Hydrol. Earth Syst. Sci. Discuss., 7, C3160–C3161, 2010
www.hydrol-earth-syst-sci-discuss.net/7/C3160/2010/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Urban hydrology in mountainous middle eastern cities" *by* T. Grodek et al.

Anonymous Referee #1

Received and published: 25 October 2010

general comments

This is a nice and well-organized manuscript dealing with (urban) runoff generation and possible groundwater recharge in two cities located in mountainous terrain. This case study is a typical example of many Mediterranean towns. The authors show that the road network typically dominates the hydrological response in the corresponding rivers and the major hydrological change between urban and natural areas. For the first time in the eastern Mediterranean, this paper provides measured hydrometeorological data to assess the impact of urbanization in mountainous limestone terrain on urban groundwater recharge. The results are important for rapidly expanding cities in areas with similar physiogeograhic characteristics.

special comments

As there is a strong link of urban runoff and corresponding pollution with the type of local sewer systems more information on the type of local sewer systems, sewage water treatment and sewage water transport in the two towns is needed. Especially the karstic aquifer is affected by surface water pollution as the filtering effect on infiltrating surface water is limited. There is some information in the text, nevertheless please insert a small paragraph in chapter 2.

Valley stations measure up to 80% more rainfall, why? Can you please give a short note on this.

technical corrections

7312 line 24 (Druck, 0–1m and accuracy 1%) what does Druck stands for? 7316 line 11 4Ms/cm or 4Ms cm-1 please be consistent througout the text and figures (e.g 7317 line 21 or 7315 line 26)

Fig. 3 I suggest deleting figure 3 as all relevant information is in the text. Brackets around mm. Fig. 4. White regression lines is not readable units in brackets Fig. 5 m3/s or m3s-1 Fig. 7 units in brackets, cms in m3s-1 Fig. 8 Rain intensity in brackets, units of EC and water level at the axis missing

Table 2 column 5 The rods have a certain length, but what is the meaning of the percentage value (e.g. Ramallah LS has 11.2 % of what?) Table 4 seasons not seasones Table 6 roads Den.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 7305, 2010.