Nat. Hazards Earth Syst. Sci. Discuss., 3, C569–C570, 2015
www.nat-hazards-earth-syst-sci-discuss.net/3/C569/2015/

Natural Hazards and Earth System Sciences
Open Access
Discussions

Interactive comment on "Assess arsenic distribution in groundwater applying GIS in capital of Punjab, Pakistan" *by* M. M. Akhtar et al.

Anonymous Referee #1

Received and published: 3 May 2015

General Comments The paper does not report any new finding in terms of methods or data; indeed it is a good synthesis regarding a dramatic problem. For this reason, in my opinion the paper should be published (after some revision, as suggested in the following paragraphs).

A better discussion about the origin of arsenic, based on a more detailed geological description and industrial activity, would improve greatly the report. Schematic geographic and geological maps of the investigated areas would help to clarify the issue. The main rivers (feeding and polluting the aquifers) should be shown. Some arrows indicating direction of groundwater flow should be shown also. In the initial part the paper is rather repetitive and could be shortened.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

There are a few points to be clarified

Page 2124 Text: Both the temperature and rainfall vary greatly from season to season with a mean temperature that ranges from 34 _C in June to 12 _C in January and an average rainfall 20 of 575 mmyear−1, which can vary from 300 to 1200mm. The evapotranspiration is about 1750mmyear−1, which is the principal reason why extensive irrigation is needed for agricultural purposes (NESPAK, 1993 in Gabriel and Khan, 2010).

Comment The evapotranspiration cannot be higher then rainfall: do the authors mean "potential evapotranspiration"?

Page 2125

Text: In Lahore the groundwater table currently varies between 14 and 43m (WASA, Lahore), and is dropping an average of 0.84myear−1.

Comment: It is not clear if 14/43 m is the depth of groundwater from the surface or if it is the thickness of the aquifer.

The authors use feet or meters in a loose way: they should use only SI units (i.e. meters)

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 2119, 2015.