Test report

SWAP
version
2.0.9d

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Content

1   Introduction

This document describes test-results of simulations with the SWAP model.

Of each case the following is reported:
1. a short description;
2. whether simulation was successfully completed
3. mass balance of water (and when relevant of solutes), including an average value for a quick interpretation of results (e.g. average leaching at 1m)

2 Hupsel

2.1 Standard

Short description of case:
Hupsel simulation with salt

Simulation successfully completed
Y

Water and salt balance
For the simulation period of 1 year:

```
Period           :  1/01/1980 until  31/12/1980
Depth soil profile :  200.00 cm


            Water storage          Solute storage
Final   :        71.63 cm      0.4605E+03 mg/cm2
Initial :        72.07 cm      0.0000E+00 mg/cm2
              ============      =================
Change           -0.44 cm      0.4605E+03 mg/cm2


Water balance components (cm)

In                            Out
========================      ============================
Rain           :    66.01     Interception    :     4.52
Irrigation     :     0.50     Runoff          :     0.00
Bottom flux    :     0.00     Transpiration   :    26.60
                              Soil evaporation :   14.43
                              Crack flux      :     0.00
                              Drainage level 1 :   21.40
========================      ============================
Sum            :    66.51     Sum             :    66.95


Solute balance components (mg/cm2)

In                            Out
========================      ============================
Rain        :  0.0000E+00     Decomposition :  0.0000E+00
Irrigation  :  0.5000E+03     Root uptake   :  0.0000E+00
Bottom flux :  0.0000E+00     Cracks        :  0.0000E+00
                              Drainage      :  0.3954E+02
========================      ============================
Sum         :  0.5000E+03     Sum           :  0.3954E+02
```

2.2 Hysterese

Short description of case:
Hupsel simulation with hystereses

Simulation successfully completed
Y

Water balance
For the simulation period of 1 year:

```
 Period           :  1/01/1980 until  31/12/1980
 Depth soil profile :  200.00 cm

            Water storage          Solute storage
 Final   :        70.02 cm        0.4532E+03 mg/cm2
 Initial :        72.07 cm        0.0000E+00 mg/cm2
            =============        =================
 Change           -2.06 cm        0.4532E+03 mg/cm2


 Water balance components (cm)

 In                          Out
 =======================     ============================
 Rain          :    66.01    Interception    :     4.52
 Irrigation    :     0.50    Runoff          :     0.00
 Bottom flux   :     0.00    Transpiration   :    26.55
                             Soil evaporation :   14.43
                             Crack flux      :     0.00
                             Drainage level 1 :   23.06
 =======================     ============================
 Sum           :    66.51    Sum             :    68.57


 Solute balance components (mg/cm2)

 In                          Out
 =======================     ============================
 Rain        :  0.0000E+00   Decomposition :  0.0000E+00
 Irrigation  :  0.5000E+03   Root uptake   :  0.0000E+00
 Bottom flux :  0.0000E+00   Cracks        :  0.0000E+00
                             Drainage      :  0.4683E+02
 =======================     ============================
 Sum         :  0.5000E+03   Sum           :  0.4683E+02
```

3   Related to PEARL

3.1   DrainageBasic
Short description of case:

Simulation successfully completed
Y

Water balance

```
VALK-M drainage

  *  Generated by:  Swap version 2.09d  (September 2, 2002)
  *  Project Name:  drainage
  *  Generated on:  02-Sep-2002 12:24:58
  *
  * Yearly output on water balance in top 1 metre of profile:
  *
  * RAIN = Rainfall
  * IRRIG = Irrigation
  * EVICPR = Evaporation by interception of rainfall
  * EVICIR = Evaporation by interception of irrigation
  * SEVP = Soil Evaporation
  * PTRA = Plant transpiration
  * PCBT = percolation  at bottom
  * RUNO = Run-off
  * STOR = Storage
  * DRA1 = Lateral drainage for level 1
  * DRA2 = Lateral drainage for level 2
  * DRA3 = Lateral drainage for level 3
  *-------------------------------------------------------------------------------------------
  * Year   RAIN   IRRI   STOR  EVICPR  EVICIR    SEVP   PTRA   RUNO    PRBT   DRA-1   DRA-2   DRA-3
  *-------------------------------------------------------------------------------------------
   1993    898.    0.    82.    13.     0.     296.   200.    0.     228.     1.     79.     0.
   1994    261.    0.   -37.     0.     0.      93.     1.    0.     167.     0.     37.     0.

  * Percolation average over years ....................................  197.3065  mm/year
```

3.2   FOCUS_66yr_1

Short description of case:
- location: JOKI-M
- period: 01-01-1901 t/m 31-12-1966

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*  Project Name:  Joki-m
*  Generated on:  02-Sep-2002 12:25:01
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*-------------------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
*-------------------------------------------------------------------------------------
  1901   375.    0.    38.     0.      0.     270.    0.     0.     67.     0.      0.      0.
  1902   393.    0.   -42.     0.      0.     210.   161.    0.     64.     0.      0.      0.
  1903   964.    0.   105.     0.      0.     246.   152.    0.    461.     0.      0.      0.
  1904   964.    0.     2.     0.      0.     247.   147.    0.    568.     0.      0.      0.
  1905   630.    0.   -49.     0.      0.     236.   176.    0.    267.     0.      0.      0.
  1906   558.    0.    -4.     0.      0.     219.   189.    0.    153.     0.      0.      0.
  1907   659.    0.    13.     0.      0.     275.   195.    0.    177.     0.      0.      0.
  1908   512.    0.     0.     0.      0.     191.   181.    0.    139.     0.      0.      0.
  1909   730.    0.    21.     0.      0.     243.   173.    0.    292.     0.      0.      0.
  1910   848.    0.     8.     0.      0.     217.   168.    0.    454.     0.      0.      0.
  1911   630.    0.   -38.     0.      0.     236.   176.    0.    256.     0.      0.      0.
  1912   717.    0.    62.     0.      0.     226.   183.    0.    246.     0.      0.      0.
  1913   951.    0.    19.     0.      0.     239.   171.    0.    522.     0.      0.      0.
  1914   558.    0.   -84.     0.      0.     219.   189.    0.    234.     0.      0.      0.
  1915   866.    0.    89.     0.      0.     225.   180.    0.    372.     0.      0.      0.
  1916   736.    0.   -58.     0.      0.     197.   165.    0.    432.     0.      0.      0.
  1917   745.    0.    35.     0.      0.     249.   170.    0.    291.     0.      0.      0.
  1918   412.    0.   -81.     0.      0.     193.   159.    0.    141.     0.      0.      0.
  1919   326.    0.   -32.     0.      0.     179.   149.    0.     31.     0.      0.      0.
  1920   431.    0.    22.     0.      0.     204.   168.    0.     37.     0.      0.      0.
  1921   375.    0.   -32.     0.      0.     226.   156.    0.     25.     0.      0.      0.
  1922   393.    0.    -9.     0.      0.     210.   158.    0.     35.     0.      0.      0.
  1923   964.    0.   117.     0.      0.     246.   152.    0.    449.     0.      0.      0.
  1924   964.    0.     4.     0.      0.     247.   147.    0.    566.     0.      0.      0.
  1925   630.    0.   -49.     0.      0.     236.   176.    0.    267.     0.      0.      0.
  1926   558.    0.    -4.     0.      0.     219.   189.    0.    153.     0.      0.      0.
  1927   511.    0.    12.     0.      0.     191.   180.    0.    128.     0.      0.      0.
  1928   730.    0.    21.     0.      0.     243.   174.    0.    292.     0.      0.      0.
  1929   848.    0.     8.     0.      0.     217.   168.    0.    454.     0.      0.      0.
  1930   630.    0.   -38.     0.      0.     236.   176.    0.    256.     0.      0.      0.
  1931   716.    0.    62.     0.      0.     226.   182.    0.    245.     0.      0.      0.
  1932   951.    0.    19.     0.      0.     239.   172.    0.    521.     0.      0.      0.
  1933   558.    0.   -84.     0.      0.     219.   189.    0.    234.     0.      0.      0.
  1934   866.    0.    89.     0.      0.     225.   180.    0.    372.     0.      0.      0.
  1935   736.    0.   -58.     0.      0.     195.   164.    0.    434.     0.      0.      0.
  1936   745.    0.    34.     0.      0.     249.   170.    0.    292.     0.      0.      0.
  1937   412.    0.   -81.     0.      0.     193.   159.    0.    141.     0.      0.      0.
  1938   326.    0.   -32.     0.      0.     179.   149.    0.     31.     0.      0.      0.
  1939   431.    0.    23.     0.      0.     201.   168.    0.     38.     0.      0.      0.
  1940   382.    0.   -33.     0.      0.     227.   158.    0.     30.     0.      0.      0.
  1941   393.    0.    -9.     0.      0.     210.   158.    0.     35.     0.      0.      0.
  1942   964.    0.   117.     0.      0.     246.   152.    0.    449.     0.      0.      0.
  1943   964.    0.     4.     0.      0.     246.   147.    0.    568.     0.      0.      0.
  1944   630.    0.   -49.     0.      0.     236.   177.    0.    267.     0.      0.      0.
  1945   558.    0.    -4.     0.      0.     219.   189.    0.    153.     0.      0.      0.
  1946   659.    0.    13.     0.      0.     275.   195.    0.    177.     0.      0.      0.
  1947   730.    0.    25.     0.      0.     243.   173.    0.    288.     0.      0.      0.
  1948   848.    0.     4.     0.      0.     218.   169.    0.    457.     0.      0.      0.
  1949   630.    0.   -38.     0.      0.     236.   176.    0.    256.     0.      0.      0.
  1950   716.    0.    62.     0.      0.     226.   182.    0.    245.     0.      0.      0.
  1951   951.    0.    19.     0.      0.     239.   171.    0.    522.     0.      0.      0.
  1952   558.    0.   -84.     0.      0.     221.   190.    0.    232.     0.      0.      0.
  1953   866.    0.    89.     0.      0.     225.   180.    0.    372.     0.      0.      0.
  1954   736.    0.   -58.     0.      0.     195.   164.    0.    434.     0.      0.      0.
  1955   745.    0.    35.     0.      0.     249.   170.    0.    292.     0.      0.      0.
  1956   412.    0.   -81.     0.      0.     195.   160.    0.    140.     0.      0.      0.
  1957   326.    0.   -33.     0.      0.     179.   149.    0.     31.     0.      0.      0.
  1958   431.    0.    23.     0.      0.     201.   168.    0.     38.     0.      0.      0.
  1959   375.    0.   -33.     0.      0.     226.   156.    0.     26.     0.      0.      0.
  1960   395.    0.   -10.     0.      0.     211.   158.    0.     36.     0.      0.      0.
  1961   964.    0.   117.     0.      0.     246.   152.    0.    449.     0.      0.      0.
  1962   964.    0.     4.     0.      0.     246.   147.    0.    568.     0.      0.      0.
  1963   630.    0.   -49.     0.      0.     236.   176.    0.    267.     0.      0.      0.
  1964   558.    0.    -4.     0.      0.     221.   190.    0.    151.     0.      0.      0.
  1965   659.    0.    13.     0.      0.     275.   195.    0.    177.     0.      0.      0.
  1966   511.    0.     0.     0.      0.     191.   181.    0.    139.     0.      0.      0.

  * Percolation average over years ....................................  256.5851  mm/year
```

3.3   FOCUS_ 66yr_2

Short description of case:
- location: OKEH-M
- period: 01-01-1901 t/m 31-12-1966

Simulation successfully completed
Y

Water balance

```
 *  Generated by:  Swap version 2.09d  (September 2, 2002)
 *   Project Name:  Okeh-m
 *   Generated on:  02-Sep-2002 12:26:59
 *
 * Yearly output on water balance in top 1 metre of profile:
 *
 * RAIN = Rainfall
 * IRRIG = Irrigation
 * EVICPR = Evaporation by interception of rainfall
 * EVICIR = Evaporation by interception of irrigation
 * SEVP = Soil Evaporation
 * PTRA = Plant transpiration
 * PCBT = percolation  at bottom
 * RUNO = Run-off
 * STOR = Storage
 * DRA1 = Lateral drainage for level 1
 * DRA2 = Lateral drainage for level 2
 * DRA3 = Lateral drainage for level 3
 *-----------------------------------------------------------------------------------------
 * Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
 *-----------------------------------------------------------------------------------------
   1901   938.    0.    185.    0.      0.     227.   371.    0.    155.    0.      0.      0.
   1902  1016.    0.     31.    0.      0.     222.   377.    0.    388.    0.      0.      0.
   1903  1113.    0.    -40.    0.      0.     201.   349.    0.    611.    0.      0.      0.
   1904  1132.    0.     -4.    0.      0.     231.   387.    0.    521.    0.      0.      0.
   1905   972.    0.     53.    0.      0.     233.   371.    0.    310.    0.      0.      0.
   1906  1158.    0.      2.    0.      0.     254.   400.    0.    505.    0.      0.      0.
   1907  1083.    0.    -66.    0.      0.     243.   391.    0.    515.    0.      0.      0.
   1908   673.    0.     18.    0.      0.     237.   283.    0.    134.    0.      0.      0.
   1909  1056.    0.     15.    0.      0.     254.   382.    0.    406.    0.      0.      0.
   1910   899.    0.     23.    0.      0.     234.   372.    0.    270.    0.      0.      0.
   1911  1097.    0.     -9.    0.      0.     256.   394.    0.    456.    0.      0.      0.
   1912  1104.    0.    -33.    0.      0.     263.   416.    0.    458.    0.      0.      0.
   1913  1238.    0.     26.    0.      0.     246.   384.    0.    584.    0.      0.      0.
   1914  1030.    0.    -24.    0.      0.     294.   457.    0.    300.    0.      0.      0.
   1915   906.    0.    -42.    0.      0.     268.   424.    0.    257.    0.      0.      0.
   1916  1161.    0.     42.    0.      0.     242.   388.    0.    491.    0.      0.      0.
   1917   902.    0.    -11.    0.      0.     248.   392.    0.    271.    0.      0.      0.
   1918  1092.    0.     38.    0.      0.     244.   373.    0.    436.    0.      0.      0.
   1919  1157.    0.    -44.    0.      0.     250.   382.    0.    572.    0.      0.      0.
   1920  1030.    0.     -5.    0.      0.     267.   400.    0.    365.    0.      0.      0.
   1921   938.    0.     30.    0.      0.     227.   379.    0.    303.    0.      0.      0.
   1922  1016.    0.     31.    0.      0.     222.   377.    0.    386.    0.      0.      0.
   1923  1113.    0.    -40.    0.      0.     201.   349.    0.    605.    0.      0.      0.
   1924  1132.    0.     -4.    0.      0.     231.   387.    0.    521.    0.      0.      0.
   1925   972.    0.     53.    0.      0.     233.   371.    0.    310.    0.      0.      0.
   1926  1158.    0.      2.    0.      0.     254.   400.    0.    505.    0.      0.      0.
   1927   670.    0.    -48.    0.      0.     235.   284.    0.    199.    0.      0.      0.
   1928  1056.    0.     15.    0.      0.     255.   383.    0.    404.    0.      0.      0.
   1929   899.    0.     23.    0.      0.     234.   372.    0.    270.    0.      0.      0.
   1930  1097.    0.     -9.    0.      0.     256.   394.    0.    456.    0.      0.      0.
   1931  1104.    0.    -33.    0.      0.     263.   416.    0.    458.    0.      0.      0.
   1932  1251.    0.     26.    0.      0.     247.   385.    0.    595.    0.      0.      0.
   1933  1030.    0.    -24.    0.      0.     294.   457.    0.    300.    0.      0.      0.
   1934   906.    0.    -42.    0.      0.     268.   424.    0.    257.    0.      0.      0.
   1935  1161.    0.     42.    0.      0.     242.   387.    0.    492.    0.      0.      0.
   1936   902.    0.    -11.    0.      0.     247.   391.    0.    272.    0.      0.      0.
   1937  1092.    0.     38.    0.      0.     244.   373.    0.    437.    0.      0.      0.
   1938  1157.    0.    -44.    0.      0.     250.   382.    0.    572.    0.      0.      0.
   1939  1029.    0.     -5.    0.      0.     266.   400.    0.    365.    0.      0.      0.
   1940   945.    0.     30.    0.      0.     227.   379.    0.    309.    0.      0.      0.
   1941  1016.    0.     31.    0.      0.     222.   377.    0.    386.    0.      0.      0.
   1942  1113.    0.    -40.    0.      0.     201.   349.    0.    605.    0.      0.      0.
   1943  1132.    0.     -4.    0.      0.     230.   387.    0.    521.    0.      0.      0.
   1944   972.    0.     53.    0.      0.     234.   372.    0.    309.    0.      0.      0.
   1945  1158.    0.      2.    0.      0.     254.   400.    0.    505.    0.      0.      0.
   1946  1083.    0.    -66.    0.      0.     243.   391.    0.    515.    0.      0.      0.
   1947  1056.    0.     33.    0.      0.     254.   382.    0.    387.    0.      0.      0.
   1948   899.    0.     23.    0.      0.     234.   372.    0.    270.    0.      0.      0.
   1949  1097.    0.     -9.    0.      0.     256.   394.    0.    457.    0.      0.      0.
   1950  1104.    0.    -33.    0.      0.     263.   416.    0.    458.    0.      0.      0.
   1951  1238.    0.     26.    0.      0.     246.   384.    0.    584.    0.      0.      0.
   1952  1030.    0.    -24.    0.      0.     294.   457.    0.    300.    0.      0.      0.
   1953   906.    0.    -42.    0.      0.     268.   424.    0.    257.    0.      0.      0.
   1954  1161.    0.     42.    0.      0.     242.   387.    0.    492.    0.      0.      0.
   1955   902.    0.    -11.    0.      0.     248.   392.    0.    271.    0.      0.      0.
   1956  1098.    0.     38.    0.      0.     245.   373.    0.    441.    0.      0.      0.
   1957  1157.    0.    -44.    0.      0.     250.   382.    0.    572.    0.      0.      0.
   1958  1029.    0.     -5.    0.      0.     266.   400.    0.    365.    0.      0.      0.
   1959   938.    0.     30.    0.      0.     227.   379.    0.    303.    0.      0.      0.
   1960  1035.    0.     31.    0.      0.     223.   376.    0.    403.    0.      0.      0.
   1961  1113.    0.    -40.    0.      0.     201.   349.    0.    605.    0.      0.      0.
   1962  1132.    0.     -4.    0.      0.     230.   387.    0.    521.    0.      0.      0.
   1963   972.    0.     53.    0.      0.     233.   371.    0.    310.    0.      0.      0.
   1964  1163.    0.      2.    0.      0.     255.   399.    0.    508.    0.      0.      0.
   1965  1083.    0.    -66.    0.      0.     243.   391.    0.    515.    0.      0.      0.
   1966   670.    0.     18.    0.      0.     235.   283.    0.    134.    0.      0.      0.

   * Percolation average over years ..................................  409.3716  mm/year
```

3.4   FOCUS_ 66yr_3

Short description of case:
-   location: PORT-M
-   period: 01-01-1901 t/m 31-12-1966

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*   Project Name:  Port-m
*  Generated on:   02-Sep-2002 12:29:47
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN  = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*-------------------------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
*-------------------------------------------------------------------------------------------
  1901   1123.    0.    44.     0.      0.    274.   325.    23.   457.     0.      0.      0.
  1902    952.    0.    13.     0.      0.    191.   256.    22.   470.     0.      0.      0.
  1903   1073.    0.   -77.     0.      0.    235.   283.    33.   599.     0.      0.      0.
  1904    661.    0.    -4.     0.      0.    195.   319.     0.   150.     0.      0.      0.
  1905    864.    0.    38.     0.      0.    194.   293.     0.   339.     0.      0.      0.
  1906    923.    0.     6.     0.      0.    198.   315.     0.   404.     0.      0.      0.
  1907    924.    0.   -45.     0.      0.    179.   259.     6.   526.     0.      0.      0.
  1908   1176.    0.    75.     0.      0.    151.   221.    35.   694.     0.      0.      0.
  1909   1563.    0.   -23.     0.      0.    228.   313.   198.   844.     0.      0.      0.
  1910   1400.    0.    51.     0.      0.    199.   281.    96.   771.     0.      0.      0.
  1911   1404.    0.   -20.     0.      0.    190.   299.   125.   814.     0.      0.      0.
  1912   1018.    0.   -57.     0.      0.    262.   343.     2.   467.     0.      0.      0.
  1913   1110.    0.    78.     0.      0.    167.   303.    39.   522.     0.      0.      0.
  1914   1068.    0.   -46.     0.      0.    203.   272.     3.   639.     0.      0.      0.
  1915   1131.    0.   -29.     0.      0.    257.   312.     0.   592.     0.      0.      0.
  1916   1508.    0.    51.     0.      0.    208.   327.   108.   814.     0.      0.      0.
  1917   1235.    0.   -21.     0.      0.    194.   285.    54.   723.     0.      0.      0.
  1918   1301.    0.    -1.     0.      0.    194.   325.    33.   749.     0.      0.      0.
  1919   1531.    0.    36.     0.      0.    230.   301.    56.   908.     0.      0.      0.
  1920   1031.    0.  -113.     0.      0.    254.   317.    48.   525.     0.      0.      0.
  1921   1123.    0.    89.     0.      0.    272.   321.    22.   419.     0.      0.      0.
  1922    952.    0.    13.     0.      0.    191.   256.    22.   470.     0.      0.      0.
  1923   1073.    0.   -77.     0.      0.    235.   283.    33.   599.     0.      0.      0.
  1924    661.    0.    -4.     0.      0.    195.   319.     0.   150.     0.      0.      0.
  1925    864.    0.    38.     0.      0.    194.   293.     0.   339.     0.      0.      0.
  1926    923.    0.     6.     0.      0.    198.   315.     0.   404.     0.      0.      0.
  1927   1176.    0.    30.     0.      0.    153.   222.    35.   736.     0.      0.      0.
  1928   1563.    0.   -23.     0.      0.    227.   315.   198.   844.     0.      0.      0.
  1929   1400.    0.    51.     0.      0.    199.   281.    96.   771.     0.      0.      0.
  1930   1404.    0.   -20.     0.      0.    190.   299.   125.   814.     0.      0.      0.
  1931   1018.    0.   -57.     0.      0.    263.   342.     2.   468.     0.      0.      0.
  1932   1127.    0.    78.     0.      0.    167.   304.    39.   535.     0.      0.      0.
  1933   1068.    0.   -46.     0.      0.    203.   272.     3.   639.     0.      0.      0.
  1934   1131.    0.   -29.     0.      0.    257.   312.     0.   592.     0.      0.      0.
  1935   1507.    0.    51.     0.      0.    208.   325.   109.   814.     0.      0.      0.
  1936   1242.    0.   -21.     0.      0.    194.   286.    54.   730.     0.      0.      0.
  1937   1301.    0.    -1.     0.      0.    194.   325.    33.   749.     0.      0.      0.
  1938   1531.    0.    36.     0.      0.    230.   301.    56.   908.     0.      0.      0.
  1939   1031.    0.  -113.     0.      0.    255.   315.    48.   526.     0.      0.      0.
  1940   1141.    0.    89.     0.      0.    272.   323.    22.   434.     0.      0.      0.
  1941    952.    0.    13.     0.      0.    191.   256.    22.   470.     0.      0.      0.
  1942   1073.    0.   -77.     0.      0.    235.   283.    33.   599.     0.      0.      0.
  1943    661.    0.    -4.     0.      0.    196.   318.     0.   151.     0.      0.      0.
  1944    865.    0.    38.     0.      0.    194.   294.     0.   339.     0.      0.      0.
  1945    923.    0.     6.     0.      0.    198.   315.     0.   404.     0.      0.      0.
  1946    924.    0.   -45.     0.      0.    179.   259.     6.   526.     0.      0.      0.
  1947   1563.    0.    52.     0.      0.    228.   313.   152.   815.     0.      0.      0.
  1948   1417.    0.    51.     0.      0.    199.   281.   103.   782.     0.      0.      0.
  1949   1404.    0.   -20.     0.      0.    190.   299.   125.   814.     0.      0.      0.
  1950   1018.    0.   -57.     0.      0.    263.   342.     2.   468.     0.      0.      0.
  1951   1110.    0.    78.     0.      0.    167.   303.    39.   522.     0.      0.      0.
  1952   1083.    0.   -46.     0.      0.    203.   274.     3.   652.     0.      0.      0.
  1953   1131.    0.   -29.     0.      0.    257.   312.     0.   592.     0.      0.      0.
  1954   1507.    0.    51.     0.      0.    208.   325.   109.   814.     0.      0.      0.
  1955   1235.    0.   -21.     0.      0.    194.   285.    54.   723.     0.      0.      0.
  1956   1302.    0.    -1.     0.      0.    194.   326.    33.   749.     0.      0.      0.
  1957   1531.    0.    36.     0.      0.    230.   301.    56.   908.     0.      0.      0.
  1958   1031.    0.  -113.     0.      0.    255.   315.    48.   526.     0.      0.      0.
  1959   1123.    0.    89.     0.      0.    272.   321.    22.   419.     0.      0.      0.
  1960    952.    0.    13.     0.      0.    190.   257.    22.   469.     0.      0.      0.
  1961   1073.    0.   -77.     0.      0.    235.   283.    32.   599.     0.      0.      0.
  1962    661.    0.    -4.     0.      0.    196.   318.     0.   151.     0.      0.      0.
  1963    864.    0.    38.     0.      0.    194.   293.     0.   339.     0.      0.      0.
  1964    924.    0.     6.     0.      0.    199.   317.     0.   403.     0.      0.      0.
  1965    924.    0.   -45.     0.      0.    179.   259.     6.   526.     0.      0.      0.
  1966   1176.    0.    75.     0.      0.    151.   220.    35.   695.     0.      0.      0.

 * Percolation average over years ...................................  581.8489  mm/year
```

3.5 FOCUS_ 66yr_4

Short description of case:
- location: SEVI-M
- period: 01-01-1901 t/m 31-12-1966

Simulation successfully completed
Y

Water balance

```
 *  Generated by:  Swap version 2.09d  (September 2, 2002)
 *   Project Name:  Sevi-m
 *   Generated on:  02-Sep-2002 12:32:21
 *
 * Yearly output on water balance in top 1 metre of profile:
 *
 * RAIN = Rainfall
 * IRRIG = Irrigation
 * EVICPR = Evaporation by interception of rainfall
 * EVICIR = Evaporation by interception of irrigation
 * SEVP = Soil Evaporation
 * PTRA = Plant transpiration
 * PCBT = percolation  at bottom
 * RUNO = Run-off
 * STOR = Storage
 * DRA1 = Lateral drainage for level 1
 * DRA2 = Lateral drainage for level 2
 * DRA3 = Lateral drainage for level 3
 *-------------------------------------------------------------------------------------
 * Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1  DRA-2  DRA-3
 *-------------------------------------------------------------------------------------
  1901   808.   817.   164.    0.      0.     326.   576.    18.   541.    0.     0.     0.
  1902   434.   611.   -34.    0.      0.     236.   245.    33.   567.    0.     0.     0.
  1903   370.   929.   -17.    0.      0.     294.   321.    67.   634.    0.     0.     0.
  1904   378.   759.   -35.    0.      0.     239.   327.    47.   559.    0.     0.     0.
  1905   316.   791.    -3.    0.      0.     241.   539.     0.   331.    0.     0.     0.
  1906   277.   930.   -36.    0.      0.     264.   633.     0.   346.    0.     0.     0.
  1907   472.   735.    78.    0.      0.     269.   307.    47.   507.    0.     0.     0.
  1908   849.   816.    51.    0.      0.     274.   217.   210.   911.    0.     0.     0.
  1909   594.   939.   -35.    0.      0.     295.   362.   123.   791.    0.     0.     0.
  1910   573.   712.     7.    0.      0.     254.   229.    90.   705.    0.     0.     0.
  1911   681.   894.   -61.    0.      0.     298.   235.   198.   905.    0.     0.     0.
  1912   379.   935.     4.    0.      0.     284.   459.    53.   514.    0.     0.     0.
  1913   349.   889.    37.    0.      0.     243.   641.     0.   316.    0.     0.     0.
  1914   387.   888.   -23.    0.      0.     268.   305.    81.   644.    0.     0.     0.
  1915   578.   853.    32.    0.      0.     243.   584.   122.   451.    0.     0.     0.
  1916   590.   751.   -33.    0.      0.     291.   240.   126.   716.    0.     0.     0.
  1917   583.   841.    62.    0.      0.     283.   328.   111.   640.    0.     0.     0.
  1918   296.   858.   -92.    0.      0.     279.   323.    59.   585.    0.     0.     0.
  1919   675.   795.    52.    0.      0.     281.   519.    85.   533.    0.     0.     0.
  1920   267.   839.   -47.    0.      0.     273.   424.    16.   439.    0.     0.     0.
  1921   808.   817.    94.    0.      0.     320.   398.   122.   691.    0.     0.     0.
  1922   434.   611.   -34.    0.      0.     236.   245.    33.   567.    0.     0.     0.
  1923   370.   929.   -17.    0.      0.     294.   321.    67.   634.    0.     0.     0.
  1924   378.   759.   -35.    0.      0.     239.   327.    47.   559.    0.     0.     0.
  1925   316.   791.    -3.    0.      0.     241.   539.     0.   331.    0.     0.     0.
  1926   277.   930.   -36.    0.      0.     264.   633.     0.   346.    0.     0.     0.
  1927   849.   816.   129.    0.      0.     275.   226.   199.   835.    0.     0.     0.
  1928   594.   939.   -35.    0.      0.     294.   374.   120.   782.    0.     0.     0.
  1929   573.   712.     7.    0.      0.     254.   229.    90.   705.    0.     0.     0.
  1930   681.   894.   -61.    0.      0.     298.   235.   198.   905.    0.     0.     0.
  1931   376.   935.     4.    0.      0.     281.   520.    24.   482.    0.     0.     0.
  1932   352.   889.    37.    0.      0.     244.   641.     0.   318.    0.     0.     0.
  1933   387.   888.   -24.    0.      0.     268.   305.    81.   644.    0.     0.     0.
  1934   578.   853.    32.    0.      0.     243.   584.   122.   451.    0.     0.     0.
  1935   577.   751.   -33.    0.      0.     292.   255.   124.   690.    0.     0.     0.
  1936   583.   841.    62.    0.      0.     282.   333.   110.   637.    0.     0.     0.
  1937   296.   858.   -92.    0.      0.     279.   323.    59.   585.    0.     0.     0.
  1938   675.   795.    52.    0.      0.     281.   519.    85.   533.    0.     0.     0.
  1939   267.   839.   -46.    0.      0.     270.   420.    17.   444.    0.     0.     0.
  1940   811.   817.    93.    0.      0.     322.   406.   120.   688.    0.     0.     0.
  1941   434.   611.   -34.    0.      0.     236.   245.    33.   567.    0.     0.     0.
  1942   370.   929.   -17.    0.      0.     294.   321.    67.   634.    0.     0.     0.
  1943   378.   759.   -35.    0.      0.     240.   337.    41.   554.    0.     0.     0.
  1944   316.   791.   -16.    0.      0.     242.   575.     0.   306.    0.     0.     0.
  1945   277.   930.   -28.    0.      0.     264.   634.     0.   338.    0.     0.     0.
  1946   472.   735.    82.    0.      0.     269.   318.    44.   494.    0.     0.     0.
  1947   594.   939.    16.    0.      0.     294.   362.   123.   738.    0.     0.     0.
  1948   586.   712.     6.    0.      0.     257.   229.    91.   716.    0.     0.     0.
  1949   681.   894.   -60.    0.      0.     299.   230.   197.   909.    0.     0.     0.
  1950   376.   935.     4.    0.      0.     281.   450.    59.   517.    0.     0.     0.
  1951   349.   889.    37.    0.      0.     243.   641.     0.   316.    0.     0.     0.
  1952   387.   888.   -24.    0.      0.     265.   290.    83.   660.    0.     0.     0.
  1953   578.   853.    32.    0.      0.     244.   474.   143.   539.    0.     0.     0.
  1954   577.   751.   -33.    0.      0.     292.   251.   124.   694.    0.     0.     0.
  1955   583.   841.    62.    0.      0.     283.   328.   111.   640.    0.     0.     0.
  1956   296.   858.   -92.    0.      0.     278.   308.    62.   598.    0.     0.     0.
  1957   675.   795.    52.    0.      0.     283.   490.   123.   523.    0.     0.     0.
  1958   267.   839.   -46.    0.      0.     271.   398.    26.   458.    0.     0.     0.
  1959   808.   817.    94.    0.      0.     320.   398.   122.   692.    0.     0.     0.
  1960   434.   611.   -34.    0.      0.     235.   240.    33.   573.    0.     0.     0.
  1961   370.   929.   -17.    0.      0.     295.   306.    72.   644.    0.     0.     0.
  1962   378.   759.   -35.    0.      0.     239.   319.    49.   564.    0.     0.     0.
  1963   316.   791.    -3.    0.      0.     241.   537.     0.   332.    0.     0.     0.
  1964   279.   930.   -36.    0.      0.     265.   634.     0.   346.    0.     0.     0.
  1965   472.   735.    77.    0.      0.     269.   296.    48.   518.    0.     0.     0.
  1966   849.   816.    52.    0.      0.     275.   217.   211.   908.    0.     0.     0.

 * Percolation average over years ................................  579.3820  mm/year
```

3.6   Crop rotation

Short description of case:
- location: HAMB-M
- period: 01-01-1901 t/m 31-12-1907

Simulation successfully completed
Y

Water balance

```
 *  Generated by:  Swap version 2.09d  (September 2, 2002)
 *   Project Name:  CropRotat
 *   Generated on:  02-Sep-2002 12:37:21
 *
 * Yearly output on water balance in top 1 metre of profile:
 *
 * RAIN = Rainfall
 * IRRIG = Irrigation
 * EVICPR = Evaporation by interception of rainfall
 * EVICIR = Evaporation by interception of irrigation
 * SEVP = Soil Evaporation
 * PTRA = Plant transpiration
 * PCBT = percolation  at bottom
 * RUNO = Run-off
 * STOR = Storage
 * DRA1 = Lateral drainage for level 1
 * DRA2 = Lateral drainage for level 2
 * DRA3 = Lateral drainage for level 3
 *-------------------------------------------------------------------------------------
 * Year   RAIN    IRRI    STOR   EVICPR   EVICIR    SEVP    PTRA    RUNO    PRBT    DRA-1    DRA-2    DRA-3
 *-------------------------------------------------------------------------------------
   1901   668.     0.    -76.      0.       0.      261.    181.     0.     302.     0.       0.       0.
   1902   608.     0.    -14.      0.       0.      239.    258.     0.     126.     0.       0.       0.
   1903   821.     0.     15.      0.       0.      236.    261.     0.     309.     0.       0.       0.
   1904   774.     0.     10.      0.       0.      278.    195.     0.     291.     0.       0.       0.
   1905   999.     0.     75.      0.       0.      222.    220.     0.     482.     0.       0.       0.
   1906   997.     0.    -53.      0.       0.      249.    304.     0.     496.     0.       0.       0.
   1907   602.     0.    -37.      0.       0.      272.    195.     0.     172.     0.       0.       0.

 * Percolation average over years ....................................  311.1646  mm/year
```

3.7　Lysimeter

Short description of case:
- location: WAG-M
- period: 01-04-1980 t/m 27-11-1982

Simulation successfully completed
Y

Water balance

```
 *  Generated by:  Swap version 2.09d  (September 2, 2002)
 *  Project Name:  Lysim
 *  Generated on:  02-Sep-2002 12:37:37
 *
 * Yearly output on water balance in top 1 metre of profile:
 *
 * RAIN = Rainfall
 * IRRIG = Irrigation
 * EVICPR = Evaporation by interception of rainfall
 * EVICIR = Evaporation by interception of irrigation
 * SEVP = Soil Evaporation
 * PTRA = Plant transpiration
 * PCBT = percolation  at bottom
 * RUNO = Run-off
 * STOR = Storage
 * DRA1 = Lateral drainage for level 1
 * DRA2 = Lateral drainage for level 2
 * DRA3 = Lateral drainage for level 3
 *-------------------------------------------------------------------------------------------
 * Year   RAIN   IRRI   STOR  EVICPR  EVICIR    SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
 *-------------------------------------------------------------------------------------------
  1980   512.    0.     5.    0.      0.      171.   205.    0.    132.    0.      0.      0.
  1981   799.    0.     6.    0.      0.      214.   188.    0.    391.    0.      0.      0.
  1982   508.    0.    -50.   0.      0.      222.   229.    0.    106.    0.      0.      0.

 * Percolation average over years ....................................  209.6310  mm/year
```

3.8   Standard Scenario NL

Short description of case:
- location: DeBilt
- period: 01-01-1980 t/m 31-12-1982

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*  Project Name:  StandardNL
*  Generated on:  02-Sep-2002 12:37:52
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*------------------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1  DRA-2  DRA-3
*------------------------------------------------------------------------------------
 1980   862.    0.    49.    0.      0.      225.   238.    0.    351.    0.     0.     0.
 1981   862.    0.     0.    0.      0.      224.   238.    0.    400.    0.     0.     0.
 1982   862.    0.     0.    0.      0.      224.   238.    0.    400.    0.     0.     0.

* Percolation average over years ....................................  383.3785  mm/year
```

3.9   Focus_Piacenza groundwaterlevel as lower boundary

Short description of case:
- location: Piacenza
- period: 01-01-1901 t/m 31-12-1926

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*   Project Name:  piac_gwl
*  Generated on:  02-Sep-2002 12:37:57
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*------------------------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
*------------------------------------------------------------------------------------------
  1901   587.    0.    -1.     0.      0.    365.     0.     0.    223.     0.      0.      0.
  1902   678.    0.     1.     0.      0.    189.   217.     0.    271.     0.      0.      0.
  1903   573.    0.    -1.     0.      0.    187.   210.     0.    177.     0.      0.      0.
  1904  1026.    0.     0.     0.      0.    245.   218.     0.    563.     0.      0.      0.
  1905   975.    0.     6.     0.      0.    238.   222.     0.    510.     0.      0.      0.
  1906  1106.    0.    -2.     0.      0.    212.   207.     0.    690.     0.      0.      0.
  1907  1119.    0.    -2.     0.      0.    271.   219.     0.    631.     0.      0.      0.
  1908  1003.    0.    10.     0.      0.    270.   239.     0.    483.     0.      0.      0.
  1909   889.    0.   -11.     0.      0.    261.   202.     0.    437.     0.      0.      0.
  1910  1101.    0.     8.     0.      0.    246.   200.     0.    647.     0.      0.      0.
  1911   948.    0.     5.     0.      0.    218.   228.     0.    497.     0.      0.      0.
  1912   911.    0.   -12.     0.      0.    253.   214.     0.    455.     0.      0.      0.
  1913   606.    0.    19.     0.      0.    257.   221.     0.    109.     0.      0.      0.
  1914  1289.    0.   -19.     0.      0.    285.   222.     0.    802.     0.      0.      0.
  1915   574.    0.     2.     0.      0.    215.   231.     0.    126.     0.      0.      0.
  1916   994.    0.     2.     0.      0.    227.   207.     0.    557.     0.      0.      0.
  1917   701.    0.    20.     0.      0.    164.   209.     0.    307.     0.      0.      0.
  1918   686.    0.   -25.     0.      0.    206.   212.     0.    292.     0.      0.      0.
  1919   693.    0.     0.     0.      0.    251.   235.     0.    207.     0.      0.      0.
  1920   684.    0.    -1.     0.      0.    183.   216.     0.    286.     0.      0.      0.
  1921   587.    0.     0.     0.      0.    237.   206.     0.    144.     0.      0.      0.
  1922   678.    0.     1.     0.      0.    189.   217.     0.    271.     0.      0.      0.
  1923   573.    0.    -1.     0.      0.    187.   210.     0.    177.     0.      0.      0.
  1924  1026.    0.     0.     0.      0.    245.   218.     0.    563.     0.      0.      0.
  1925   975.    0.     6.     0.      0.    238.   222.     0.    510.     0.      0.      0.
  1926  1106.    0.    -2.     0.      0.    212.   207.     0.    690.     0.      0.      0.

* Percolation average over years ....................................   408.7000  mm/year
```

4 Related to ANIMO/STONE

4.1 Grassland - Cranendonck

Short description of case:
- location: Cranendonck
- period: 01-01-1992 t/m 31-12-1999

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*  Project Name:  crangras
*  Generated on:  02-Sep-2002 12:16:22
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*----------------------------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR    SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
*----------------------------------------------------------------------------------------------
  1992   679.    0.     8.    85.     0.     94.    395.    0.    97.     0.      0.      0.
  1993   743.    0.    46.    89.     0.     81.    371.   25.   129.     0.      0.      0.
  1994   743.    0.   -44.    92.     0.     91.    381.   20.   205.     0.      0.      0.
  1995   664.    0.   -69.    90.     0.     79.    380.   56.   128.     0.      0.      0.
  1996   587.    0.    50.    77.     0.     87.    376.    0.    -4.     0.      0.      0.
  1997   692.    0.   -24.    84.     0.    101.    418.    0.   113.     0.      0.      0.
  1998   892.    0.    72.   111.     0.     87.    330.   44.   248.     0.      0.      0.
  1999   811.    0.   -15.   100.     0.     96.    400.   30.   201.     0.      0.      0.

* Percolation average over years ....................................  139.5780  mm/year
```

Graph

GWL Cranendonk
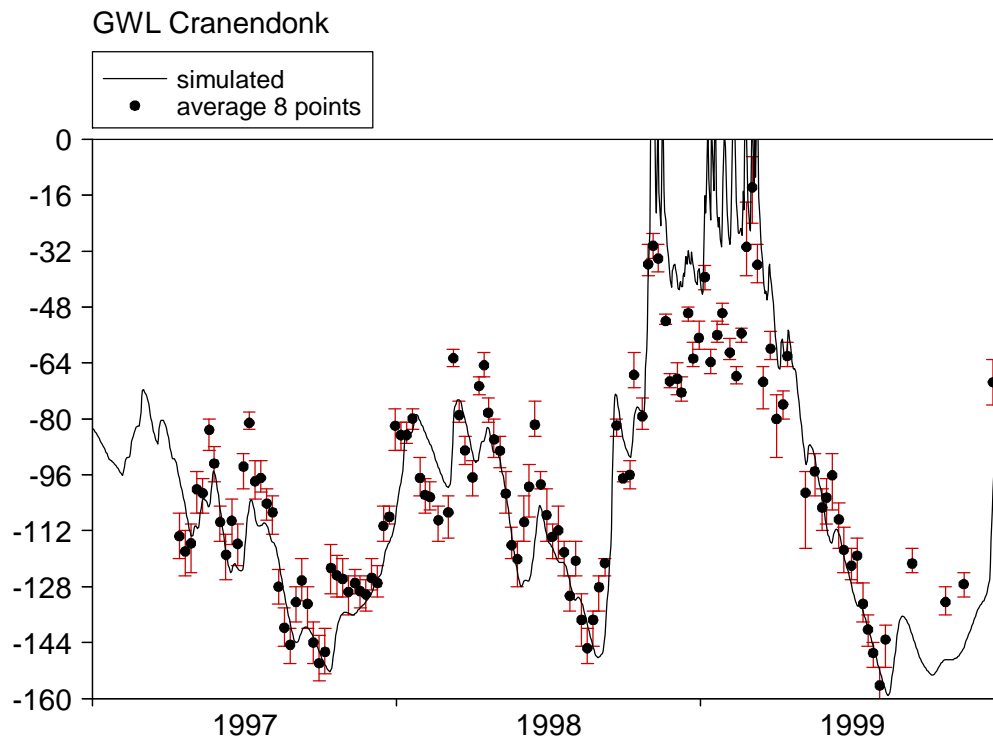
Statistics of graph

```
Number of observation ......................... =      122
Difference between average of calc and measured =     1.05
Differance between stdv of calc and measured .. =    10.48
Average of residuals .......................... =    -1.05
Standarddeviation of residual ................. =    17.18
Root mean square error (standarddeviation) .... =    17.14
Coefficient of determination .................. =     0.56
Modelling efficiency .......................... =     0.69
Coefficient of residual mass .................. =     0.01
Correlation coefficient  ...................... =     0.86
Goodness of fit ............................... =     0.31
```

4.2   Forage maize - Cranendonck

Short description of case:
- location: Cranendonck
- period: 01-01-1974 t/m 31-12-1982

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*  Project Name:  cranmais
*  Generated on:  02-Sep-2002 12:16:37
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*----------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR    SEVP   PTRA   RUNO   PRBT   DRA-1  DRA-2  DRA-3
*----------------------------------------------------------------------------
  1974   822.    0.    15.    53.     0.      160.   257.    0.    337.    0.     0.     0.
  1975   590.    0.  -111.    31.     0.      166.   323.    0.    181.    0.     0.     0.
  1976   492.    0.    24.    32.     0.      139.   312.    0.    -15.    0.     0.     0.
  1977   809.    0.    30.    37.     0.      157.   241.    0.    343.    0.     0.     0.
  1978   615.    0.     5.    36.     0.      149.   248.    0.    176.    0.     0.     0.
  1979   727.    0.     4.    36.     0.      171.   252.    0.    264.    0.     0.     0.
  1980   792.    0.   -32.    45.     0.      150.   259.   26.    345.    0.     0.     0.
  1981   811.    0.    42.    44.     0.      157.   250.    0.    318.    0.     0.     0.
  1982   645.    0.   -25.    46.     0.      162.   287.    0.    175.    0.     0.     0.

* Percolation average over years .................................... 235.9151  mm/year
```

Graph

Grondwaterstand (cm-mv) - Cranendonk SnijMais

Tijd (jaren)
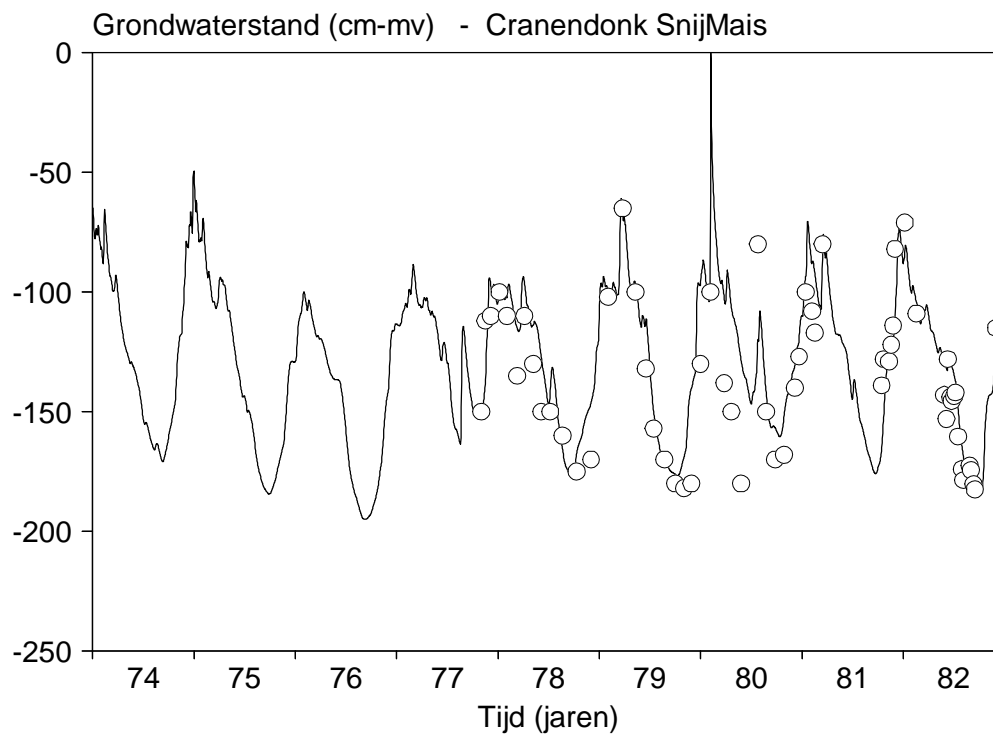
Statistics of graph

```
 Number of observation ......................... =      61
 Difference between average of calc and measured =      7.51
 Differance between stdv of calc and measured .. =     -0.90
 Average of residuals .......................... =     -7.51
 Standarddeviation of residual ................. =     17.40
 Root mean square error (standarddeviation) .... =     18.83
 Coefficient of determination .................. =      1.00
 Modelling efficiency .......................... =      0.63
 Coefficient of residual mass .................. =      0.06
 Correlation coefficient  ...................... =      0.71
 Goodness of fit ............................... =      0.37
```

4.3   Grassland - Ruurlo

Short description of case:
-   location: Ruurlo
-   period: 01-01-1980 t/m 31-12-1984

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*  Project Name:  ruurlogras
*  Generated on:  02-Sep-2002 12:16:57
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*-------------------------------------------------------------------------------
* Year   RAIN   IRRI   STOR  EVICPR  EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1   DRA-2   DRA-3
*-------------------------------------------------------------------------------
  1980   743.    0.    18.    42.     0.     96.   376.    0.    209.    3.     0.     0.
  1981   805.    0.     5.    45.     0.     94.   361.    0.    298.    4.     0.     0.
  1982   616.    0.   -41.    38.     0.     98.   421.    0.    100.    1.     0.     0.
  1983   763.    0.    -6.    27.     0.    101.   394.    0.    245.    3.     0.     0.
  1984   744.    0.    41.    31.     0.     88.   327.    0.    254.    4.     0.     0.

* Percolation average over years .................................  221.0242  mm/year
```

Graph

GWL in cm - mv   Ruurlo
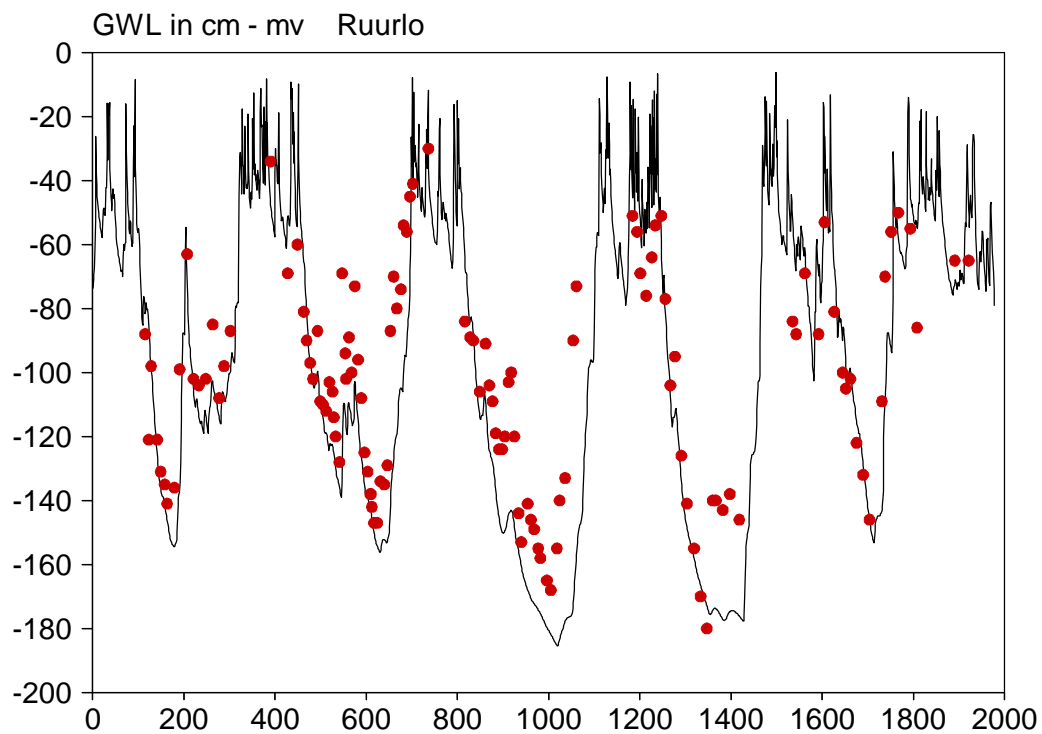
Statistics of graph

```
Number of observation ......................... =      127
Difference between average of calc and measured =    -11.54
Differance between stdv of calc and measured .. =      8.54
Average of residuals .......................... =     11.54
Standarddeviation of residual ................. =     21.37
Root mean square error (standarddeviation) .... =     24.21
Coefficient of determination .................. =      0.59
Modelling efficiency .......................... =      0.47
Coefficient of residual mass .................. =     -0.11
Correlation coefficient  ...................... =      0.74
Goodness of fit ............................... =      0.53
```

4.4   Extended Drainage

Short description of case:
- location:STONE_UC nr 6
- period: 01-01-1981 t/m 31-12-1985

Simulation successfully completed
Y

Water balance

```
*  Generated by:  Swap version 2.09d  (September 2, 2002)
*  Project Name:  Stone_uc6
*  Generated on:  02-Sep-2002 12:34:18
*
* Yearly output on water balance in top 1 metre of profile:
*
* RAIN = Rainfall
* IRRIG = Irrigation
* EVICPR = Evaporation by interception of rainfall
* EVICIR = Evaporation by interception of irrigation
* SEVP = Soil Evaporation
* PTRA = Plant transpiration
* PCBT = percolation  at bottom
* RUNO = Run-off
* STOR = Storage
* DRA1 = Lateral drainage for level 1
* DRA2 = Lateral drainage for level 2
* DRA3 = Lateral drainage for level 3
*-------------------------------------------------------------------------------
* Year  RAIN   IRRI   STOR  EVICPR EVICIR   SEVP   PTRA   RUNO   PRBT   DRA-1  DRA-2  DRA-3
*-------------------------------------------------------------------------------
  1971  599.    0.    13.    68.    0.    105.   279.    0.    134.    0.    0.    0.
  1972  740.    0.    12.    64.    0.    116.   260.    0.    273.    0.    0.    0.
  1973  793.    0.     9.    84.    0.    103.   260.    0.    304.    0.    0.    0.
  1974  824.    0.    11.    79.    0.     98.   270.    0.    328.    0.    0.    0.
  1975  695.    0.   -36.    76.    0.    102.   291.    0.    248.    0.    0.    0.
  1976  588.    0.     2.    60.    0.     90.   312.    0.    115.    0.    0.    0.
  1977  789.    0.    37.    83.    0.     91.   234.    0.    315.    0.    0.    0.
  1978  712.    0.     5.    90.    0.     95.   225.    0.    280.    0.    0.    0.
  1979  874.    0.     4.    87.    0.    104.   227.    0.    403.    0.    0.    0.
  1980  837.    0.   -16.    81.    0.     94.   221.    0.    393.    0.    0.    0.
  1981  879.    0.    -7.    81.    0.    102.   244.    3.    391.    0.    0.    0.
  1982  701.    0.     1.    76.    0.    106.   278.    0.    229.    0.    0.    0.
  1983  840.    0.   -19.    84.    0.    108.   275.    1.    346.    0.    0.    0.
  1984  822.    0.    25.    69.    0.    108.   233.    0.    345.    0.    0.    0.
  1985  866.    0.     0.    80.    0.    112.   224.    0.    405.    0.    0.    0.

* Percolation average over years ...................................  300.5675  mm/year
```