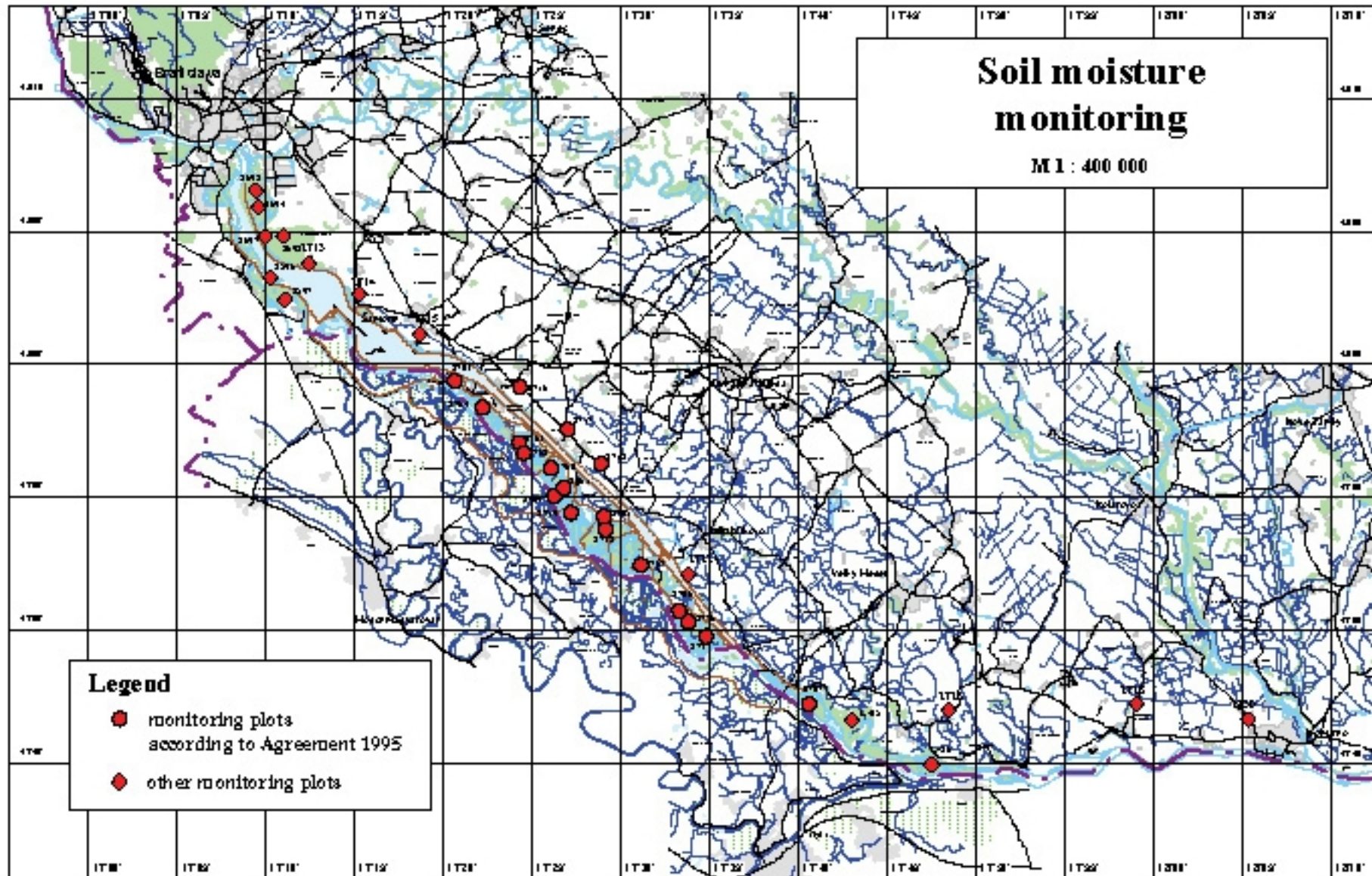


Soil moisture monitoring

Danube Monitoring Scientific Conference Publication, Slovak Section, chapter:

V.1.8. Ground water levels and soil moisture

Zoltán Hlavatý, Ľubomír Banský



Changes in soil moisture have deciding role at transfer of impact of water regime towards terrestrial biota

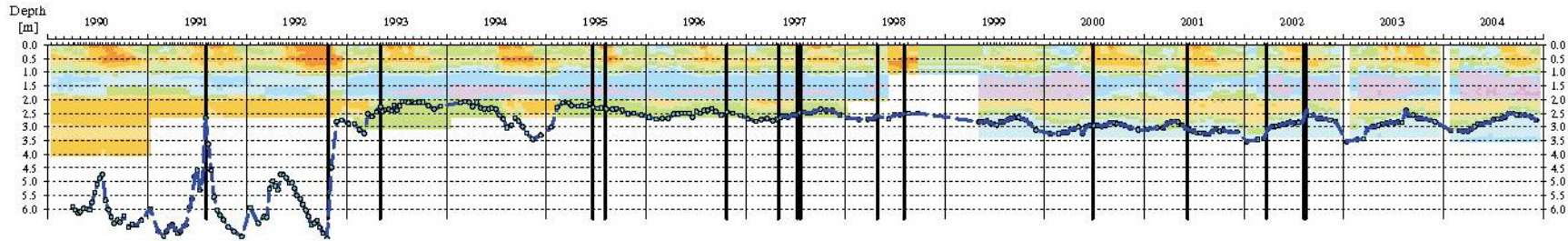
- ground water level fluctuation
- precipitation, evapotranspiration

Supposition

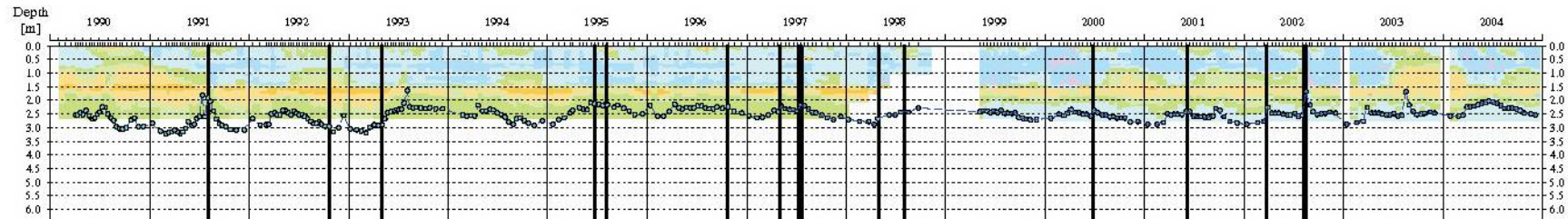
If there is a rise in the ground water level, than there is also an increase in soil moisture or occasionally the moisture may remain unchanged, while other conditions remain unchanged, but in no case a decrease of soil moisture can occur because of rising of ground water level. The same is valid vice versa.

Soil moisture monitoring

Monitoring site: 2621 - Dunajská Lužná, P-1



Monitoring site: 2626 - Horný Bar, MP-6



soil moisture (%)

- from 0 to 5
- from 5 to 10
- from 10 to 15
- from 15 to 20
- from 20 to 25
- from 25 to 30
- from 30 to 35
- from 35 to 40
- from 40 to 45
- from 45 to 50
- 50 and more

flood wave on the Danube

damming the Danube

filling up the left side river branch system

bottom weir putting into operation
artificial flooding in the left side river branch system

flood wave on the Danube

artificial flooding in the left side river branch system

flood waves on the Danube

artificial flooding in the left side river branch system

artificial flooding in the left side river branch system

artificial flooding in the left side river branch system

increased discharge in the left side river branch system

flood wave on the Danube

flood waves on the Danube

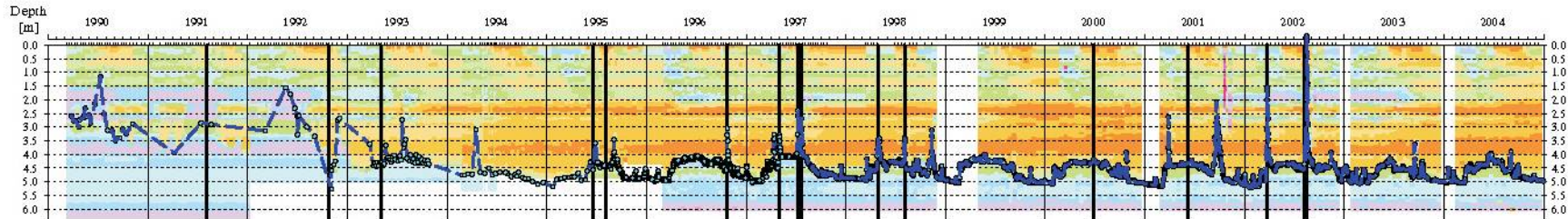
—●— ground water level observed on monitoring plots

Based on VÚPOP data

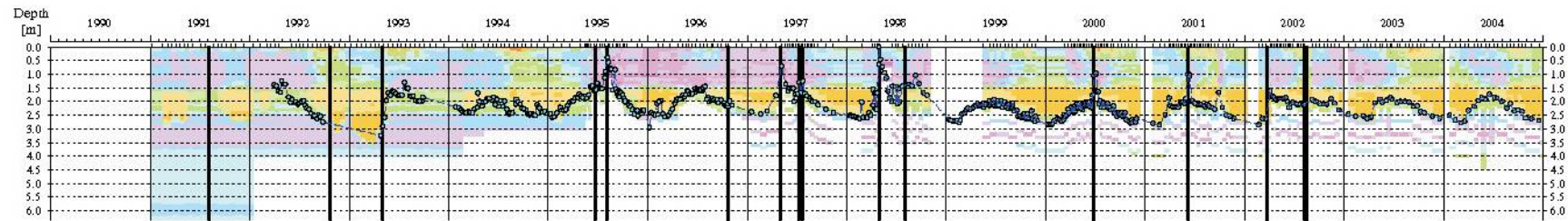


Soil moisture monitoring

Monitoring site: 2600- Dobrohošť, Dunajské kriviny, MP-1



Monitoring site: 2760 - Horný Bar - Šuňany, L-8



soil moisture (%)

- from 0 to 5
- from 5 to 10
- from 10 to 15
- from 15 to 20
- from 20 to 25
- from 25 to 30
- from 30 to 35
- from 35 to 40
- from 40 to 45
- from 45 to 50
- 50 and more

flood wave on the Danube

damming the Danube

filling up the left side river branch system

bottom weir putting into operation
artificial flooding in the left side river branch system

flood wave on the Danube

artificial flooding in the left side river branch system

flood waves on the Danube

artificial flooding in the left side river branch system

artificial flooding in the left side river branch system

artificial flooding in the left side river branch system

increased discharge in the left side river branch system

flood wave on the Danube

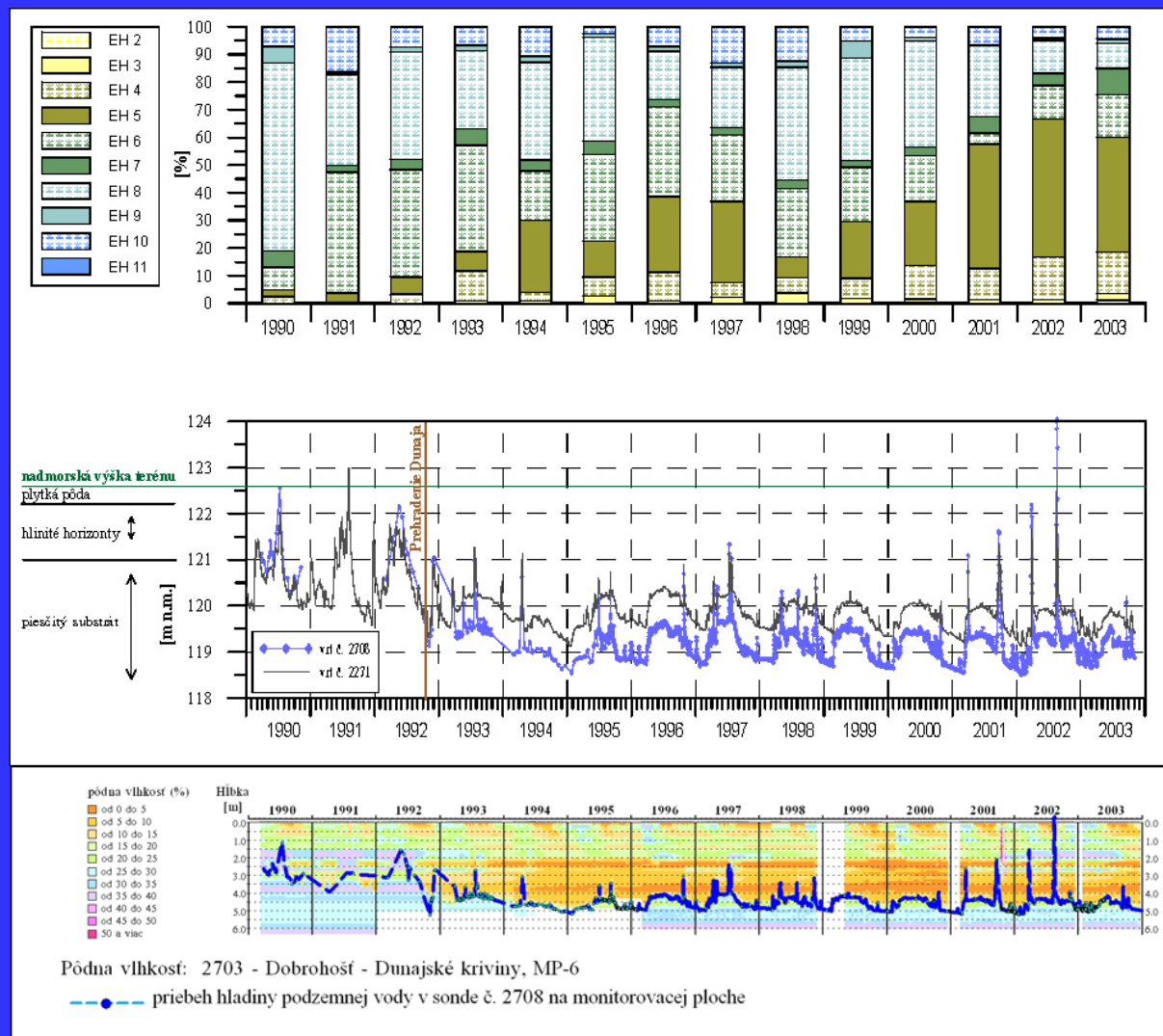
flood waves on the Danube

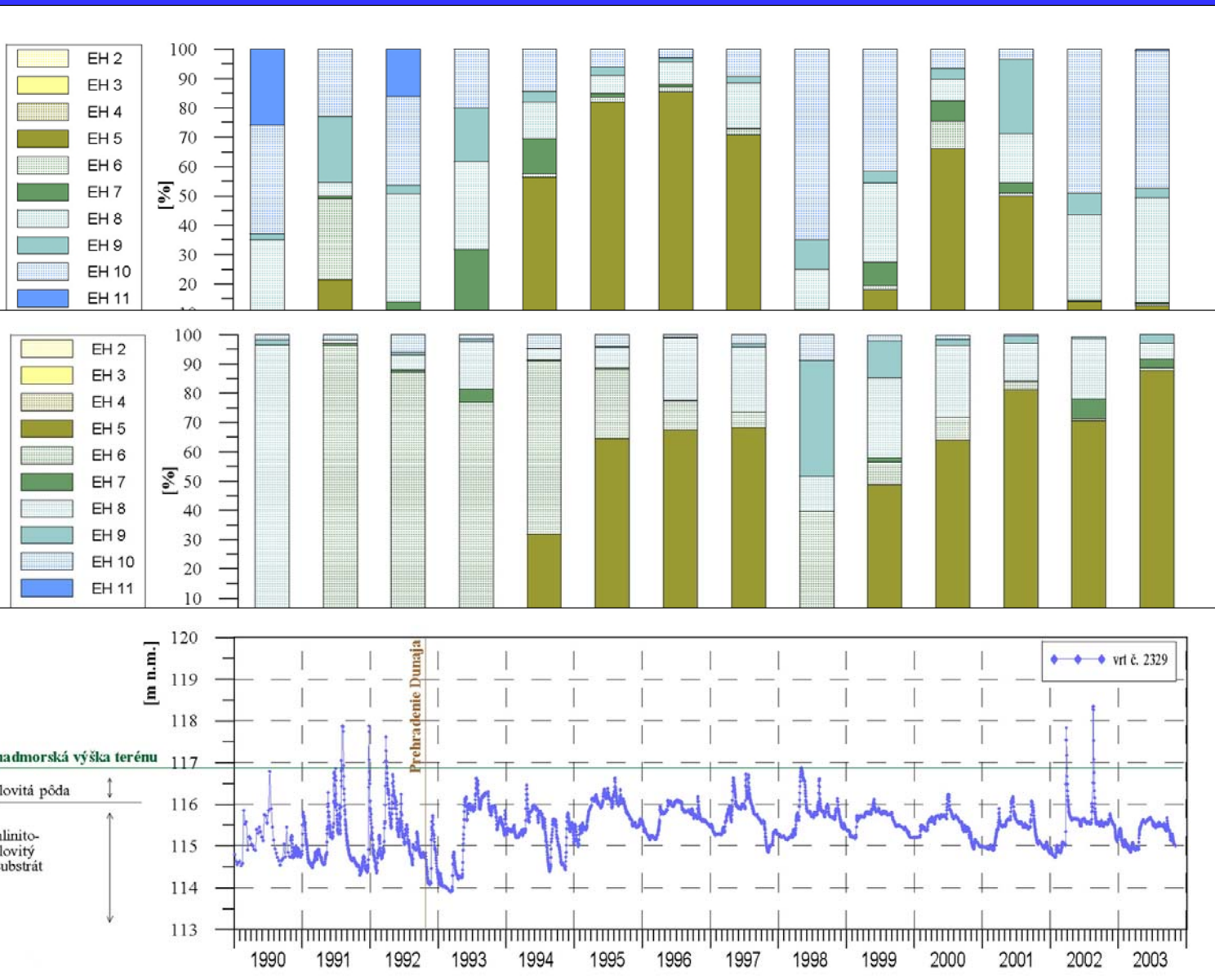
—●— ground water level observed on monitoring plots

Based on PrIF UK and NLC data



Soil moisture monitoring and biota





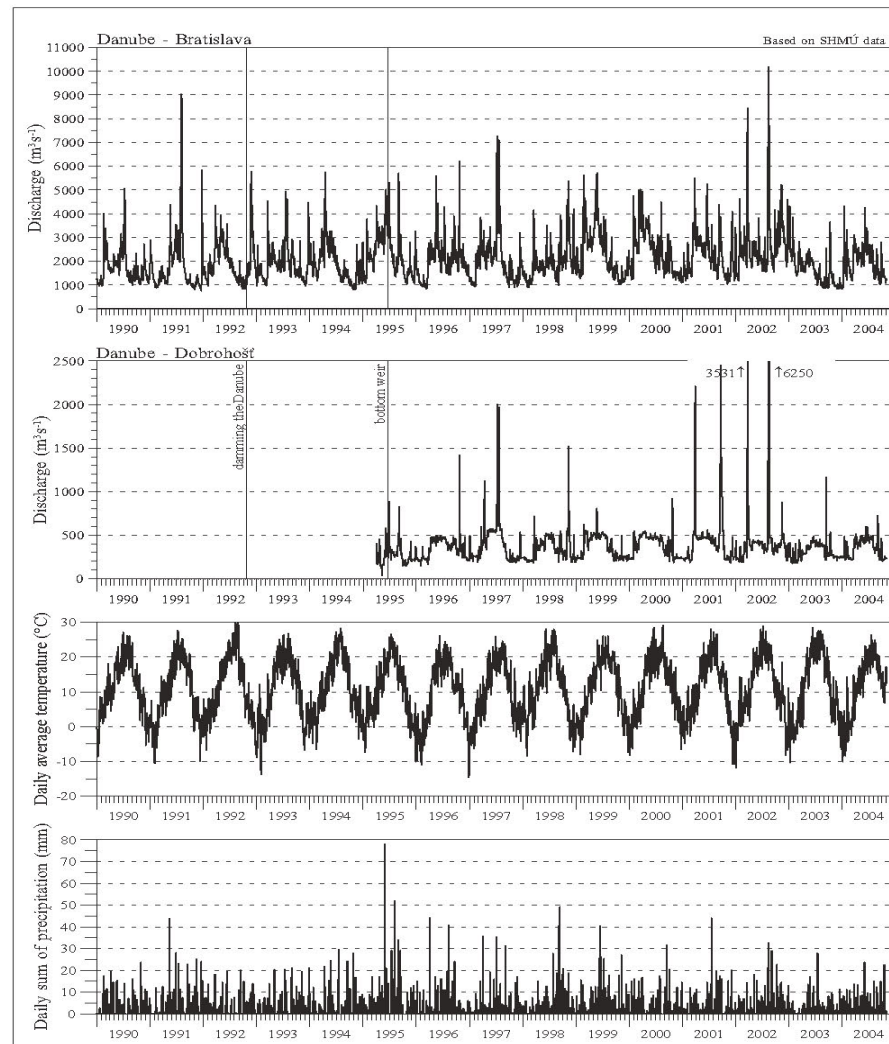


Fig. V.1.8. / 12 Discharge in the Danube (Bratislava and Dobrohošť), average temperature and precipitation (Bratislava)