131 mu= 4 = 4
## 33 1982 fw= 0.2770846 n.wet= 101 = 101 mu= 4.4 = 4.4
## 34 1983 fw= 0.3847189 n.wet= 141 = 141 mu= 5 = 5
## 35 1984 fw= 0.4298824 n.wet= 157 = 157 mu= 3.9 = 3.9
## 36 1985 fw= 0.3715798 n.wet= 136 = 136 mu= 6 = 5.9
## 37 1986 fw= 0.4098957 n.wet= 150 = 150 mu= 4.5 = 4.5
## 38 1987 fw= 0.3242602 n.wet= 118 = 118 mu= 5.5 = 5.5
## 39 1988 fw= 0.3576212 n.wet= 131 = 131 mu= 4.7 = 4.7
## 40 1989 fw= 0.3283151 n.wet= 120 = 120 mu= 5.7 = 5.7
## 41 1990 fw= 0.3818233 n.wet= 139 = 139 mu= 4.5 = 4.5
## 42 1991 fw= 0.4080263 n.wet= 149 = 149 mu= 5.3 = 5.3
## 43 1992 fw= 0.3775505 n.wet= 138 = 138 mu= 5.3 = 5.3
## 44 1993 fw= 0.3012366 n.wet= 110 = 110 mu= 5.8 = 5.8
## 45 1994 fw= 0.3239691 n.wet= 118 = 118 mu= 5.1 = 5.1
## 46 1995 fw= 0.3653656 n.wet= 133 = 133 mu= 6.5 = 6.5
## 47 1996 fw= 0.486275 n.wet= 178 = 178 mu= 4.8 = 4.8
## 48 1997 fw= 0.4497314 n.wet= 164 = 164 mu= 5.6 = 5.6
## 49 1998 fw= 0.4720071 n.wet= 172 = 172 mu= 4.4 = 4.4
## 50 1999 fw= 0.4252624 n.wet= 155 = 155 mu= 5.5 = 5.5
## 51 2000 fw= 0.4343889 n.wet= 159 = 159 mu= 5.3 = 5.3
## 52 2001 fw= 0.4183412 n.wet= 153 = 153 mu= 4.6 = 4.6
## 53 2002 fw= 0.446982 n.wet= 163 = 163 mu= 4.5 = 4.5
## 54 2003 fw= 0.4012871 n.wet= 147 = 147 mu= 5.3 = 5.3
## 55 2004 fw= 0.3703192 n.wet= 135 = 135 mu= 5.9 = 5.9
## 56 2005 fw= 0.4114798 n.wet= 150 = 150 mu= 4.3 = 4.3
```

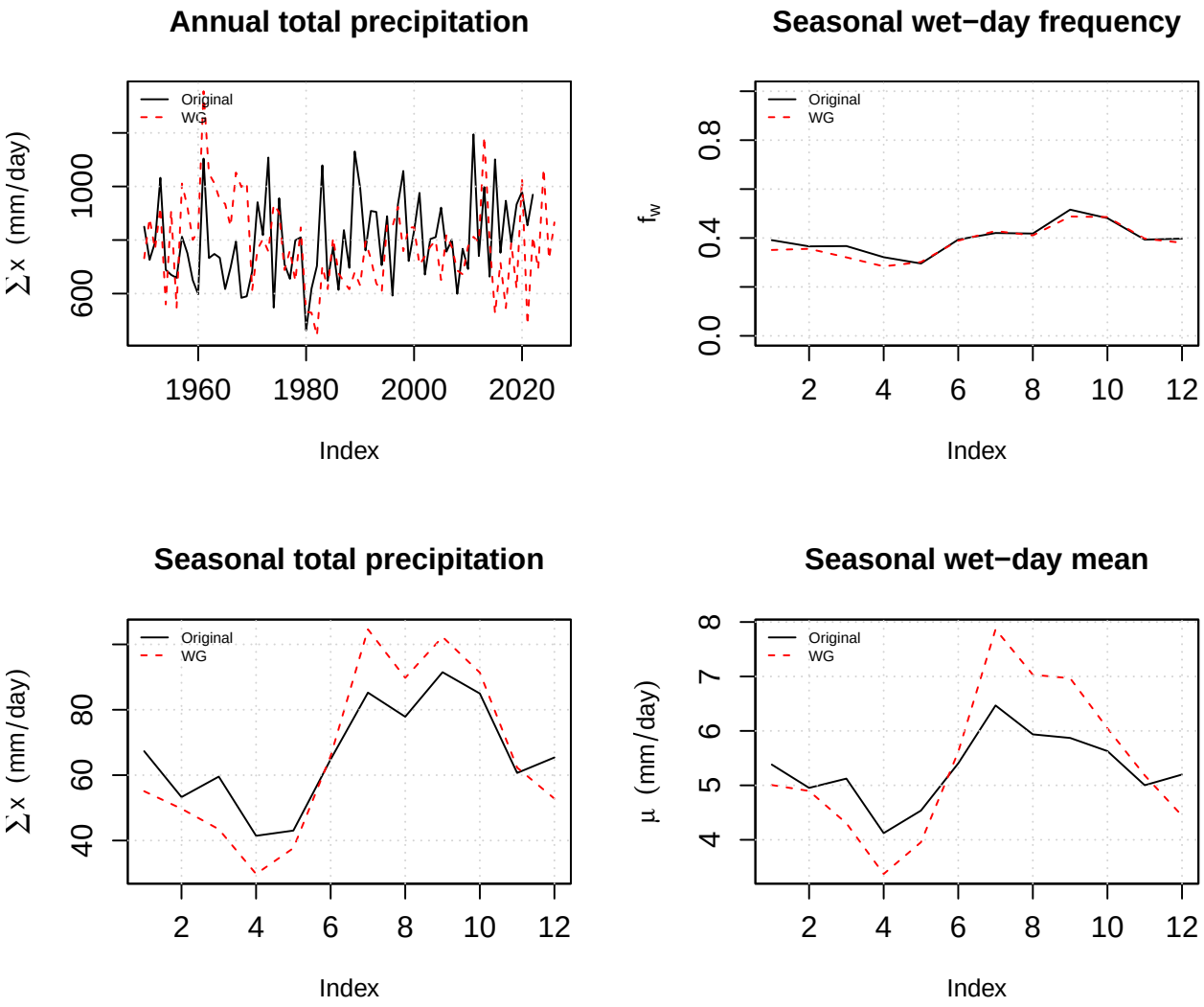
```
## 57 2006 fw= 0.4339917 n.wet= 159 = 159 mu= 5.2 = 5.2
## 58 2007 fw= 0.3852584 n.wet= 141 = 141 mu= 5.5 = 5.5
## 59 2008 fw= 0.3794478 n.wet= 139 = 139 mu= 4.9 = 4.9
## 60 2009 fw= 0.3660924 n.wet= 134 = 134 mu= 5 = 5
## 61 2010 fw= 0.3821577 n.wet= 140 = 140 mu= 5.5 = 5.5
## 62 2011 fw= 0.3998816 n.wet= 146 = 146 mu= 5.6 = 5.6
## 63 2012 fw= 0.4347556 n.wet= 159 = 159 mu= 5 = 5
## 64 2013 fw= 0.4958901 n.wet= 181 = 181 mu= 6.5 = 6.6
## 65 2014 fw= 0.3947748 n.wet= 144 = 144 mu= 5.5 = 5.5
## 66 2015 fw= 0.3044956 n.wet= 111 = 111 mu= 4.7 = 4.7
## 67 2016 fw= 0.377291 n.wet= 138 = 138 mu= 5.2 = 5.2
## 68 2017 fw= 0.2365872 n.wet= 86 = 86 mu= 6.4 = 6.3
## 69 2018 fw= 0.3906204 n.wet= 143 = 143 mu= 5.5 = 5.5
## 70 2019 fw= 0.3163681 n.wet= 116 = 116 mu= 5.3 = 5.3
## 71 2020 fw= 0.4892397 n.wet= 179 = 179 mu= 5.8 = 5.8
## 72 2021 fw= 0.2628883 n.wet= 96 = 96 mu= 5 = 5
## 73 2022 fw= 0.3745788 n.wet= 137 = 137 mu= 5.9 = 5.9
## 74 2023 fw= 0.3316483 n.wet= 121 = 121 mu= 5.7 = 5.7
## 75 2024 fw= 0.4329267 n.wet= 158 = 158 mu= 6.8 = 6.8
## 76 2025 fw= 0.3444398 n.wet= 126 = 126 mu= 5.8 = 5.8
## 77 2026 fw= 0.4113966 n.wet= 150 = 150 mu= 5.8 = 5.8
## [1] "Sort precipitation magnitudes"
## [1] "11026 observed wet days and 10499 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.3   2.178     2.9    45.8       7
## Feb       0       0     0.2   1.888     2.3    47.3       2
## Mar       0       0     0.0   1.945     2.4    40.0       3
## Apr       0       0     0.0   1.401     1.6    36.2       3
## May       0       0     0.0   1.412     1.4    26.2       9
## Jun       0       0     0.2   2.192     2.6    41.4       3
## Jul       0       0     0.4   2.787     3.2    61.9       1
## Aug       0       0     0.4   2.547     2.9    71.0       3
## Sep       0       0     1.1   3.092     4.2    38.5       2
## Oct       0       0     0.8   2.778     3.9    56.9       1
## Nov       0       0     0.4   2.050     2.6    39.7       2
## Dec       0       0     0.3   2.140     2.8    57.2       3
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.7760    2.10 37.8   NA
## Feb    0       0      0 1.7600    2.10 48.7   NA
## Mar    0       0      0 1.4010    1.70 28.8   NA
## Apr    0       0      0 0.9921    1.20 27.7   NA
## May    0       0      0 1.2150    1.40 38.7   NA
## Jun    0       0      0 2.1950    3.00 28.4   NA
## Jul    0       0      0 3.3740    5.00 59.0   NA
## Aug    0       0      0 2.8950    4.05 40.7   NA
## Sep    0       0      0 3.4090    5.20 47.7   NA
## Oct    0       0      0 2.9470    4.00 44.7   NA
## Nov    0       0      0 2.0770    2.60 36.5   NA
## Dec    0       0      0 1.7030    2.20 32.7   NA
```


TUNNSJØ wet−day amounts
WG amount (mm/day)
0
20
40
60
0
10
30
50
70
Observed amount (mm/day)


Dry spell durations
WG
5
10
20
5
10
15
20
25
obs


Number of annual wet days
days
50
100
200
Original
WG
1960
1980
2000
2020

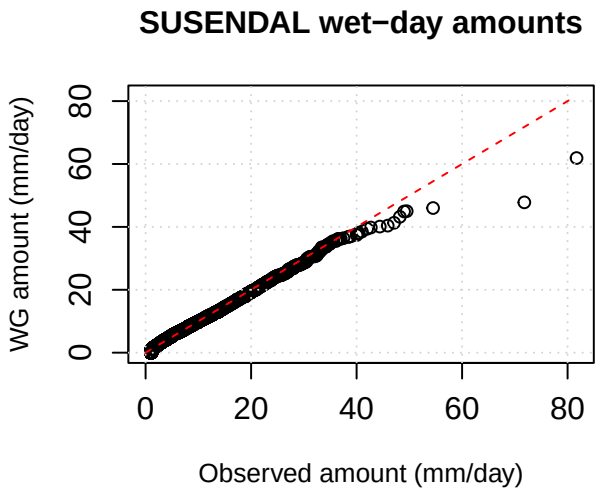

wet spell durations
WG
0
20
40
0
10
20
30
40
50
obs

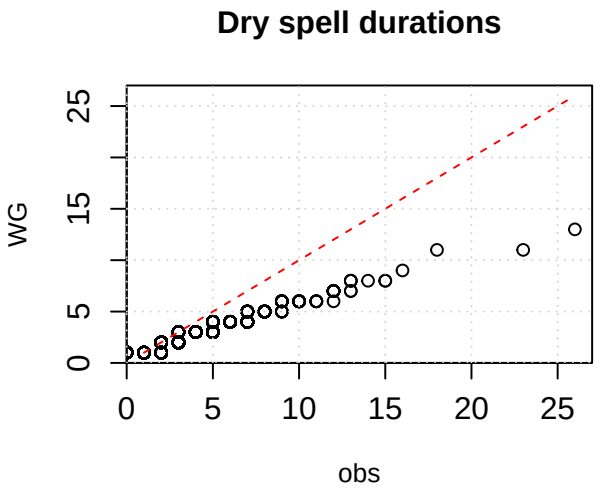


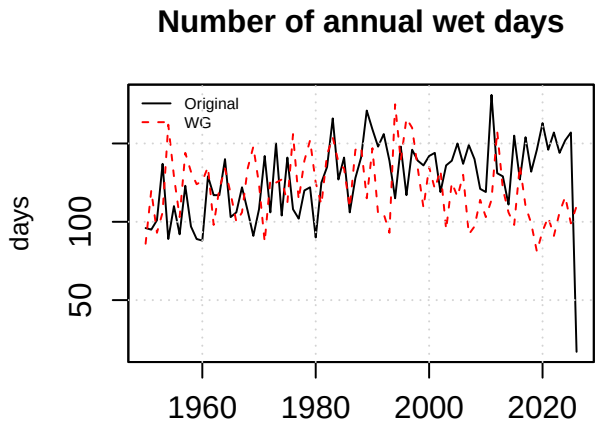

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for SUSENDAL"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: SUSENDAL"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2287
##  1st Qu.:1969   1st Qu.:0.3062
##  Median :1988   Median :0.3530
##  Mean   :1988   Mean   :0.3542
##  3rd Qu.:2007   3rd Qu.:0.4030
##  Max.   :2026   Max.   :0.4992
##      Index          c(mu)
##  Min.   :1950   Min.   :4.210
##  1st Qu.:1969   1st Qu.:5.178
##  Median :1988   Median :5.436
##  Mean   :1988   Mean   :5.523
##  3rd Qu.:2007   3rd Qu.:5.934
##  Max.   :2026   Max.   :7.088
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.263334 n.wet= 96 = 96 mu= 4.5 = 4.5
## 2 1951 fw= 0.3529559 n.wet= 129 = 129 mu= 5.6 = 5.6
```

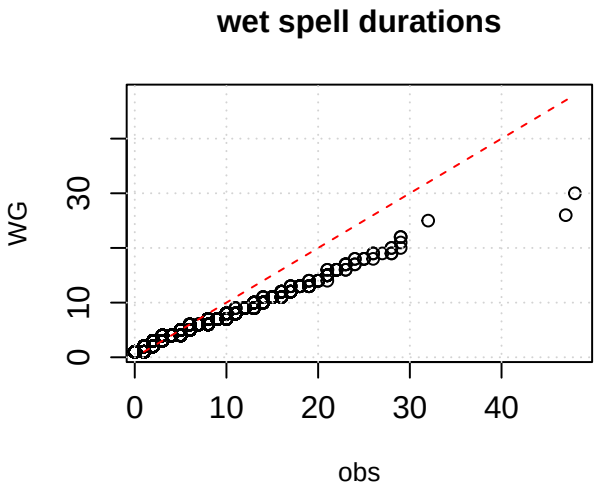
```
## 3 1952 fw= 0.2750815 n.wet= 100 = 100 mu= 5 = 5
## 4 1953 fw= 0.3150573 n.wet= 115 = 115 mu= 5.7 = 5.7
## 5 1954 fw= 0.4682217 n.wet= 171 = 171 mu= 5.7 = 5.7
## 6 1955 fw= 0.3789385 n.wet= 138 = 138 mu= 5.3 = 5.3
## 7 1956 fw= 0.2847838 n.wet= 104 = 104 mu= 5.2 = 5.2
## 8 1957 fw= 0.4032755 n.wet= 147 = 147 mu= 6.6 = 6.6
## 9 1958 fw= 0.3840749 n.wet= 140 = 140 mu= 5.1 = 5.1
## 10 1959 fw= 0.3620702 n.wet= 132 = 132 mu= 5.4 = 5.4
## 11 1960 fw= 0.3620807 n.wet= 132 = 132 mu= 5.3 = 5.3
## 12 1961 fw= 0.3801607 n.wet= 139 = 139 mu= 5 = 5
## 13 1962 fw= 0.3040316 n.wet= 111 = 111 mu= 4.5 = 4.5
## 14 1963 fw= 0.3626008 n.wet= 132 = 132 mu= 4.8 = 4.8
## 15 1964 fw= 0.4118189 n.wet= 150 = 150 mu= 4.5 = 4.5
## 16 1965 fw= 0.3558769 n.wet= 130 = 130 mu= 5.6 = 5.6
## 17 1966 fw= 0.3036579 n.wet= 111 = 111 mu= 4.4 = 4.4
## 18 1967 fw= 0.3062005 n.wet= 112 = 112 mu= 5.4 = 5.4
## 19 1968 fw= 0.39343 n.wet= 144 = 144 mu= 5.1 = 5.1
## 20 1969 fw= 0.4196229 n.wet= 153 = 153 mu= 5.3 = 5.3
## 21 1970 fw= 0.3697986 n.wet= 135 = 135 mu= 5.2 = 5.2
## 22 1971 fw= 0.2510238 n.wet= 92 = 92 mu= 6 = 6
## 23 1972 fw= 0.3744574 n.wet= 137 = 137 mu= 5.3 = 5.3
## 24 1973 fw= 0.364856 n.wet= 133 = 133 mu= 5.7 = 5.7
## 25 1974 fw= 0.4010111 n.wet= 146 = 146 mu= 4.6 = 4.6
## 26 1975 fw= 0.3208065 n.wet= 117 = 117 mu= 4.9 = 4.9
## 27 1976 fw= 0.4492931 n.wet= 164 = 164 mu= 5.2 = 5.2
## 28 1977 fw= 0.3245629 n.wet= 119 = 119 mu= 5.3 = 5.3
## 29 1978 fw= 0.4262662 n.wet= 156 = 156 mu= 5.4 = 5.4
## 30 1979 fw= 0.4232062 n.wet= 155 = 155 mu= 6 = 6
## 31 1980 fw= 0.3677958 n.wet= 134 = 134 mu= 5.8 = 5.8
## 32 1981 fw= 0.3214673 n.wet= 117 = 117 mu= 6 = 6
## 33 1982 fw= 0.4113683 n.wet= 150 = 150 mu= 5.9 = 5.9
## 34 1983 fw= 0.4323181 n.wet= 158 = 158 mu= 7 = 7
## 35 1984 fw= 0.4029947 n.wet= 147 = 147 mu= 5.1 = 5.1
## 36 1985 fw= 0.4081454 n.wet= 149 = 149 mu= 5.6 = 5.6
## 37 1986 fw= 0.3134426 n.wet= 114 = 114 mu= 5.7 = 5.7
## 38 1987 fw= 0.4187536 n.wet= 153 = 153 mu= 4.7 = 4.7
## 39 1988 fw= 0.4503139 n.wet= 164 = 164 mu= 4.8 = 4.8
## 40 1989 fw= 0.3222988 n.wet= 118 = 118 mu= 6 = 6
## 41 1990 fw= 0.4232149 n.wet= 155 = 155 mu= 5 = 5
## 42 1991 fw= 0.3130339 n.wet= 114 = 114 mu= 5.4 = 5.4
## 43 1992 fw= 0.2998626 n.wet= 110 = 110 mu= 5.8 = 5.8
## 44 1993 fw= 0.2818339 n.wet= 103 = 103 mu= 5.2 = 5.2
## 45 1994 fw= 0.499156 n.wet= 182 = 182 mu= 6.3 = 6.3
## 46 1995 fw= 0.3922477 n.wet= 143 = 143 mu= 7.1 = 7.1
## 47 1996 fw= 0.4770899 n.wet= 174 = 174 mu= 5.5 = 5.5
## 48 1997 fw= 0.4533079 n.wet= 166 = 166 mu= 6.3 = 6.3
## 49 1998 fw= 0.4018756 n.wet= 147 = 147 mu= 5.2 = 5.2
## 50 1999 fw= 0.3184522 n.wet= 116 = 116 mu= 5.3 = 5.3
## 51 2000 fw= 0.3797488 n.wet= 139 = 139 mu= 6.5 = 6.5
## 52 2001 fw= 0.3441289 n.wet= 126 = 126 mu= 4.9 = 4.9
## 53 2002 fw= 0.4268041 n.wet= 156 = 156 mu= 4.2 = 4.2
## 54 2003 fw= 0.2737936 n.wet= 100 = 100 mu= 4.2 = 4.2
## 55 2004 fw= 0.3483095 n.wet= 127 = 127 mu= 5.2 = 5.2
## 56 2005 fw= 0.3438239 n.wet= 126 = 126 mu= 6 = 6
```

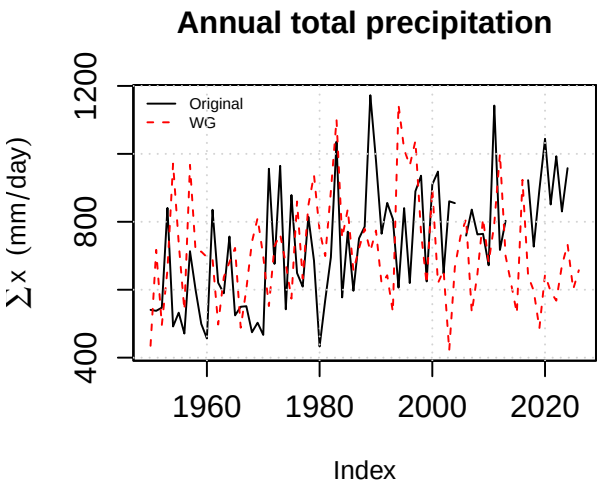
```
## 57 2006 fw= 0.3709389 n.wet= 135 = 135 mu= 6 = 6
## 58 2007 fw= 0.2658135 n.wet= 97 = 97 mu= 5.5 = 5.5
## 59 2008 fw= 0.2768386 n.wet= 101 = 101 mu= 6.4 = 6.4
## 60 2009 fw= 0.3365588 n.wet= 123 = 123 mu= 6.6 = 6.6
## 61 2010 fw= 0.3008187 n.wet= 110 = 110 mu= 6.2 = 6.2
## 62 2011 fw= 0.3197753 n.wet= 117 = 117 mu= 6.8 = 6.8
## 63 2012 fw= 0.4591929 n.wet= 168 = 168 mu= 6 = 6
## 64 2013 fw= 0.3596692 n.wet= 131 = 131 mu= 5.3 = 5.3
## 65 2014 fw= 0.3006581 n.wet= 110 = 110 mu= 5.6 = 5.6
## 66 2015 fw= 0.2800151 n.wet= 102 = 102 mu= 5.2 = 5.2
## 67 2016 fw= 0.4053415 n.wet= 148 = 148 mu= 6.2 = 6.2
## 68 2017 fw= 0.3275186 n.wet= 120 = 120 mu= 5.3 = 5.3
## 69 2018 fw= 0.3003254 n.wet= 110 = 110 mu= 5.4 = 5.4
## 70 2019 fw= 0.2287026 n.wet= 84 = 84 mu= 5.8 = 5.8
## 71 2020 fw= 0.278176 n.wet= 102 = 102 mu= 6.3 = 6.3
## 72 2021 fw= 0.3066588 n.wet= 112 = 112 mu= 5.3 = 5.3
## 73 2022 fw= 0.2821485 n.wet= 103 = 103 mu= 5.5 = 5.5
## 74 2023 fw= 0.3135817 n.wet= 115 = 115 mu= 5.8 = 5.8
## 75 2024 fw= 0.3387062 n.wet= 124 = 124 mu= 5.9 = 5.9
## 76 2025 fw= 0.2882711 n.wet= 105 = 105 mu= 5.7 = 5.7
## 77 2026 fw= 0.3133875 n.wet= 114 = 114 mu= 5.8 = 5.8
## [1] "Sort precipitation magnitudes"
## [1] "9783 observed wet days and 9341 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.3   2.302   2.600    49.5       2
## Feb       0       0     0.2   1.979   2.100    48.2       2
## Mar       0       0     0.1   1.907   1.800    49.0       1
## Apr       0       0     0.0   1.075   1.000    36.4       2
## May       0       0     0.0   1.074   0.800    34.9       7
## Jun       0       0     0.0   1.757   1.925    38.6      NA
## Jul       0       0     0.2   2.459   2.700    42.0      NA
## Aug       0       0     0.2   2.249   2.400    54.5      13
## Sep       0       0     0.5   2.716   3.500    81.7       3
## Oct       0       0     0.3   2.411   3.000    36.1       8
## Nov       0       0     0.2   2.061   2.300    71.8       9
## Dec       0       0     0.3   2.333   2.500    45.9       4
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 2.1340     2.5 41.3   NA
## Feb    0       0      0 1.9620     2.4 33.7   NA
## Mar    0       0      0 1.3140     1.3 28.6   NA
## Apr    0       0      0 0.7703     0.8 21.1   NA
## May    0       0      0 0.8647     0.7 23.3   NA
## Jun    0       0      0 1.5200     1.7 32.5   NA
## Jul    0       0      0 2.5380     3.0 43.2   NA
## Aug    0       0      0 2.5500     3.3 47.8   NA
## Sep    0       0      0 2.8320     4.0 46.0   NA
## Oct    0       0      0 2.6430     3.7 40.4   NA
## Nov    0       0      0 2.1300     2.8 44.9   NA
## Dec    0       0      0 2.2240     2.7 61.9   NA
```

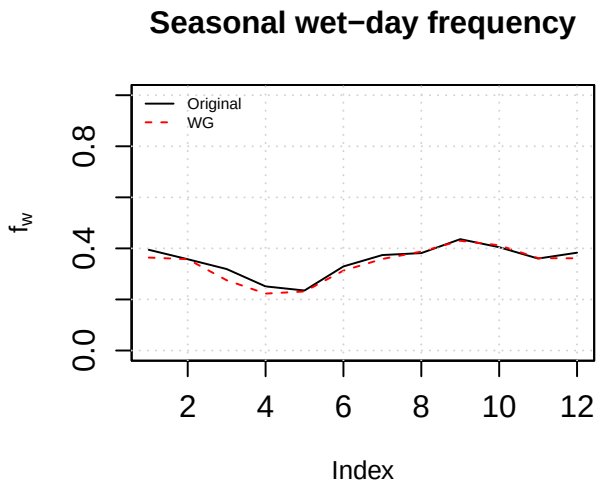

SUSENDAL wet−day amounts
WG amount (mm/day)
0
20
40
60
80
0
20
40
60
80
Observed amount (mm/day)

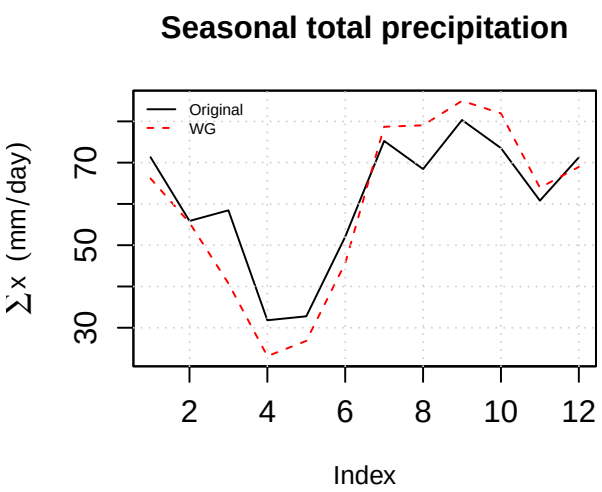

Dry spell durations
WG
0
5
15
25
0
5
10
15
20
25
obs

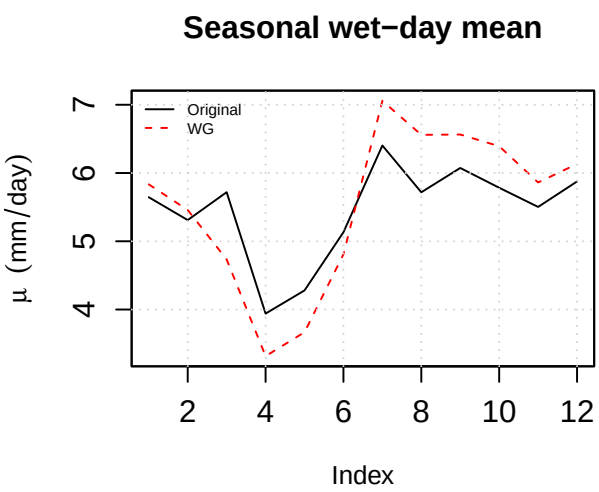

Number of annual wet days
days
50
100
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
30
0
10
20
30
40
obs





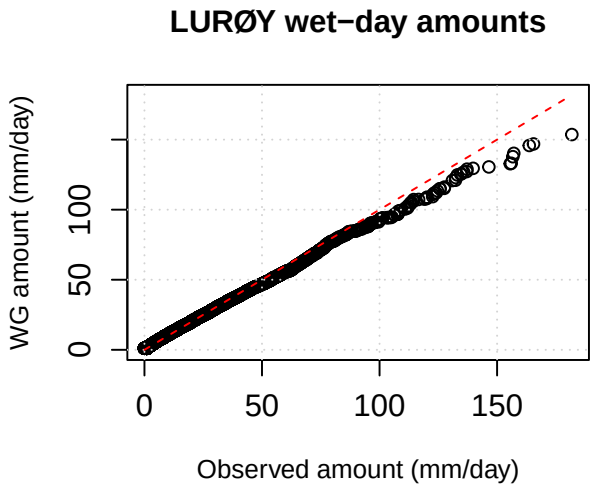


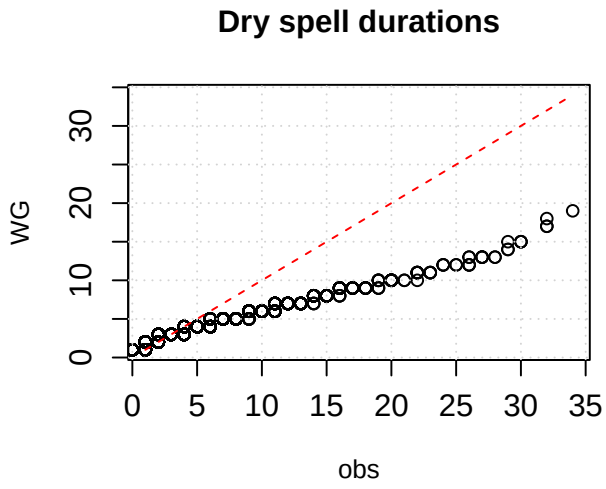


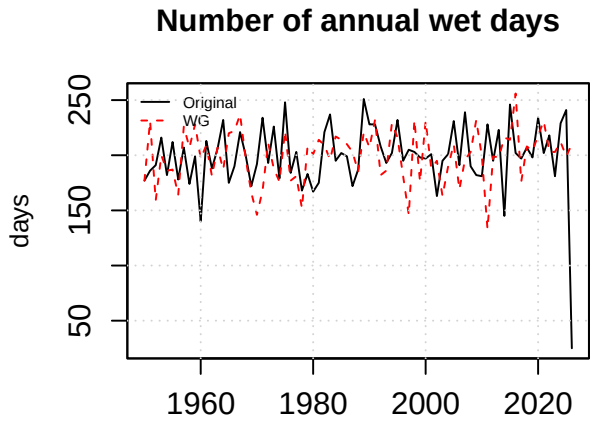

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for LURØY"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: LURØY"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3682
##  1st Qu.:1969   1st Qu.:0.5111
##  Median :1988   Median :0.5620
##  Mean   :1988   Mean   :0.5522
##  3rd Qu.:2007   3rd Qu.:0.5954
##  Max.   :2026   Max.   :0.7158
##      Index          c(mu)
##  Min.   :1950   Min.   :11.05
##  1st Qu.:1969   1st Qu.:13.50
##  Median :1988   Median :14.55
##  Mean   :1988   Mean   :14.58
##  3rd Qu.:2007   3rd Qu.:15.58
##  Max.   :2026   Max.   :18.75
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.4929054 n.wet= 180 = 180 mu= 16.6 = 16.6
## 2 1951 fw= 0.6340551 n.wet= 232 = 232 mu= 11.8 = 11.8
```

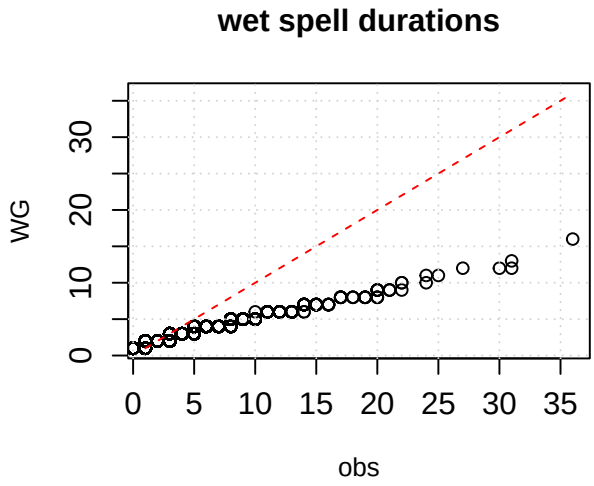
```
## 3 1952 fw= 0.4384035 n.wet= 160 = 160 mu= 15.6 = 15.6
## 4 1953 fw= 0.554355 n.wet= 202 = 202 mu= 14.7 = 14.7
## 5 1954 fw= 0.5122283 n.wet= 187 = 187 mu= 16.3 = 16.3
## 6 1955 fw= 0.5150083 n.wet= 188 = 188 mu= 15 = 15
## 7 1956 fw= 0.448595 n.wet= 164 = 164 mu= 15.4 = 15.4
## 8 1957 fw= 0.6335958 n.wet= 231 = 231 mu= 15.2 = 15.2
## 9 1958 fw= 0.570945 n.wet= 209 = 209 mu= 14.1 = 14.1
## 10 1959 fw= 0.6296748 n.wet= 230 = 230 mu= 15.2 = 15.2
## 11 1960 fw= 0.5488503 n.wet= 200 = 200 mu= 13.6 = 13.6
## 12 1961 fw= 0.5872428 n.wet= 214 = 214 mu= 11.5 = 11.5
## 13 1962 fw= 0.5108591 n.wet= 187 = 187 mu= 11.6 = 11.6
## 14 1963 fw= 0.5688086 n.wet= 208 = 208 mu= 18 = 18
## 15 1964 fw= 0.5233832 n.wet= 191 = 191 mu= 14.5 = 14.5
## 16 1965 fw= 0.62019 n.wet= 227 = 227 mu= 13.7 = 13.7
## 17 1966 fw= 0.6282016 n.wet= 229 = 229 mu= 14.7 = 14.7
## 18 1967 fw= 0.649832 n.wet= 237 = 237 mu= 16.4 = 16.4
## 19 1968 fw= 0.5554383 n.wet= 203 = 203 mu= 12.9 = 12.9
## 20 1969 fw= 0.4618487 n.wet= 169 = 169 mu= 13 = 13
## 21 1970 fw= 0.4099327 n.wet= 150 = 150 mu= 13.2 = 13.2
## 22 1971 fw= 0.4623791 n.wet= 169 = 169 mu= 13.5 = 13.5
## 23 1972 fw= 0.5989993 n.wet= 219 = 219 mu= 13.8 = 13.9
## 24 1973 fw= 0.5352555 n.wet= 196 = 196 mu= 13.4 = 13.4
## 25 1974 fw= 0.4856289 n.wet= 177 = 177 mu= 15.9 = 15.9
## 26 1975 fw= 0.6175687 n.wet= 226 = 226 mu= 11 = 11
## 27 1976 fw= 0.4947163 n.wet= 181 = 181 mu= 14 = 14
## 28 1977 fw= 0.49867 n.wet= 182 = 182 mu= 15.4 = 15.4
## 29 1978 fw= 0.4243592 n.wet= 155 = 155 mu= 13.5 = 13.5
## 30 1979 fw= 0.5771184 n.wet= 211 = 211 mu= 13.1 = 13.1
## 31 1980 fw= 0.5647555 n.wet= 206 = 206 mu= 14.5 = 14.5
## 32 1981 fw= 0.5929526 n.wet= 217 = 217 mu= 14.6 = 14.6
## 33 1982 fw= 0.5729583 n.wet= 209 = 209 mu= 17 = 17
## 34 1983 fw= 0.5432857 n.wet= 198 = 198 mu= 16.3 = 16.3
## 35 1984 fw= 0.5978339 n.wet= 218 = 218 mu= 15 = 15
## 36 1985 fw= 0.5954009 n.wet= 217 = 217 mu= 12.2 = 12.2
## 37 1986 fw= 0.5789891 n.wet= 211 = 211 mu= 14.9 = 14.9
## 38 1987 fw= 0.5670598 n.wet= 207 = 207 mu= 13.9 = 13.9
## 39 1988 fw= 0.509245 n.wet= 186 = 186 mu= 15.2 = 15.2
## 40 1989 fw= 0.6067972 n.wet= 222 = 222 mu= 13.6 = 13.6
## 41 1990 fw= 0.5767515 n.wet= 211 = 211 mu= 14.2 = 14.2
## 42 1991 fw= 0.6351141 n.wet= 232 = 232 mu= 16.8 = 16.8
## 43 1992 fw= 0.5003126 n.wet= 183 = 183 mu= 14.6 = 14.6
## 44 1993 fw= 0.5210146 n.wet= 190 = 190 mu= 14.7 = 14.7
## 45 1994 fw= 0.6315745 n.wet= 231 = 231 mu= 15.3 = 15.3
## 46 1995 fw= 0.5962205 n.wet= 218 = 218 mu= 15.9 = 15.9
## 47 1996 fw= 0.5111021 n.wet= 187 = 187 mu= 12.1 = 12.1
## 48 1997 fw= 0.4047551 n.wet= 148 = 148 mu= 14.3 = 14.3
## 49 1998 fw= 0.6383137 n.wet= 233 = 233 mu= 13.1 = 13.1
## 50 1999 fw= 0.4889729 n.wet= 179 = 179 mu= 13.1 = 13.1
## 51 2000 fw= 0.6376527 n.wet= 233 = 233 mu= 12.9 = 12.9
## 52 2001 fw= 0.5159766 n.wet= 188 = 188 mu= 16.6 = 16.6
## 53 2002 fw= 0.5358281 n.wet= 196 = 196 mu= 17.1 = 17.1
## 54 2003 fw= 0.4626539 n.wet= 169 = 169 mu= 14 = 14
## 55 2004 fw= 0.5250598 n.wet= 192 = 192 mu= 13.7 = 13.7
## 56 2005 fw= 0.5758896 n.wet= 210 = 210 mu= 15.2 = 15.2
```

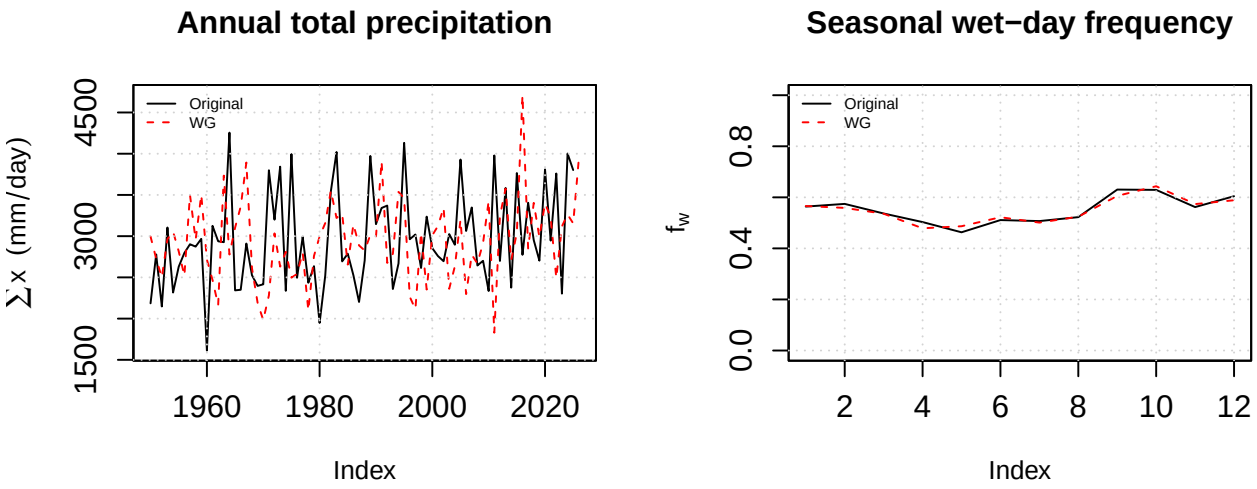
```
## 57 2006 fw= 0.4721813 n.wet= 172 = 172 mu= 13.4 = 13.4
## 58 2007 fw= 0.5375302 n.wet= 196 = 196 mu= 14.2 = 14.2
## 59 2008 fw= 0.5623912 n.wet= 205 = 205 mu= 13 = 13
## 60 2009 fw= 0.6551676 n.wet= 239 = 239 mu= 12.2 = 12.2
## 61 2010 fw= 0.5468546 n.wet= 200 = 200 mu= 17.1 = 17.1
## 62 2011 fw= 0.3681777 n.wet= 134 = 134 mu= 13.7 = 13.6
## 63 2012 fw= 0.5513592 n.wet= 201 = 201 mu= 16.1 = 16.1
## 64 2013 fw= 0.5468315 n.wet= 200 = 200 mu= 17.9 = 17.9
## 65 2014 fw= 0.5938999 n.wet= 217 = 217 mu= 12.5 = 12.5
## 66 2015 fw= 0.5892878 n.wet= 215 = 215 mu= 14.1 = 14.1
## 67 2016 fw= 0.7158482 n.wet= 261 = 261 mu= 18 = 18
## 68 2017 fw= 0.4966511 n.wet= 181 = 181 mu= 15.7 = 15.7
## 69 2018 fw= 0.5771607 n.wet= 211 = 211 mu= 16.1 = 16.1
## 70 2019 fw= 0.5572946 n.wet= 204 = 204 mu= 14.7 = 14.7
## 71 2020 fw= 0.5977103 n.wet= 218 = 218 mu= 15.6 = 15.6
## 72 2021 fw= 0.6325281 n.wet= 231 = 231 mu= 14 = 14
## 73 2022 fw= 0.5674581 n.wet= 207 = 207 mu= 12 = 12
## 74 2023 fw= 0.5620497 n.wet= 205 = 205 mu= 15.2 = 15.2
## 75 2024 fw= 0.5799835 n.wet= 212 = 212 mu= 15.4 = 15.4
## 76 2025 fw= 0.5609931 n.wet= 205 = 205 mu= 15.4 = 15.4
## 77 2026 fw= 0.575571 n.wet= 210 = 210 mu= 18.7 = 18.7
## [1] "Sort precipitation magnitudes"
## [1] "15309 observed wet days and 15330 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0    2.10   8.436   10.30   139.8    3
## Feb       0       0    2.10   7.601    9.90   181.8   NA
## Mar       0       0    1.70   7.773    9.50   146.5    1
## Apr       0       0    1.00   6.503    8.10   137.1   NA
## May       0       0    0.50   5.540    6.30   120.0   NA
## Jun       0       0    1.10   6.310    7.20   165.5   NA
## Jul       0       0    1.00   6.413    7.60   155.6    1
## Aug       0       0    1.40   7.409    8.80   163.7   NA
## Sep       0       0    3.90  11.000   15.68   135.8    2
## Oct       0       0    4.50  11.940   17.20   157.1    2
## Nov       0       0    2.20   8.675   12.10   137.2   NA
## Dec       0       0    3.45   9.590   12.90   156.0   NA
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu.  Max. NA's
## Jan    0       0    2.6  8.401   11.60 145.8   NA
## Feb    0       0    2.3  7.648   10.65 107.5   NA
## Mar    0       0    1.7  7.331   10.10 137.8   NA
## Apr    0       0    0.0  6.509    8.20 106.0   NA
## May    0       0    0.0  6.414    8.35 108.3   NA
## Jun    0       0    1.4  6.992    8.80 122.9   NA
## Jul    0       0    1.0  6.421    8.60 100.5   NA
## Aug    0       0    1.5  7.307   10.30 101.0   NA
## Sep    0       0    3.9 10.070   13.90 153.6   NA
## Oct    0       0    5.7 11.810   17.20 146.9   NA
## Nov    0       0    3.1  8.746   12.00 126.8   NA
## Dec    0       0    3.1  8.976   11.90 132.8   NA
```

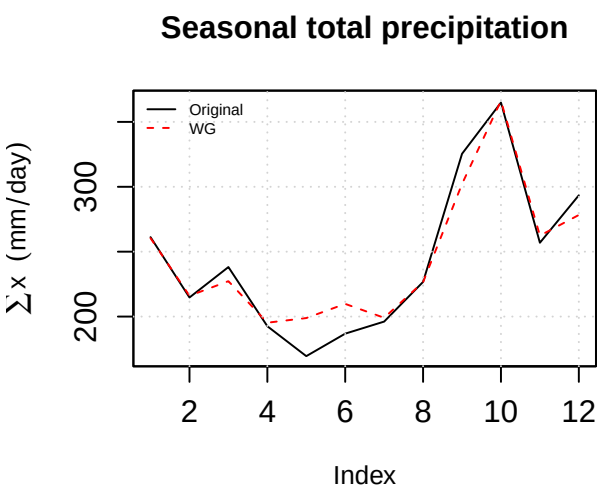

LURØY wet−day amounts
WG amount (mm/day)
0
50
100
0
50
100
150
Observed amount (mm/day)

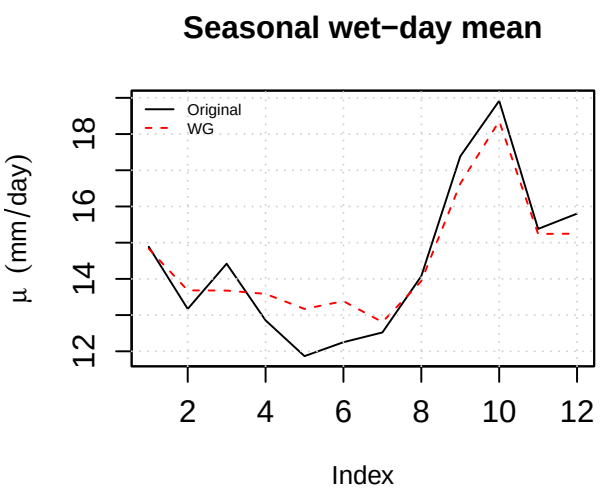

Dry spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs


Number of annual wet days
days
50
150
250
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
0
5
10
15
20
25
30
35
obs



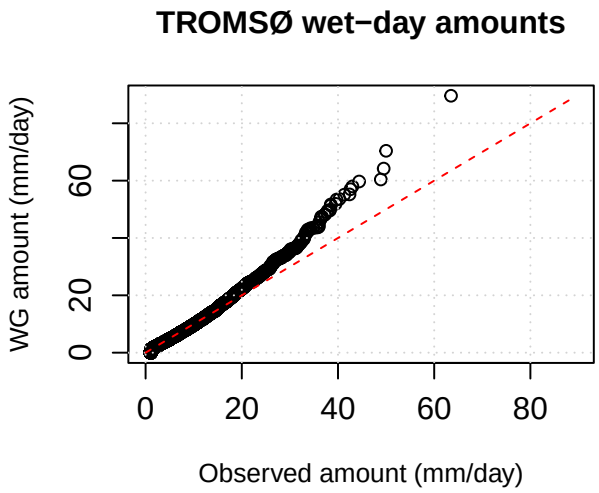


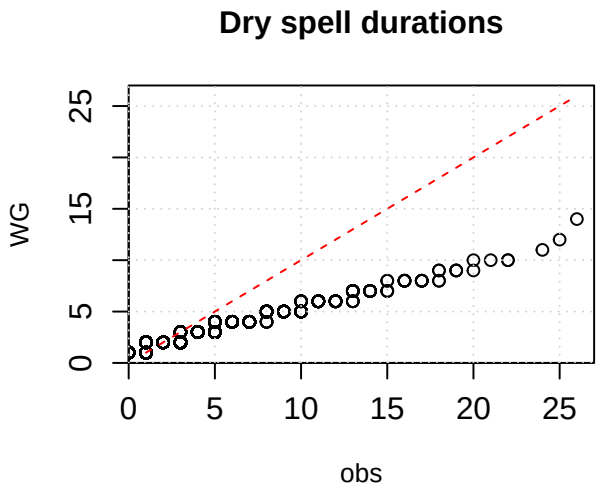


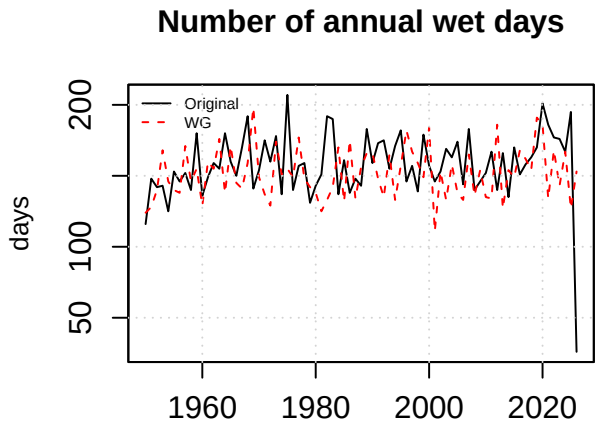

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for TROMSØ"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: TROMSØ"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.3110
##  1st Qu.:1969   1st Qu.:0.3964
##  Median :1988   Median :0.4304
##  Mean   :1988   Mean   :0.4364
##  3rd Qu.:2007   3rd Qu.:0.4758
##  Max.   :2026   Max.   :0.5605
##      Index          c(mu)
##  Min.   :1950   Min.   :4.983
##  1st Qu.:1969   1st Qu.:5.922
##  Median :1988   Median :6.381
##  Mean   :1988   Mean   :6.426
##  3rd Qu.:2007   3rd Qu.:6.957
##  Max.   :2026   Max.   :8.153
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.358569 n.wet= 131 = 131 mu= 5.7 = 5.7
## 2 1951 fw= 0.3766297 n.wet= 138 = 138 mu= 5.1 = 5.1
```

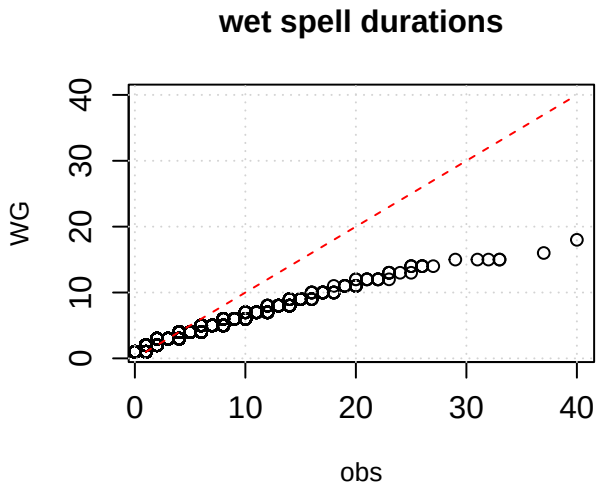
```
## 3 1952 fw= 0.3983059 n.wet= 145 = 145 mu= 7 = 7
## 4 1953 fw= 0.4814382 n.wet= 176 = 176 mu= 5.8 = 5.8
## 5 1954 fw= 0.4204221 n.wet= 154 = 154 mu= 7.1 = 7.1
## 6 1955 fw= 0.3979281 n.wet= 145 = 145 mu= 7.3 = 7.3
## 7 1956 fw= 0.3951677 n.wet= 144 = 144 mu= 6.2 = 6.2
## 8 1957 fw= 0.479619 n.wet= 175 = 175 mu= 8.2 = 8.2
## 9 1958 fw= 0.4259789 n.wet= 156 = 156 mu= 6 = 6
## 10 1959 fw= 0.4432404 n.wet= 162 = 162 mu= 7.5 = 7.5
## 11 1960 fw= 0.3698771 n.wet= 135 = 135 mu= 6.5 = 6.5
## 12 1961 fw= 0.4505279 n.wet= 165 = 165 mu= 7.1 = 7.1
## 13 1962 fw= 0.4499858 n.wet= 164 = 164 mu= 5.7 = 5.7
## 14 1963 fw= 0.5129825 n.wet= 187 = 187 mu= 6.2 = 6.2
## 15 1964 fw= 0.3985549 n.wet= 146 = 146 mu= 6.1 = 6.1
## 16 1965 fw= 0.4788457 n.wet= 175 = 175 mu= 6.8 = 6.8
## 17 1966 fw= 0.4136623 n.wet= 151 = 151 mu= 5.9 = 5.9
## 18 1967 fw= 0.400852 n.wet= 146 = 146 mu= 7.6 = 7.6
## 19 1968 fw= 0.446699 n.wet= 163 = 163 mu= 6 = 6
## 20 1969 fw= 0.5604699 n.wet= 205 = 205 mu= 6.3 = 6.3
## 21 1970 fw= 0.4260769 n.wet= 156 = 156 mu= 6.2 = 6.2
## 22 1971 fw= 0.4055731 n.wet= 148 = 148 mu= 6.1 = 6.1
## 23 1972 fw= 0.3868907 n.wet= 141 = 141 mu= 5 = 5
## 24 1973 fw= 0.5190604 n.wet= 190 = 190 mu= 5.7 = 5.7
## 25 1974 fw= 0.4376123 n.wet= 160 = 160 mu= 6.7 = 6.7
## 26 1975 fw= 0.4578299 n.wet= 167 = 167 mu= 5.7 = 5.7
## 27 1976 fw= 0.4303566 n.wet= 157 = 157 mu= 6.9 = 6.9
## 28 1977 fw= 0.4956541 n.wet= 181 = 181 mu= 6.5 = 6.5
## 29 1978 fw= 0.4163405 n.wet= 152 = 152 mu= 6.5 = 6.5
## 30 1979 fw= 0.4236836 n.wet= 155 = 155 mu= 6.5 = 6.5
## 31 1980 fw= 0.4002088 n.wet= 146 = 146 mu= 6.5 = 6.5
## 32 1981 fw= 0.3448266 n.wet= 126 = 126 mu= 7.2 = 7.2
## 33 1982 fw= 0.400551 n.wet= 146 = 146 mu= 5.6 = 5.6
## 34 1983 fw= 0.4030387 n.wet= 147 = 147 mu= 7.5 = 7.5
## 35 1984 fw= 0.4793128 n.wet= 175 = 175 mu= 7.2 = 7.2
## 36 1985 fw= 0.3844467 n.wet= 140 = 140 mu= 6.4 = 6.4
## 37 1986 fw= 0.4973527 n.wet= 182 = 182 mu= 5.8 = 5.8
## 38 1987 fw= 0.3944477 n.wet= 144 = 144 mu= 5.6 = 5.6
## 39 1988 fw= 0.4398338 n.wet= 161 = 161 mu= 6.1 = 6.1
## 40 1989 fw= 0.4866595 n.wet= 178 = 178 mu= 6.3 = 6.3
## 41 1990 fw= 0.5014766 n.wet= 183 = 183 mu= 5.3 = 5.3
## 42 1991 fw= 0.4176836 n.wet= 153 = 153 mu= 6.8 = 6.8
## 43 1992 fw= 0.3964135 n.wet= 145 = 145 mu= 5.2 = 5.2
## 44 1993 fw= 0.4730919 n.wet= 173 = 173 mu= 7 = 7
## 45 1994 fw= 0.3738069 n.wet= 137 = 137 mu= 6.7 = 6.7
## 46 1995 fw= 0.460449 n.wet= 168 = 168 mu= 6.9 = 6.9
## 47 1996 fw= 0.5313539 n.wet= 194 = 194 mu= 7 = 7
## 48 1997 fw= 0.4647165 n.wet= 170 = 170 mu= 6.7 = 6.7
## 49 1998 fw= 0.4576231 n.wet= 167 = 167 mu= 7.3 = 7.3
## 50 1999 fw= 0.4286868 n.wet= 157 = 157 mu= 6.3 = 6.3
## 51 2000 fw= 0.5132248 n.wet= 187 = 187 mu= 6.2 = 6.2
## 52 2001 fw= 0.3110017 n.wet= 114 = 114 mu= 5.3 = 5.3
## 53 2002 fw= 0.4278043 n.wet= 156 = 156 mu= 7.6 = 7.6
## 54 2003 fw= 0.3891252 n.wet= 142 = 142 mu= 5.9 = 5.8
## 55 2004 fw= 0.4697002 n.wet= 172 = 172 mu= 5.8 = 5.8
## 56 2005 fw= 0.3848189 n.wet= 141 = 141 mu= 7.3 = 7.3
```

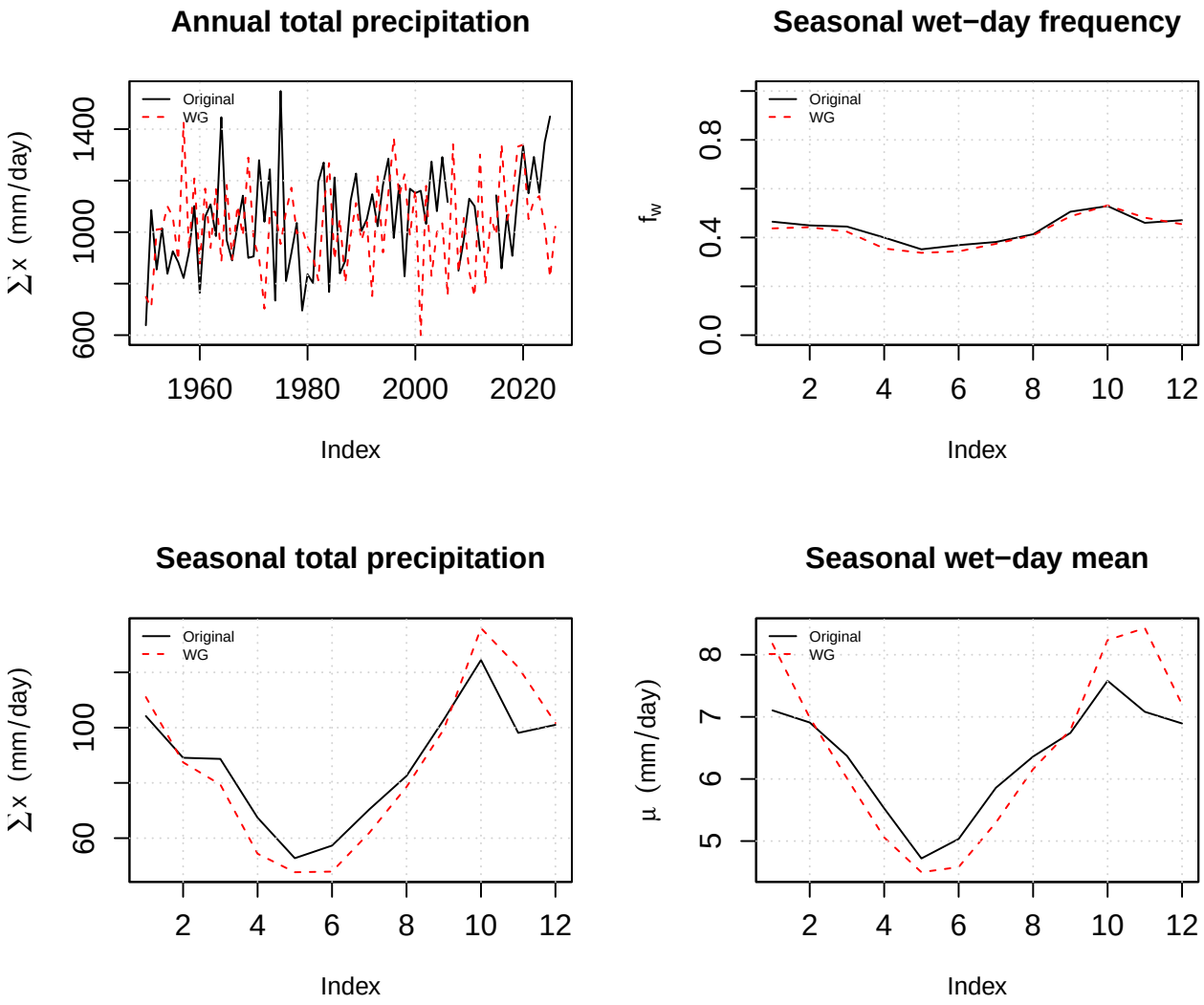
```
## 57 2006 fw= 0.379855 n.wet= 139 = 139 mu= 5.4 = 5.4
## 58 2007 fw= 0.4815156 n.wet= 176 = 176 mu= 7.6 = 7.6
## 59 2008 fw= 0.3854509 n.wet= 141 = 141 mu= 6 = 6
## 60 2009 fw= 0.4499121 n.wet= 164 = 164 mu= 6.4 = 6.4
## 61 2010 fw= 0.3957917 n.wet= 145 = 145 mu= 5.8 = 5.8
## 62 2011 fw= 0.395146 n.wet= 144 = 144 mu= 5.2 = 5.2
## 63 2012 fw= 0.5131868 n.wet= 187 = 187 mu= 7 = 7
## 64 2013 fw= 0.3681815 n.wet= 134 = 134 mu= 5.9 = 5.9
## 65 2014 fw= 0.4489993 n.wet= 164 = 164 mu= 6.5 = 6.5
## 66 2015 fw= 0.4333242 n.wet= 158 = 158 mu= 6.2 = 6.2
## 67 2016 fw= 0.4957837 n.wet= 181 = 181 mu= 7.4 = 7.4
## 68 2017 fw= 0.4571454 n.wet= 167 = 167 mu= 6.3 = 6.3
## 69 2018 fw= 0.4518987 n.wet= 165 = 165 mu= 6.8 = 6.8
## 70 2019 fw= 0.5444838 n.wet= 199 = 199 mu= 6.7 = 6.7
## 71 2020 fw= 0.535878 n.wet= 196 = 196 mu= 6.8 = 6.8
## 72 2021 fw= 0.3930687 n.wet= 144 = 144 mu= 7.3 = 7.3
## 73 2022 fw= 0.4758125 n.wet= 174 = 174 mu= 6.5 = 6.5
## 74 2023 fw= 0.4123278 n.wet= 151 = 151 mu= 7.6 = 7.6
## 75 2024 fw= 0.4951506 n.wet= 181 = 181 mu= 5.7 = 5.7
## 76 2025 fw= 0.3626827 n.wet= 132 = 132 mu= 6.2 = 6.2
## 77 2026 fw= 0.4393666 n.wet= 160 = 160 mu= 6.4 = 6.4
## [1] "Sort precipitation magnitudes"
## [1] "12132 observed wet days and 11674 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.6   3.362     4.9    39.5       1
## Feb       0       0     0.5   3.173     4.7    48.9      13
## Mar       0       0     0.5   2.896     4.0    41.3       2
## Apr       0       0     0.3   2.278     3.1    35.4       2
## May       0       0     0.1   1.726     2.1    42.6       4
## Jun       0       0     0.2   1.938     2.3    27.0       3
## Jul       0       0     0.2   2.306     2.6    50.0       6
## Aug       0       0     0.3   2.699     3.5    43.0       2
## Sep       0       0     1.0   3.483     5.0    40.3       6
## Oct       0       0     1.2   4.067     6.1    63.5      NA
## Nov       0       0     0.5   3.312     5.0    49.5      NA
## Dec       0       0     0.6   3.302     4.9    36.4       1
## [1] "WG:"
##     Min. 1st Qu. Median  Mean 3rd Qu. Max. NA's
## Jan    0       0    0.0 3.582   4.800 89.6   NA
## Feb    0       0    0.0 3.095   4.300 57.0   NA
## Mar    0       0    0.0 2.561   3.500 43.0   NA
## Apr    0       0    0.0 1.812   2.100 51.3   NA
## May    0       0    0.0 1.538   1.700 53.4   NA
## Jun    0       0    0.0 1.596   2.000 36.4   NA
## Jul    0       0    0.0 1.998   2.500 59.7   NA
## Aug    0       0    0.0 2.533   3.300 43.5   NA
## Sep    0       0    0.0 3.311   4.575 70.4   NA
## Oct    0       0    1.5 4.387   6.500 60.4   NA
## Nov    0       0    0.0 4.061   6.100 55.1   NA
## Dec    0       0    0.0 3.280   4.650 64.2   NA
```


TROMSØ wet−day amounts
WG amount (mm/day)
0
20
60
0
20
40
60
80
Observed amount (mm/day)


Dry spell durations
WG
0
5
15
25
0
5
10
15
20
25
obs


Number of annual wet days
days
50
100
200
Original
WG
1960
1980
2000
2020

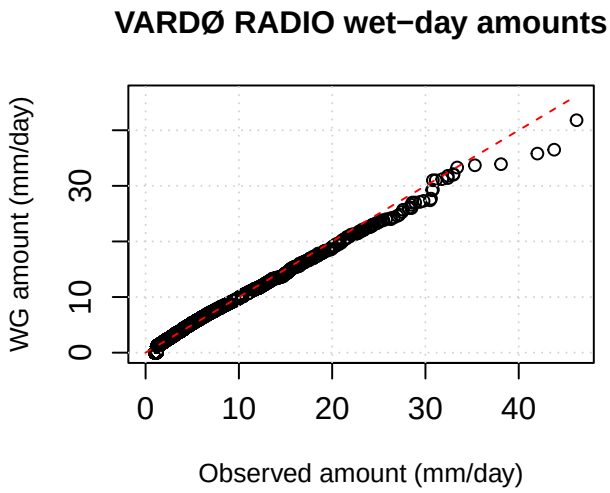

wet spell durations
WG
0
10
20
30
40
0
10
20
30
40
obs

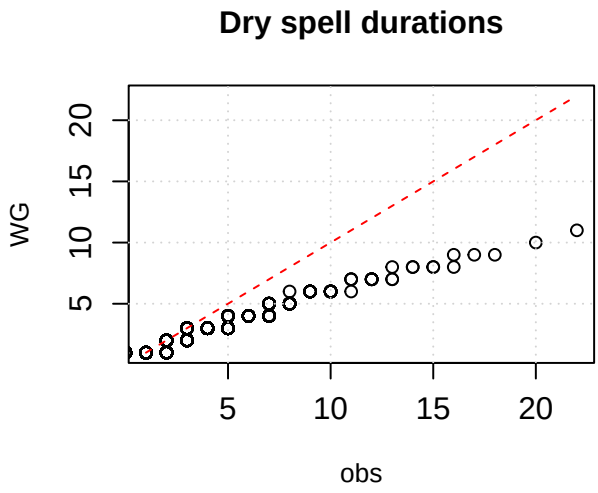


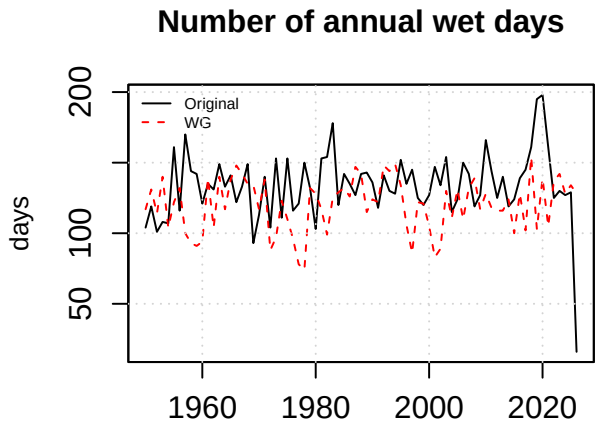

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for VARDØ RADIO"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: VARDØ RADIO"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2243
##  1st Qu.:1969   1st Qu.:0.3378
##  Median :1988   Median :0.3775
##  Mean   :1988   Mean   :0.3704
##  3rd Qu.:2007   3rd Qu.:0.4103
##  Max.   :2026   Max.   :0.4590
##      Index          c(mu)
##  Min.   :1950   Min.   :2.730
##  1st Qu.:1969   1st Qu.:3.603
##  Median :1988   Median :3.982
##  Mean   :1988   Mean   :3.943
##  3rd Qu.:2007   3rd Qu.:4.322
##  Max.   :2026   Max.   :5.039
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3647441 n.wet= 133 = 133 mu= 3.6 = 3.6
## 2 1951 fw= 0.4103189 n.wet= 150 = 150 mu= 4.2 = 4.2
```

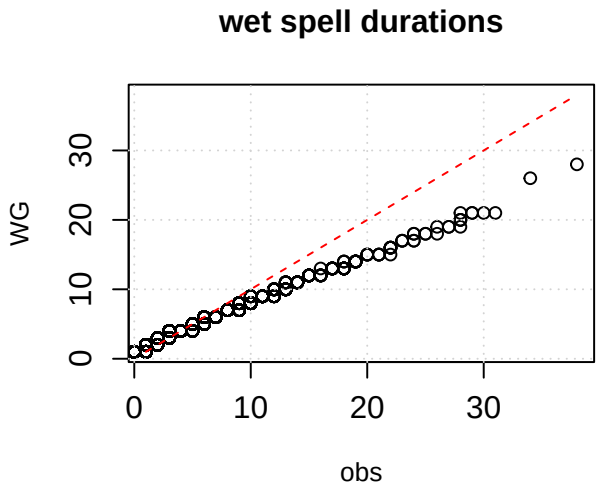
```
## 3 1952 fw= 0.3748071 n.wet= 137 = 137 mu= 4 = 4
## 4 1953 fw= 0.4154355 n.wet= 152 = 152 mu= 4.1 = 4.1
## 5 1954 fw= 0.3205896 n.wet= 117 = 117 mu= 4.4 = 4.4
## 6 1955 fw= 0.3638841 n.wet= 133 = 133 mu= 4.5 = 4.5
## 7 1956 fw= 0.3747718 n.wet= 137 = 137 mu= 4.5 = 4.5
## 8 1957 fw= 0.3278193 n.wet= 120 = 120 mu= 4.6 = 4.6
## 9 1958 fw= 0.2801987 n.wet= 102 = 102 mu= 4 = 4
## 10 1959 fw= 0.2924921 n.wet= 107 = 107 mu= 4.4 = 4.4
## 11 1960 fw= 0.27468 n.wet= 100 = 100 mu= 4.4 = 4.4
## 12 1961 fw= 0.41375 n.wet= 151 = 151 mu= 4.5 = 4.5
## 13 1962 fw= 0.3014008 n.wet= 110 = 110 mu= 5 = 5
## 14 1963 fw= 0.4071877 n.wet= 149 = 149 mu= 4.6 = 4.6
## 15 1964 fw= 0.359431 n.wet= 131 = 131 mu= 4.1 = 4.1
## 16 1965 fw= 0.4125433 n.wet= 151 = 151 mu= 3.9 = 3.9
## 17 1966 fw= 0.4265574 n.wet= 156 = 156 mu= 4.5 = 4.5
## 18 1967 fw= 0.4224279 n.wet= 154 = 154 mu= 4.3 = 4.3
## 19 1968 fw= 0.4331871 n.wet= 158 = 158 mu= 4.1 = 4.1
## 20 1969 fw= 0.4032194 n.wet= 147 = 147 mu= 4.6 = 4.6
## 21 1970 fw= 0.3753246 n.wet= 137 = 137 mu= 3.9 = 3.9
## 22 1971 fw= 0.3953136 n.wet= 144 = 144 mu= 4.8 = 4.8
## 23 1972 fw= 0.2828416 n.wet= 103 = 103 mu= 3.8 = 3.8
## 24 1973 fw= 0.2866193 n.wet= 105 = 105 mu= 4.4 = 4.4
## 25 1974 fw= 0.3666668 n.wet= 134 = 134 mu= 3.9 = 3.9
## 26 1975 fw= 0.3377561 n.wet= 123 = 123 mu= 3.7 = 3.7
## 27 1976 fw= 0.3036546 n.wet= 111 = 111 mu= 4.6 = 4.6
## 28 1977 fw= 0.2399907 n.wet= 88 = 88 mu= 4.4 = 4.4
## 29 1978 fw= 0.224279 n.wet= 82 = 82 mu= 4.6 = 4.6
## 30 1979 fw= 0.4092651 n.wet= 149 = 149 mu= 3.9 = 3.9
## 31 1980 fw= 0.3785083 n.wet= 138 = 138 mu= 4.4 = 4.4
## 32 1981 fw= 0.3614046 n.wet= 132 = 132 mu= 4 = 4
## 33 1982 fw= 0.2999751 n.wet= 110 = 110 mu= 4 = 4
## 34 1983 fw= 0.412655 n.wet= 151 = 151 mu= 4.3 = 4.3
## 35 1984 fw= 0.4041589 n.wet= 148 = 148 mu= 3.9 = 4
## 36 1985 fw= 0.4076023 n.wet= 149 = 149 mu= 4.7 = 4.7
## 37 1986 fw= 0.380231 n.wet= 139 = 139 mu= 4.3 = 4.3
## 38 1987 fw= 0.4498654 n.wet= 164 = 164 mu= 4.1 = 4.1
## 39 1988 fw= 0.4290443 n.wet= 157 = 157 mu= 3.9 = 3.9
## 40 1989 fw= 0.3778556 n.wet= 138 = 138 mu= 3.3 = 3.3
## 41 1990 fw= 0.3807595 n.wet= 139 = 139 mu= 3.5 = 3.5
## 42 1991 fw= 0.3713568 n.wet= 136 = 136 mu= 3.5 = 3.5
## 43 1992 fw= 0.4371462 n.wet= 160 = 160 mu= 3.6 = 3.6
## 44 1993 fw= 0.4319576 n.wet= 158 = 158 mu= 3.9 = 3.9
## 45 1994 fw= 0.4524157 n.wet= 165 = 165 mu= 3.5 = 3.5
## 46 1995 fw= 0.4166332 n.wet= 152 = 152 mu= 3.5 = 3.5
## 47 1996 fw= 0.3680708 n.wet= 134 = 134 mu= 2.7 = 2.7
## 48 1997 fw= 0.3037599 n.wet= 111 = 111 mu= 2.8 = 2.8
## 49 1998 fw= 0.4075436 n.wet= 149 = 149 mu= 3 = 3
## 50 1999 fw= 0.3774522 n.wet= 138 = 138 mu= 3.2 = 3.2
## 51 2000 fw= 0.3492344 n.wet= 128 = 128 mu= 3.4 = 3.4
## 52 2001 fw= 0.27312 n.wet= 100 = 100 mu= 3.5 = 3.5
## 53 2002 fw= 0.2710755 n.wet= 99 = 99 mu= 3.5 = 3.5
## 54 2003 fw= 0.4295532 n.wet= 157 = 157 mu= 2.8 = 2.8
## 55 2004 fw= 0.3742981 n.wet= 137 = 137 mu= 3.3 = 3.3
## 56 2005 fw= 0.4304832 n.wet= 157 = 157 mu= 2.8 = 2.8
```

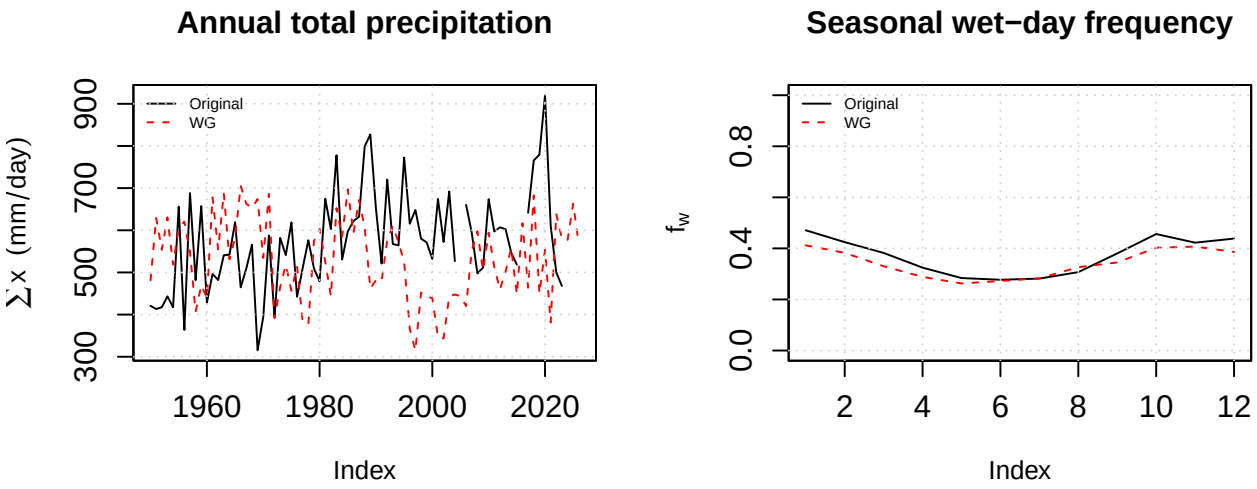
```
## 57 2006 fw= 0.3574956 n.wet= 131 = 131 mu= 3.2 = 3.2
## 58 2007 fw= 0.4128496 n.wet= 151 = 151 mu= 3.7 = 3.7
## 59 2008 fw= 0.4473141 n.wet= 163 = 163 mu= 3.7 = 3.7
## 60 2009 fw= 0.3496242 n.wet= 128 = 128 mu= 3.9 = 3.9
## 61 2010 fw= 0.3958616 n.wet= 145 = 145 mu= 4.1 = 4.1
## 62 2011 fw= 0.351859 n.wet= 129 = 129 mu= 4 = 4
## 63 2012 fw= 0.3612359 n.wet= 132 = 132 mu= 3.5 = 3.5
## 64 2013 fw= 0.339551 n.wet= 124 = 124 mu= 4.1 = 4.1
## 65 2014 fw= 0.3917687 n.wet= 143 = 143 mu= 3.9 = 3.9
## 66 2015 fw= 0.2944143 n.wet= 108 = 108 mu= 4.1 = 4.1
## 67 2016 fw= 0.3933064 n.wet= 144 = 144 mu= 4.3 = 4.3
## 68 2017 fw= 0.3268896 n.wet= 119 = 119 mu= 3.9 = 3.9
## 69 2018 fw= 0.4590201 n.wet= 168 = 168 mu= 4.1 = 4.1
## 70 2019 fw= 0.3184905 n.wet= 116 = 116 mu= 3.9 = 3.9
## 71 2020 fw= 0.436648 n.wet= 159 = 159 mu= 3.5 = 3.5
## 72 2021 fw= 0.3197389 n.wet= 117 = 117 mu= 3.3 = 3.3
## 73 2022 fw= 0.4091322 n.wet= 149 = 149 mu= 4.3 = 4.3
## 74 2023 fw= 0.4088142 n.wet= 149 = 149 mu= 3.9 = 3.9
## 75 2024 fw= 0.3936023 n.wet= 144 = 144 mu= 4 = 4
## 76 2025 fw= 0.4092499 n.wet= 149 = 149 mu= 4.4 = 4.4
## 77 2026 fw= 0.3669248 n.wet= 134 = 134 mu= 4.2 = 4.2
## [1] "Sort precipitation magnitudes"
## [1] "10282 observed wet days and 9253 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.8   1.757     2.4    30.6      28
## Feb       0       0     0.6   1.539     2.0    27.2       1
## Mar       0       0     0.4   1.367     1.9    19.2       8
## Apr       0       0     0.3   1.187     1.4    20.8       3
## May       0       0     0.1   1.073     1.1    18.9       2
## Jun       0       0     0.1   1.377     1.1    43.8       3
## Jul       0       0     0.1   1.656     1.2    38.1       6
## Aug       0       0     0.1   1.723     1.5    46.2       1
## Sep       0       0     0.3   1.688     2.0    35.3       6
## Oct       0       0     0.7   1.959     2.6    29.8       2
## Nov       0       0     0.5   1.789     2.5    28.9       5
## Dec       0       0     0.6   1.718     2.4    26.3      16
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.3180    1.95 16.9   NA
## Feb    0       0      0 1.1920    1.70 20.5   NA
## Mar    0       0      0 1.0660    1.50 14.6   NA
## Apr    0       0      0 0.9434    1.20 31.8   NA
## May    0       0      0 0.8934    1.10 21.4   NA
## Jun    0       0      0 1.3770    1.40 41.8   NA
## Jul    0       0      0 1.9910    2.10 35.8   NA
## Aug    0       0      0 2.1480    2.90 36.5   NA
## Sep    0       0      0 1.7080    2.30 31.0   NA
## Oct    0       0      0 1.7320    2.50 27.0   NA
## Nov    0       0      0 1.6750    2.60 24.3   NA
## Dec    0       0      0 1.4130    1.90 25.3   NA
```

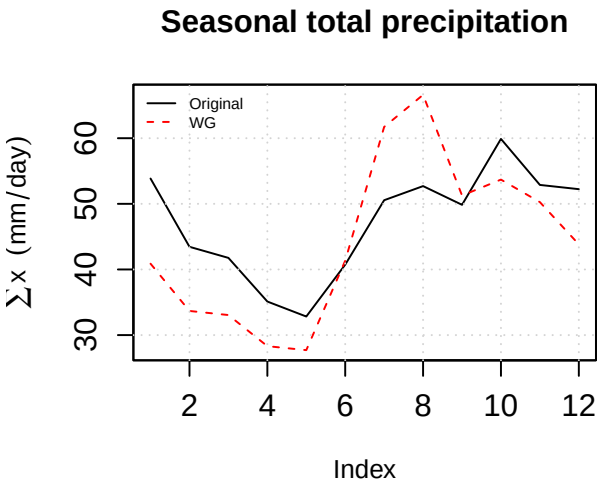

VARDØ RADIO wet−day amounts
WG amount (mm/day)
0
10
30
0
10
20
30
40
Observed amount (mm/day)

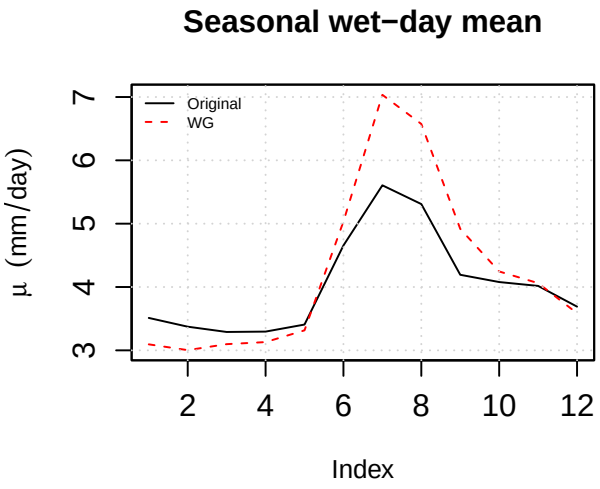

Dry spell durations
WG
5
10
15
20
5
10
15
20
obs


Number of annual wet days
days
50
100
200
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
10
20
30
0
10
20
30
obs



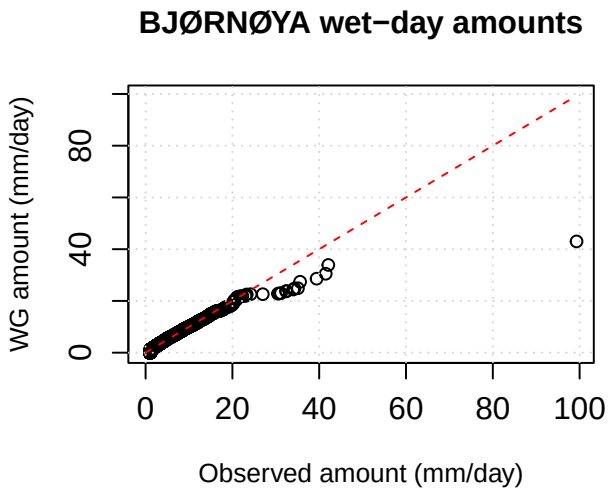


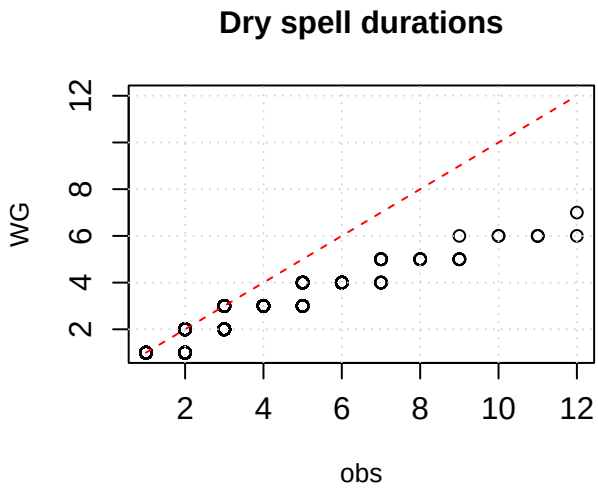


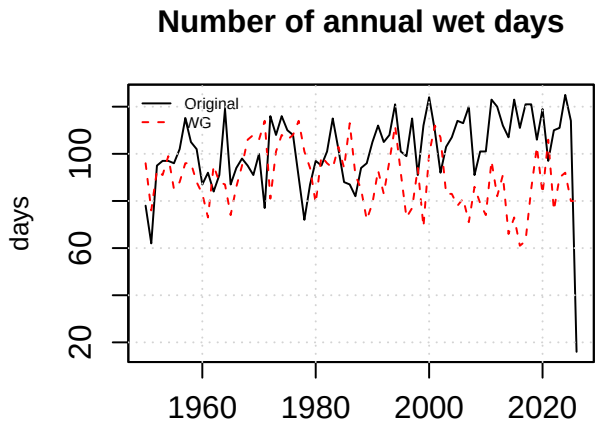

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for BJØRNØYA"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: BJØRNØYA"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2024
##  1st Qu.:1969   1st Qu.:0.2586
##  Median :1988   Median :0.2778
##  Mean   :1988   Mean   :0.2821
##  3rd Qu.:2007   3rd Qu.:0.3128
##  Max.   :2026   Max.   :0.3611
##      Index          c(mu)
##  Min.   :1950   Min.   :2.445
##  1st Qu.:1969   1st Qu.:3.194
##  Median :1988   Median :3.534
##  Mean   :1988   Mean   :3.531
##  3rd Qu.:2007   3rd Qu.:3.814
##  Max.   :2026   Max.   :4.469
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3216871 n.wet= 117 = 117 mu= 3 = 3
## 2 1951 fw= 0.2758677 n.wet= 101 = 101 mu= 2.4 = 2.4
```

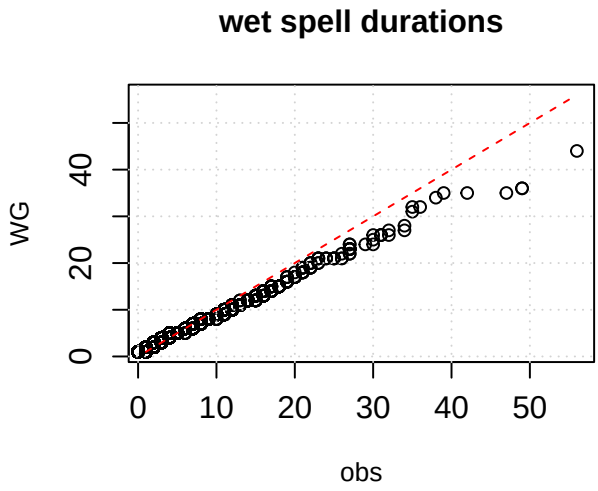
```
## 3 1952 fw= 0.285219 n.wet= 104 = 104 mu= 4 = 4
## 4 1953 fw= 0.2669162 n.wet= 97 = 97 mu= 3.8 = 3.8
## 5 1954 fw= 0.2930256 n.wet= 107 = 107 mu= 4.3 = 4.3
## 6 1955 fw= 0.263028 n.wet= 96 = 96 mu= 3.3 = 3.3
## 7 1956 fw= 0.2897685 n.wet= 106 = 106 mu= 2.6 = 2.6
## 8 1957 fw= 0.3318654 n.wet= 121 = 121 mu= 2.8 = 2.8
## 9 1958 fw= 0.3005341 n.wet= 110 = 110 mu= 3.8 = 3.8
## 10 1959 fw= 0.2791248 n.wet= 102 = 102 mu= 3.5 = 3.5
## 11 1960 fw= 0.2515078 n.wet= 92 = 92 mu= 3.7 = 3.7
## 12 1961 fw= 0.255322 n.wet= 93 = 93 mu= 2.9 = 2.9
## 13 1962 fw= 0.2805287 n.wet= 102 = 102 mu= 3.5 = 3.5
## 14 1963 fw= 0.285388 n.wet= 104 = 104 mu= 3.8 = 3.8
## 15 1964 fw= 0.2650661 n.wet= 97 = 97 mu= 3.5 = 3.5
## 16 1965 fw= 0.2541517 n.wet= 93 = 93 mu= 3.5 = 3.5
## 17 1966 fw= 0.2722967 n.wet= 99 = 99 mu= 2.8 = 2.8
## 18 1967 fw= 0.3064723 n.wet= 112 = 112 mu= 3.1 = 3.1
## 19 1968 fw= 0.3330848 n.wet= 122 = 122 mu= 3.6 = 3.6
## 20 1969 fw= 0.3324558 n.wet= 121 = 121 mu= 3.1 = 3.1
## 21 1970 fw= 0.3207068 n.wet= 117 = 117 mu= 3.6 = 3.6
## 22 1971 fw= 0.3289467 n.wet= 120 = 120 mu= 3.9 = 3.9
## 23 1972 fw= 0.2586345 n.wet= 94 = 94 mu= 3.4 = 3.4
## 24 1973 fw= 0.3123295 n.wet= 114 = 114 mu= 3.6 = 3.6
## 25 1974 fw= 0.315588 n.wet= 115 = 115 mu= 4.3 = 4.3
## 26 1975 fw= 0.3352007 n.wet= 122 = 122 mu= 3.9 = 3.9
## 27 1976 fw= 0.3287966 n.wet= 120 = 120 mu= 3.6 = 3.6
## 28 1977 fw= 0.3462188 n.wet= 126 = 126 mu= 3.3 = 3.3
## 29 1978 fw= 0.327948 n.wet= 120 = 120 mu= 3 = 3
## 30 1979 fw= 0.282161 n.wet= 103 = 103 mu= 4.2 = 4.2
## 31 1980 fw= 0.2484428 n.wet= 91 = 91 mu= 3.4 = 3.4
## 32 1981 fw= 0.2885705 n.wet= 105 = 105 mu= 4.4 = 4.4
## 33 1982 fw= 0.3231057 n.wet= 118 = 118 mu= 3.3 = 3.3
## 34 1983 fw= 0.3037248 n.wet= 111 = 111 mu= 3.7 = 3.7
## 35 1984 fw= 0.3330307 n.wet= 122 = 122 mu= 3.1 = 3.1
## 36 1985 fw= 0.2949479 n.wet= 108 = 108 mu= 3.5 = 3.5
## 37 1986 fw= 0.3350022 n.wet= 122 = 122 mu= 4.5 = 4.5
## 38 1987 fw= 0.2660373 n.wet= 97 = 97 mu= 3.9 = 3.9
## 39 1988 fw= 0.2614012 n.wet= 95 = 95 mu= 3.8 = 3.8
## 40 1989 fw= 0.258735 n.wet= 95 = 95 mu= 3.1 = 3.1
## 41 1990 fw= 0.270524 n.wet= 99 = 99 mu= 3.3 = 3.3
## 42 1991 fw= 0.2705435 n.wet= 99 = 99 mu= 3.6 = 3.6
## 43 1992 fw= 0.2777921 n.wet= 101 = 101 mu= 3.6 = 3.6
## 44 1993 fw= 0.3244979 n.wet= 119 = 119 mu= 3 = 3
## 45 1994 fw= 0.3610946 n.wet= 132 = 132 mu= 3.5 = 3.5
## 46 1995 fw= 0.2915842 n.wet= 107 = 107 mu= 3.1 = 3.1
## 47 1996 fw= 0.2448268 n.wet= 89 = 89 mu= 3.4 = 3.4
## 48 1997 fw= 0.2659773 n.wet= 97 = 97 mu= 2.9 = 2.9
## 49 1998 fw= 0.2872851 n.wet= 105 = 105 mu= 3.4 = 3.4
## 50 1999 fw= 0.2081582 n.wet= 76 = 76 mu= 4.1 = 4.1
## 51 2000 fw= 0.3127807 n.wet= 114 = 114 mu= 4.2 = 4.2
## 52 2001 fw= 0.343659 n.wet= 126 = 126 mu= 4.2 = 4.2
## 53 2002 fw= 0.3302509 n.wet= 121 = 121 mu= 3.9 = 3.9
## 54 2003 fw= 0.2621094 n.wet= 96 = 96 mu= 3.5 = 3.5
## 55 2004 fw= 0.2748224 n.wet= 100 = 100 mu= 3.1 = 3.1
## 56 2005 fw= 0.2512576 n.wet= 92 = 92 mu= 3.2 = 3.2
```

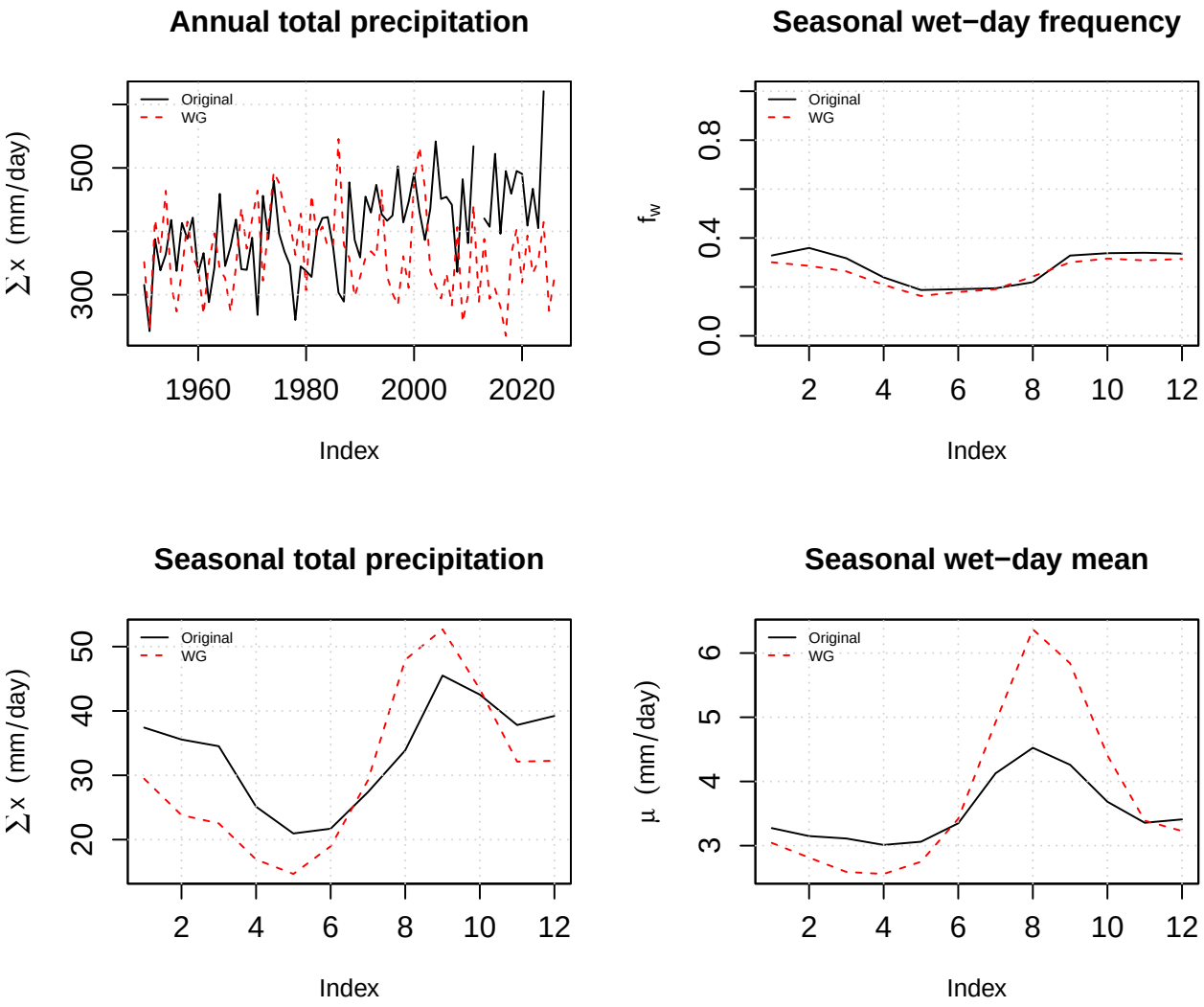
```
## 57 2006 fw= 0.2500546 n.wet= 91 = 91 mu= 3.7 = 3.7
## 58 2007 fw= 0.2219506 n.wet= 81 = 81 mu= 3.5 = 3.5
## 59 2008 fw= 0.2709166 n.wet= 99 = 99 mu= 4.1 = 4.1
## 60 2009 fw= 0.2375165 n.wet= 87 = 87 mu= 3 = 2.9
## 61 2010 fw= 0.2385269 n.wet= 87 = 87 mu= 3.4 = 3.4
## 62 2011 fw= 0.2943387 n.wet= 108 = 108 mu= 4.1 = 4.1
## 63 2012 fw= 0.2584994 n.wet= 94 = 94 mu= 3.1 = 3.1
## 64 2013 fw= 0.2784317 n.wet= 102 = 102 mu= 3.8 = 3.8
## 65 2014 fw= 0.2130378 n.wet= 78 = 78 mu= 3.8 = 3.8
## 66 2015 fw= 0.2151829 n.wet= 79 = 79 mu= 3.9 = 3.9
## 67 2016 fw= 0.2033928 n.wet= 74 = 74 mu= 3.8 = 3.8
## 68 2017 fw= 0.2024399 n.wet= 74 = 74 mu= 3.2 = 3.2
## 69 2018 fw= 0.260343 n.wet= 95 = 95 mu= 3.8 = 3.8
## 70 2019 fw= 0.3105774 n.wet= 113 = 113 mu= 3.6 = 3.6
## 71 2020 fw= 0.272068 n.wet= 99 = 99 mu= 3.2 = 3.2
## 72 2021 fw= 0.3354906 n.wet= 123 = 123 mu= 3.2 = 3.2
## 73 2022 fw= 0.2340622 n.wet= 85 = 85 mu= 3.9 = 3.9
## 74 2023 fw= 0.2726107 n.wet= 100 = 100 mu= 3.5 = 3.5
## 75 2024 fw= 0.2720443 n.wet= 99 = 99 mu= 4.2 = 4.2
## 76 2025 fw= 0.2482524 n.wet= 91 = 91 mu= 3 = 3
## 77 2026 fw= 0.2411864 n.wet= 88 = 88 mu= 3.7 = 3.7
## [1] "Sort precipitation magnitudes"
## [1] "7809 observed wet days and 6913 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.3  1.2090     1.4    32.4       4
## Feb       0       0     0.4  1.2610     1.6    42.1       4
## Mar       0       0     0.3  1.1280     1.4    21.6       4
## Apr       0       0     0.2  0.8490     0.9    16.5       3
## May       0       0     0.1  0.6850     0.6    18.2       2
## Jun       0       0     0.1  0.7326     0.5    20.9       1
## Jul       0       0     0.1  0.8966     0.5    30.8       5
## Aug       0       0     0.1  1.1070     0.7    39.4       1
## Sep       0       0     0.3  1.5370     1.5    34.0       1
## Oct       0       0     0.4  1.3900     1.5    23.2      NA
## Nov       0       0     0.4  1.2770     1.5    35.1       1
## Dec       0       0     0.4  1.2880     1.4    99.3      11
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 0.9501     1.3 14.0   NA
## Feb    0       0      0 0.8424     1.2 15.1   NA
## Mar    0       0      0 0.7261     1.0 20.1   NA
## Apr    0       0      0 0.5633     0.0 15.1   NA
## May    0       0      0 0.4727     0.0 22.3   NA
## Jun    0       0      0 0.6318     0.0 23.8   NA
## Jul    0       0      0 0.9423     0.0 43.0   NA
## Aug    0       0      0 1.5460     0.0 30.5   NA
## Sep    0       0      0 1.7560     2.4 27.4   NA
## Oct    0       0      0 1.3990     1.8 33.9   NA
## Nov    0       0      0 1.0700     1.5 18.5   NA
## Dec    0       0      0 1.0400     1.5 24.8   NA
```


BJØRNØYA wet−day amounts
WG amount (mm/day)
0
40
80
0
20
40
60
80
100
Observed amount (mm/day)


Dry spell durations
WG
2
4
6
8
10
12
2
4
6
8
10
12
obs


Number of annual wet days
days
20
60
100
1960
1980
2000
2020
Original
WG

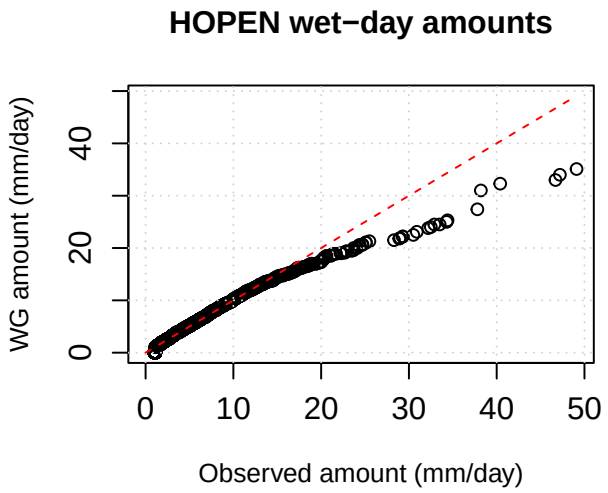

wet spell durations
WG
0
20
40
0
10
20
30
40
50
obs

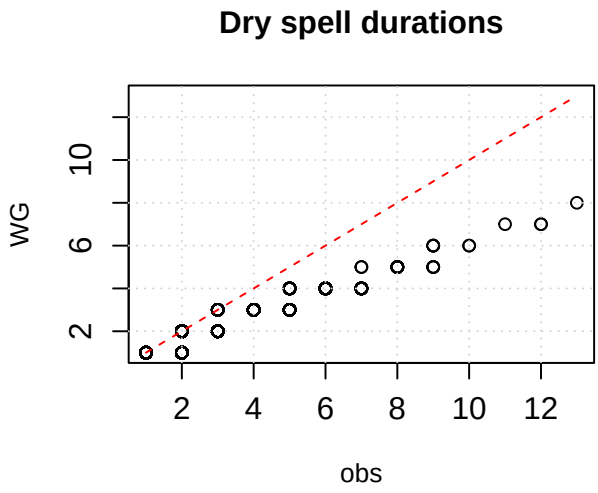


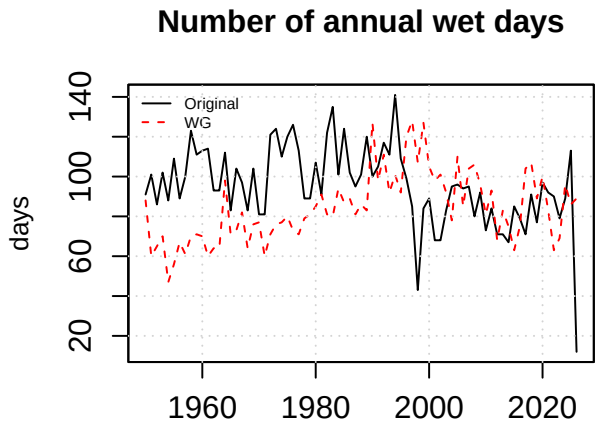

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for HOPEN"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: HOPEN"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.1507
##  1st Qu.:1969   1st Qu.:0.2258
##  Median :1988   Median :0.2626
##  Mean   :1988   Mean   :0.2621
##  3rd Qu.:2007   3rd Qu.:0.2894
##  Max.   :2026   Max.   :0.3894
##      Index          c(mu)
##  Min.   :1950   Min.   :2.397
##  1st Qu.:1969   1st Qu.:3.200
##  Median :1988   Median :3.629
##  Mean   :1988   Mean   :3.572
##  3rd Qu.:2007   3rd Qu.:3.928
##  Max.   :2026   Max.   :4.840
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.2796618 n.wet= 102 = 102 mu= 3.2 = 3.2
## 2 1951 fw= 0.1986065 n.wet= 73 = 73 mu= 3 = 3
```

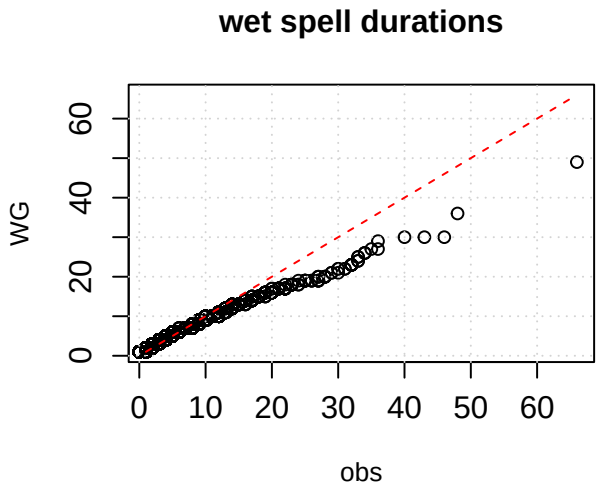
```
## 3 1952 fw= 0.2066999 n.wet= 75 = 75 mu= 3.2 = 3.2
## 4 1953 fw= 0.2452066 n.wet= 90 = 90 mu= 2.9 = 2.9
## 5 1954 fw= 0.1507012 n.wet= 55 = 55 mu= 3.2 = 3.2
## 6 1955 fw= 0.1772089 n.wet= 65 = 65 mu= 2.8 = 2.8
## 7 1956 fw= 0.2279217 n.wet= 83 = 83 mu= 3.3 = 3.3
## 8 1957 fw= 0.2034115 n.wet= 74 = 74 mu= 2.9 = 2.9
## 9 1958 fw= 0.2257664 n.wet= 82 = 82 mu= 3.7 = 3.7
## 10 1959 fw= 0.2314811 n.wet= 85 = 85 mu= 2.8 = 2.8
## 11 1960 fw= 0.2097301 n.wet= 77 = 77 mu= 3.8 = 3.8
## 12 1961 fw= 0.1889251 n.wet= 69 = 69 mu= 3.3 = 3.3
## 13 1962 fw= 0.206329 n.wet= 75 = 75 mu= 3.8 = 3.8
## 14 1963 fw= 0.2107756 n.wet= 77 = 77 mu= 2.8 = 2.8
## 15 1964 fw= 0.2895926 n.wet= 106 = 106 mu= 3.8 = 3.8
## 16 1965 fw= 0.2108736 n.wet= 77 = 77 mu= 3.4 = 3.4
## 17 1966 fw= 0.2087579 n.wet= 76 = 76 mu= 3.8 = 3.8
## 18 1967 fw= 0.2447371 n.wet= 89 = 89 mu= 3.8 = 3.8
## 19 1968 fw= 0.1895144 n.wet= 69 = 69 mu= 3.6 = 3.6
## 20 1969 fw= 0.2551877 n.wet= 93 = 93 mu= 3.3 = 3.3
## 21 1970 fw= 0.2310559 n.wet= 84 = 84 mu= 3.5 = 3.5
## 22 1971 fw= 0.2053501 n.wet= 75 = 75 mu= 3.4 = 3.4
## 23 1972 fw= 0.2228578 n.wet= 81 = 81 mu= 3.6 = 3.6
## 24 1973 fw= 0.241082 n.wet= 88 = 88 mu= 2.9 = 2.9
## 25 1974 fw= 0.2243471 n.wet= 82 = 82 mu= 3.1 = 3.1
## 26 1975 fw= 0.2697014 n.wet= 99 = 99 mu= 2.6 = 2.6
## 27 1976 fw= 0.2552888 n.wet= 93 = 93 mu= 2.7 = 2.7
## 28 1977 fw= 0.2302972 n.wet= 84 = 84 mu= 2.4 = 2.4
## 29 1978 fw= 0.2834408 n.wet= 104 = 104 mu= 2.4 = 2.4
## 30 1979 fw= 0.2625822 n.wet= 96 = 96 mu= 2.6 = 2.6
## 31 1980 fw= 0.2697511 n.wet= 99 = 99 mu= 3.1 = 3.1
## 32 1981 fw= 0.2821458 n.wet= 103 = 103 mu= 3 = 3
## 33 1982 fw= 0.2612728 n.wet= 95 = 95 mu= 3.8 = 3.8
## 34 1983 fw= 0.2501739 n.wet= 91 = 91 mu= 3.3 = 3.3
## 35 1984 fw= 0.2906894 n.wet= 106 = 106 mu= 3.2 = 3.2
## 36 1985 fw= 0.2624785 n.wet= 96 = 96 mu= 3.7 = 3.7
## 37 1986 fw= 0.27322 n.wet= 100 = 100 mu= 3.8 = 3.8
## 38 1987 fw= 0.2907613 n.wet= 106 = 106 mu= 2.9 = 2.9
## 39 1988 fw= 0.2674479 n.wet= 98 = 98 mu= 3.8 = 3.8
## 40 1989 fw= 0.2846548 n.wet= 104 = 104 mu= 2.9 = 2.9
## 41 1990 fw= 0.3728764 n.wet= 136 = 136 mu= 3.6 = 3.6
## 42 1991 fw= 0.3030104 n.wet= 111 = 111 mu= 3.8 = 3.8
## 43 1992 fw= 0.3216627 n.wet= 117 = 117 mu= 4.3 = 4.3
## 44 1993 fw= 0.2786236 n.wet= 102 = 102 mu= 4.4 = 4.4
## 45 1994 fw= 0.2893748 n.wet= 106 = 106 mu= 4.8 = 4.8
## 46 1995 fw= 0.2739656 n.wet= 100 = 100 mu= 4.3 = 4.3
## 47 1996 fw= 0.3516625 n.wet= 128 = 128 mu= 4.3 = 4.3
## 48 1997 fw= 0.3894109 n.wet= 142 = 142 mu= 4.4 = 4.4
## 49 1998 fw= 0.3225519 n.wet= 118 = 118 mu= 3.9 = 3.9
## 50 1999 fw= 0.3808614 n.wet= 139 = 139 mu= 3.5 = 3.5
## 51 2000 fw= 0.3190741 n.wet= 117 = 117 mu= 4.1 = 4.1
## 52 2001 fw= 0.3032765 n.wet= 111 = 111 mu= 4.2 = 4.2
## 53 2002 fw= 0.323723 n.wet= 118 = 118 mu= 4.1 = 4.1
## 54 2003 fw= 0.2783307 n.wet= 102 = 102 mu= 4.4 = 4.4
## 55 2004 fw= 0.2305608 n.wet= 84 = 84 mu= 4.7 = 4.7
## 56 2005 fw= 0.3275427 n.wet= 120 = 120 mu= 4 = 4
```

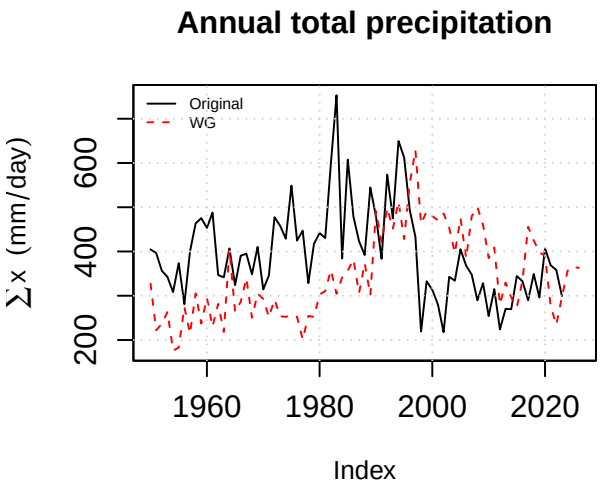
```
## 57 2006 fw= 0.2570159 n.wet= 94 = 94 mu= 4.1 = 4.1
## 58 2007 fw= 0.3121085 n.wet= 114 = 114 mu= 4.2 = 4.2
## 59 2008 fw= 0.3220081 n.wet= 118 = 118 mu= 4.2 = 4.2
## 60 2009 fw= 0.2891032 n.wet= 106 = 106 mu= 4.3 = 4.3
## 61 2010 fw= 0.2663209 n.wet= 97 = 97 mu= 4 = 4
## 62 2011 fw= 0.2773479 n.wet= 101 = 101 mu= 4 = 4
## 63 2012 fw= 0.2008935 n.wet= 73 = 73 mu= 3.8 = 3.8
## 64 2013 fw= 0.2549317 n.wet= 93 = 93 mu= 3.5 = 3.5
## 65 2014 fw= 0.2430896 n.wet= 89 = 89 mu= 3.3 = 3.3
## 66 2015 fw= 0.2074769 n.wet= 76 = 76 mu= 3.6 = 3.6
## 67 2016 fw= 0.2447378 n.wet= 89 = 89 mu= 3.8 = 3.8
## 68 2017 fw= 0.3179855 n.wet= 116 = 116 mu= 3.9 = 3.9
## 69 2018 fw= 0.3204474 n.wet= 117 = 117 mu= 3.6 = 3.6
## 70 2019 fw= 0.275856 n.wet= 101 = 101 mu= 3.9 = 3.9
## 71 2020 fw= 0.3130158 n.wet= 114 = 114 mu= 3.4 = 3.4
## 72 2021 fw= 0.2608023 n.wet= 95 = 95 mu= 2.9 = 2.9
## 73 2022 fw= 0.1964148 n.wet= 72 = 72 mu= 3.3 = 3.3
## 74 2023 fw= 0.2104053 n.wet= 77 = 77 mu= 3.9 = 3.9
## 75 2024 fw= 0.2847493 n.wet= 104 = 104 mu= 3.4 = 3.4
## 76 2025 fw= 0.2750498 n.wet= 100 = 100 mu= 3.7 = 3.7
## 77 2026 fw= 0.2664188 n.wet= 97 = 97 mu= 3.7 = 3.7
## [1] "Sort precipitation magnitudes"
## [1] "7343 observed wet days and 6481 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0       0     0.2  1.1220     1.2    40.4       5
## Feb       0       0     0.2  1.1180     1.2    29.3       3
## Mar       0       0     0.2  1.1070     1.1    28.9       1
## Apr       0       0     0.1  0.8871     0.8    37.8      NA
## May       0       0     0.1  0.6817     0.6    46.7       3
## Jun       0       0     0.0  0.7543     0.4    32.2       7
## Jul       0       0     0.1  0.9846     0.6    28.3      11
## Aug       0       0     0.2  1.2030     0.9    47.2      NA
## Sep       0       0     0.3  1.3830     1.5    38.2       1
## Oct       0       0     0.4  1.2980     1.5    24.7       2
## Nov       0       0     0.3  1.1740     1.3    29.0       3
## Dec       0       0     0.2  1.2500     1.2    49.1       7
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 0.7269     0.8 17.0   NA
## Feb    0       0      0 0.8597     1.0 17.8   NA
## Mar    0       0      0 0.7893     0.9 17.0   NA
## Apr    0       0      0 0.5929     0.0 14.5   NA
## May    0       0      0 0.4136     0.0 13.4   NA
## Jun    0       0      0 0.7316     0.0 22.5   NA
## Jul    0       0      0 1.2960     0.0 32.3   NA
## Aug    0       0      0 1.6340     0.0 34.0   NA
## Sep    0       0      0 1.3990     1.8 25.3   NA
## Oct    0       0      0 1.0160     1.2 35.1   NA
## Nov    0       0      0 0.8485     1.1 17.9   NA
## Dec    0       0      0 1.0290     1.2 24.5   NA
```

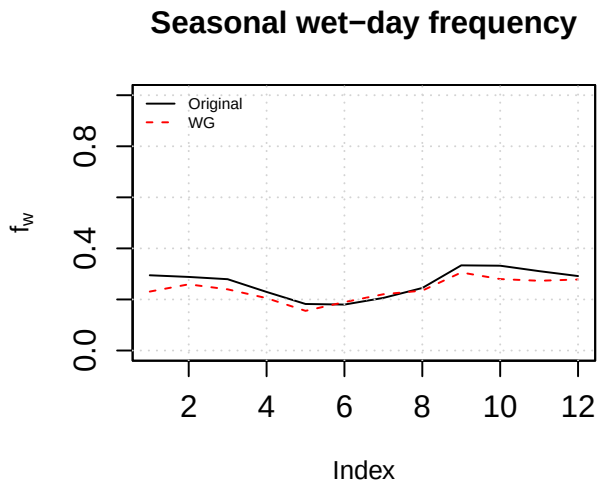

HOPEN wet−day amounts
WG amount (mm/day)
0
20
40
0
10
20
30
40
50
Observed amount (mm/day)

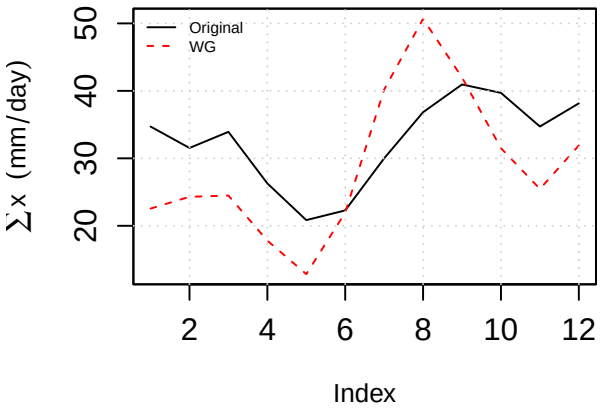

Dry spell durations
WG
2
6
10
2
4
6
8
10
12
obs

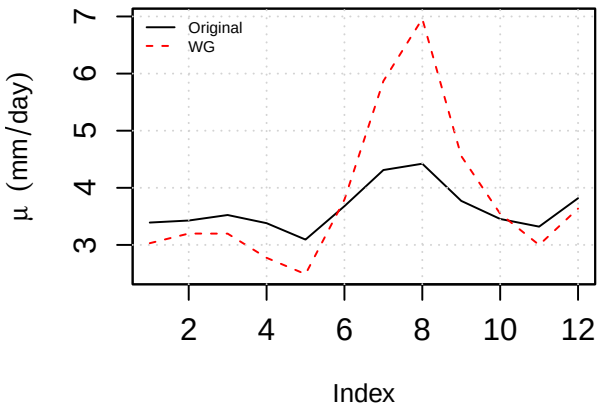

Number of annual wet days
days
20
60
100
140
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
40
60
0
10
20
30
40
50
60
obs





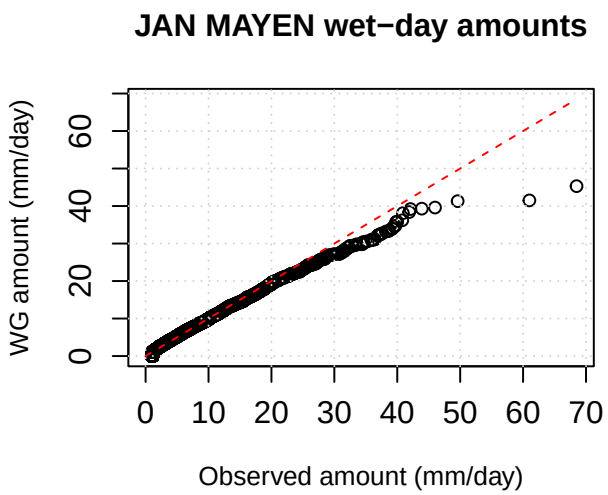


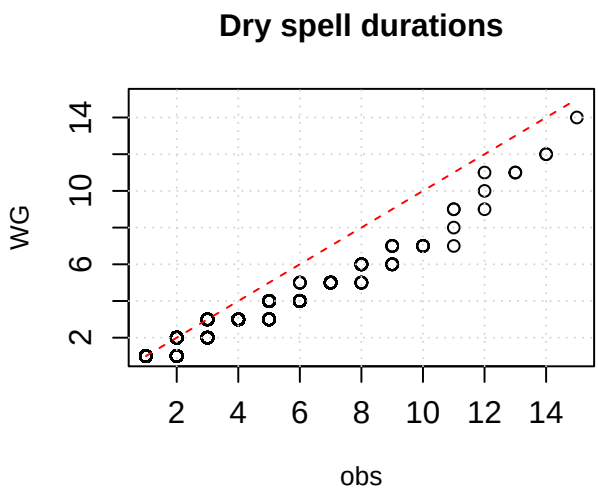


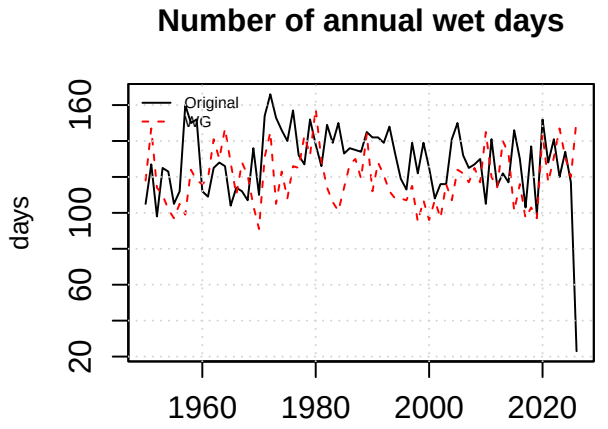

```
## [1] "test.WG.fwmu.day.precip"
## [1] "test.WG.fwmu.day.precip for JAN MAYEN"
## [1] "WG.fwmu.day.precip"
## [1] "Use data provided: JAN MAYEN"
##      Index          c(fw)
##  Min.   :1950   Min.   :0.2604
##  1st Qu.:1969   1st Qu.:0.3193
##  Median :1988   Median :0.3522
##  Mean   :1988   Mean   :0.3549
##  3rd Qu.:2007   3rd Qu.:0.3849
##  Max.   :2026   Max.   :0.4623
##      Index          c(mu)
##  Min.   :1950   Min.   :3.076
##  1st Qu.:1969   1st Qu.:4.463
##  Median :1988   Median :4.857
##  Mean   :1988   Mean   :4.859
##  3rd Qu.:2007   3rd Qu.:5.237
##  Max.   :2026   Max.   :6.099
## The WG simulates the years:  1950 2026
## 1 1950 fw= 0.3674794 n.wet= 134 = 134 mu= 4.8 = 4.8
## 2 1951 fw= 0.4224632 n.wet= 154 = 154 mu= 4.7 = 4.7
```

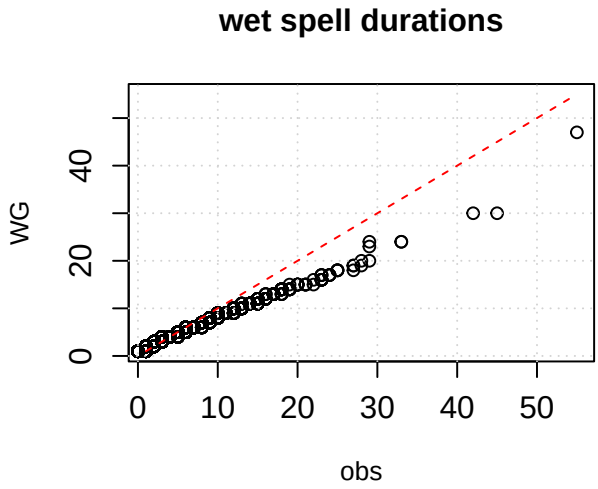
```
## 3 1952 fw= 0.3326683 n.wet= 122 = 122 mu= 5.2 = 5.2
## 4 1953 fw= 0.3508753 n.wet= 128 = 128 mu= 4.4 = 4.4
## 5 1954 fw= 0.3003679 n.wet= 110 = 110 mu= 4.5 = 4.5
## 6 1955 fw= 0.2842849 n.wet= 104 = 104 mu= 4.4 = 4.4
## 7 1956 fw= 0.3246319 n.wet= 119 = 119 mu= 4.2 = 4.2
## 8 1957 fw= 0.3274383 n.wet= 120 = 120 mu= 4 = 4
## 9 1958 fw= 0.3802403 n.wet= 139 = 139 mu= 3.8 = 3.8
## 10 1959 fw= 0.3422187 n.wet= 125 = 125 mu= 5 = 5
## 11 1960 fw= 0.3198791 n.wet= 117 = 117 mu= 5.2 = 5.2
## 12 1961 fw= 0.366723 n.wet= 134 = 134 mu= 4.6 = 4.6
## 13 1962 fw= 0.4200433 n.wet= 153 = 153 mu= 4.3 = 4.3
## 14 1963 fw= 0.3758251 n.wet= 137 = 137 mu= 4.8 = 4.8
## 15 1964 fw= 0.4234593 n.wet= 155 = 155 mu= 4.6 = 4.6
## 16 1965 fw= 0.3849002 n.wet= 141 = 141 mu= 4.5 = 4.5
## 17 1966 fw= 0.349254 n.wet= 128 = 128 mu= 3.1 = 3.1
## 18 1967 fw= 0.3913686 n.wet= 143 = 143 mu= 4.9 = 4.9
## 19 1968 fw= 0.3772509 n.wet= 138 = 138 mu= 4 = 4
## 20 1969 fw= 0.303528 n.wet= 111 = 111 mu= 4.7 = 4.7
## 21 1970 fw= 0.2603836 n.wet= 95 = 95 mu= 5.7 = 5.7
## 22 1971 fw= 0.3885724 n.wet= 142 = 142 mu= 5.1 = 5.1
## 23 1972 fw= 0.406654 n.wet= 149 = 149 mu= 5.8 = 5.8
## 24 1973 fw= 0.3093699 n.wet= 113 = 113 mu= 5.4 = 5.4
## 25 1974 fw= 0.3947251 n.wet= 144 = 144 mu= 4.6 = 4.6
## 26 1975 fw= 0.3125357 n.wet= 114 = 114 mu= 4.7 = 4.7
## 27 1976 fw= 0.3645965 n.wet= 133 = 133 mu= 5.5 = 5.5
## 28 1977 fw= 0.3670718 n.wet= 134 = 134 mu= 5.2 = 5.2
## 29 1978 fw= 0.4238883 n.wet= 155 = 155 mu= 5.1 = 5.1
## 30 1979 fw= 0.3994787 n.wet= 146 = 146 mu= 5.1 = 5.1
## 31 1980 fw= 0.4622525 n.wet= 169 = 169 mu= 5.3 = 5.3
## 32 1981 fw= 0.3739737 n.wet= 137 = 137 mu= 5 = 5
## 33 1982 fw= 0.3522201 n.wet= 129 = 129 mu= 4.1 = 4.1
## 34 1983 fw= 0.3081929 n.wet= 113 = 113 mu= 4.5 = 4.5
## 35 1984 fw= 0.3049057 n.wet= 111 = 111 mu= 4.9 = 4.9
## 36 1985 fw= 0.3334948 n.wet= 122 = 122 mu= 4.6 = 4.6
## 37 1986 fw= 0.3600875 n.wet= 132 = 132 mu= 4.7 = 4.7
## 38 1987 fw= 0.3828928 n.wet= 140 = 140 mu= 4 = 4
## 39 1988 fw= 0.3501775 n.wet= 128 = 128 mu= 4.5 = 4.5
## 40 1989 fw= 0.4114619 n.wet= 150 = 150 mu= 4.9 = 4.9
## 41 1990 fw= 0.326873 n.wet= 119 = 119 mu= 5.6 = 5.6
## 42 1991 fw= 0.3593285 n.wet= 131 = 131 mu= 5.5 = 5.5
## 43 1992 fw= 0.3559779 n.wet= 130 = 130 mu= 4.3 = 4.3
## 44 1993 fw= 0.3381478 n.wet= 124 = 124 mu= 5.1 = 5.1
## 45 1994 fw= 0.3344628 n.wet= 122 = 122 mu= 5.5 = 5.6
## 46 1995 fw= 0.3195957 n.wet= 117 = 117 mu= 4.2 = 4.2
## 47 1996 fw= 0.3068406 n.wet= 112 = 112 mu= 5.2 = 5.2
## 48 1997 fw= 0.3193314 n.wet= 117 = 117 mu= 5 = 5
## 49 1998 fw= 0.2991289 n.wet= 109 = 109 mu= 4.2 = 4.2
## 50 1999 fw= 0.3074645 n.wet= 112 = 112 mu= 5.5 = 5.5
## 51 2000 fw= 0.2996216 n.wet= 109 = 109 mu= 4.3 = 4.3
## 52 2001 fw= 0.3123191 n.wet= 114 = 114 mu= 4.5 = 4.5
## 53 2002 fw= 0.2964366 n.wet= 108 = 108 mu= 5.3 = 5.3
## 54 2003 fw= 0.3390402 n.wet= 124 = 124 mu= 5.6 = 5.6
## 55 2004 fw= 0.3058294 n.wet= 112 = 112 mu= 4.8 = 4.8
## 56 2005 fw= 0.3626401 n.wet= 132 = 132 mu= 5.8 = 5.8
```

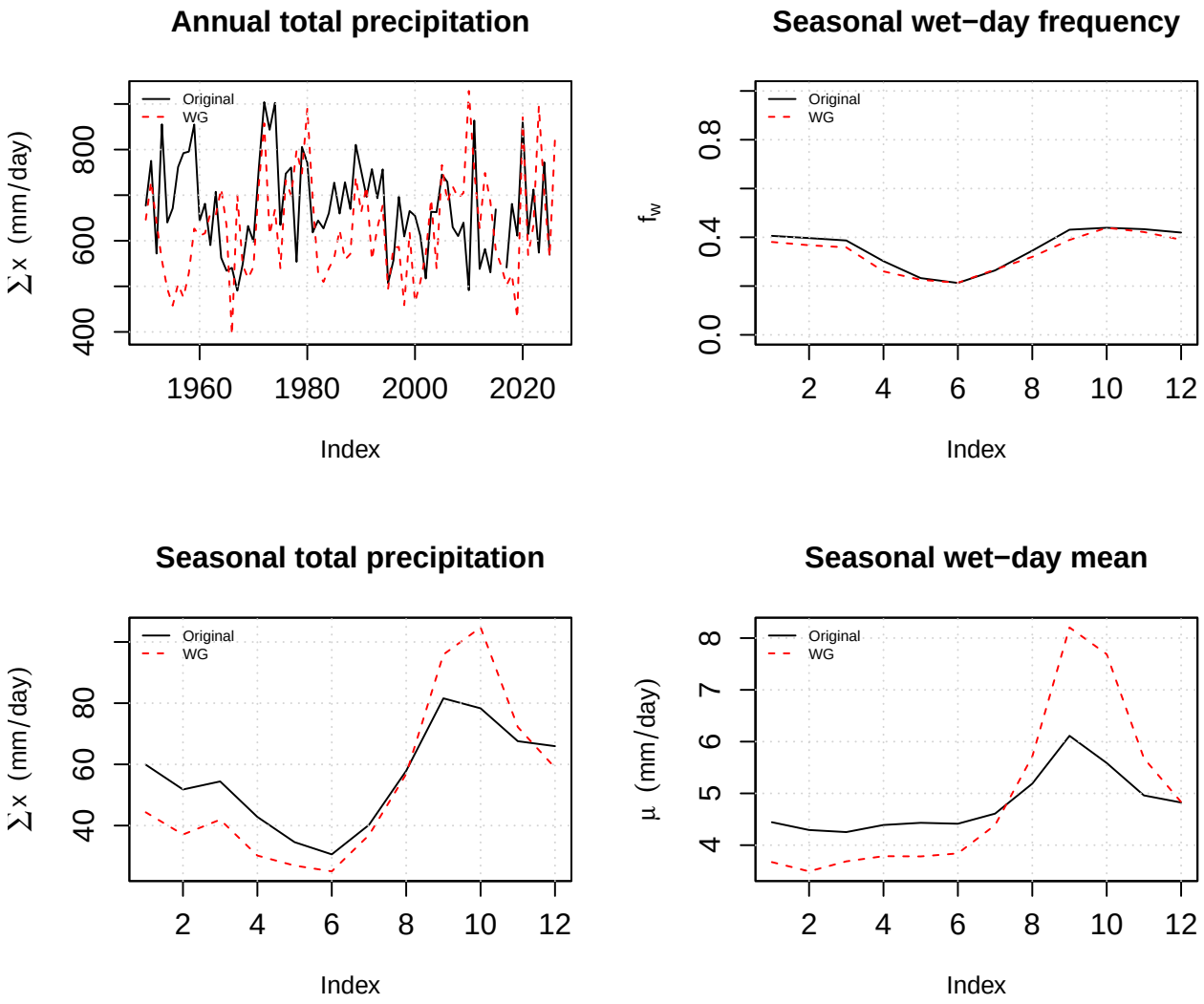
```
## 57 2006 fw= 0.3597137 n.wet= 131 = 131 mu= 5.2 = 5.2
## 58 2007 fw= 0.3243427 n.wet= 118 = 118 mu= 6.1 = 6.1
## 59 2008 fw= 0.3596742 n.wet= 131 = 131 mu= 5.3 = 5.3
## 60 2009 fw= 0.342015 n.wet= 125 = 125 mu= 5.6 = 5.6
## 61 2010 fw= 0.4271346 n.wet= 156 = 156 mu= 6 = 6
## 62 2011 fw= 0.3505673 n.wet= 128 = 128 mu= 5.9 = 5.9
## 63 2012 fw= 0.3428467 n.wet= 125 = 125 mu= 5 = 5
## 64 2013 fw= 0.4031276 n.wet= 147 = 147 mu= 5.1 = 5.1
## 65 2014 fw= 0.4162549 n.wet= 152 = 152 mu= 4.5 = 4.5
## 66 2015 fw= 0.3066857 n.wet= 112 = 112 mu= 5.2 = 5.2
## 67 2016 fw= 0.3534865 n.wet= 129 = 129 mu= 4.2 = 4.2
## 68 2017 fw= 0.2859272 n.wet= 104 = 104 mu= 4.8 = 4.8
## 69 2018 fw= 0.3113223 n.wet= 114 = 114 mu= 4.6 = 4.6
## 70 2019 fw= 0.3152379 n.wet= 115 = 115 mu= 3.7 = 3.7
## 71 2020 fw= 0.4359715 n.wet= 159 = 159 mu= 5.5 = 5.5
## 72 2021 fw= 0.3766555 n.wet= 138 = 138 mu= 4.1 = 4.1
## 73 2022 fw= 0.3958794 n.wet= 145 = 145 mu= 4.4 = 4.4
## 74 2023 fw= 0.421032 n.wet= 154 = 154 mu= 5.8 = 5.8
## 75 2024 fw= 0.3855611 n.wet= 141 = 141 mu= 5 = 5
## 76 2025 fw= 0.3669445 n.wet= 134 = 134 mu= 4.2 = 4.2
## 77 2026 fw= 0.4536252 n.wet= 166 = 166 mu= 5 = 5
## [1] "Sort precipitation magnitudes"
## [1] "9888 observed wet days and 9198 simulated wet days"
## [1] "Obs:"
##     Min.    1st Qu. Median  Mean    3rd Qu. Max.    NA's
## Jan       0     0.1     0.5   1.935     2.2    42.1    4
## Feb       0     0.1     0.5   1.833     2.1    31.1   NA
## Mar       0     0.1     0.5   1.778     2.1    37.4    3
## Apr       0     0.0     0.2   1.447     1.5    39.7    2
## May       0     0.0     0.1   1.130     0.8    41.9   NA
## Jun       0     0.0     0.1   1.033     0.7    39.9   NA
## Jul       0     0.0     0.1   1.315     1.1    35.3    2
## Aug       0     0.0     0.3   1.894     1.8    34.6    3
## Sep       0     0.0     0.6   2.754     3.0    68.5   NA
## Oct       0     0.0     0.6   2.562     2.9    46.0    3
## Nov       0     0.1     0.7   2.284     2.6    40.9    2
## Dec       0     0.1     0.6   2.155     2.5    27.7   NA
## [1] "WG:"
##     Min. 1st Qu. Median   Mean 3rd Qu. Max. NA's
## Jan    0       0      0 1.4300     1.9 27.9   NA
## Feb    0       0      0 1.3120     1.8 20.2   NA
## Mar    0       0      0 1.3520     1.8 36.2   NA
## Apr    0       0      0 1.0060     1.0 23.1   NA
## May    0       0      0 0.8681     0.0 32.6   NA
## Jun    0       0      0 0.8343     0.0 23.6   NA
## Jul    0       0      0 1.1890     1.2 39.3   NA
## Aug    0       0      0 1.8330     2.1 41.5   NA
## Sep    0       0      0 3.1960     4.8 45.3   NA
## Oct    0       0      0 3.3780     5.2 39.6   NA
## Nov    0       0      0 2.4060     3.4 35.7   NA
## Dec    0       0      0 1.9000     2.7 38.4   NA
```


JAN MAYEN wet−day amounts
WG amount (mm/day)
0
20
40
60
0
10
20
30
40
50
60
70
Observed amount (mm/day)


Dry spell durations
WG
2
6
10
14
2
4
6
8
10
12
14
obs


Number of annual wet days
days
20
60
100
160
Original
WG
1960
1980
2000
2020


wet spell durations
WG
0
20
40
0
10
20
30
40
50
obs



One observation in these tests is that the default μ-smudging factor is not appropriate for all sites and it sometimes needs to to be calibrated for the local case - which will involve testing with e.g `test.WG.fwmu.day.precip(y)`.

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