



Interactive comment on “The Indus basin in the framework of current and future water resources management” by A. N. Laghari et al.

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Within the Introduction of the manuscript the Authors write the following 2 paragraphs:

“Different aspects of the water cycle in the Indus basin have been the subject of several studies, e.g. hydrology and available water resources (Winiger et al., 2005;Archer, 2003;Immerzeel et al., 2010;Kaser et al., 2010), the impact of climate change on glaciers and the hydrological regime (Akhtar et al., 2008;Immerzeel et al., 2010), agricultural water demands and productivity (Cai and Sharma, 2009;Cai and Sharma, 2010), groundwater management (Kerr, 2009;Qureshi et al., 2009;Scott and Sharma, 2009;Shah et al., 2006), reservoir sedimentation (Khan and Tingsanchali, 2009), ecological flows and the Indus delta (Leichenko and Wescoat, 1993), water policy (Biswas,

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1992;Miner et al., 2009;Shah et al., 2009;Shah et al., 2006;Sharma et al., 2010) and water resources management (Archer et al., 2010;Qureshi et al., 2009).

Within the two latter publications the major challenges facing the Indus basin were described, as well as recommendations for sustainable water management. However, both papers have certain limitations. They both focused only on Pakistan, although 40% of the basin's surface area is located within 3 other countries. Qureshi et al. (2009) focused on groundwater. The recommendations for sustainable water management within (Archer et al., 2010) were far from complete, as not all available options were accounted for. This paper gives a comprehensive listing and description of all available water resources management options and does not restrict itself to the Pakistani part of the Indus basin. Especially the Indian part of the basin is also included in the analysis."

These paragraphs give the context why the Authors decided to write this paper. Especially the paper published in HESS (Archer et al., 2010) – published in August 2010 – stimulated the Authors to write this paper, for the reasons given in the 2 above paragraphs. At the time the Authors started to write, the publication on the Indus basin in Water International – which the Referee refers to – was not available yet. Therefore the goal to write and publish our manuscript at that time seemed to be justified. When finishing writing, the mentioned paper in Water International was published, and the Authors also refer to it. This paper is definitely a very good work on the Indus basin. While the comment on repetition raised by Reviewer 2 is hence partly true, it is the Authors' feeling that additional papers can still be published on this topic, giving the possibility of new insights and analyses.

Another question the reviewer raises is whether it is worth a peer-reviewed publication as it stands. Again we would like to refer to the paper Archer et al., 2010 which gave the Authors the stimulation to write their paper. Is this paper not also a similar review paper? Was this paper not also published in HESS? Therefore the Referee's statement - but not sufficient for a highly technical peer-reviewed journal like HESS – seems not appropriate. This statement also gives an answer on topic 3) whether it is in the scope

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of the journal. The Authors want to inform the readers of HESS on all possible management options for the Indus basin. Within the HESS-paper of Archer et al., 2010 the focus is on water supply management options. The part on “water resources management” is not sufficient, and water demand management options are not addressed. In a world with finite (water) resources the solution is not only in supply management but sustainable management options require the inclusion of demand management practices. This is lacking in this particular HESS-paper, and to give HESS readers a full picture on sustainable water resources management the Authors feel that their paper is indeed a necessary contribution.

The Authors agree that the paper can be improved with a more detailed analysis – as also indicated by reviewer 1. They also agree with reviewer 1 that an analysis of secondary data and more detailed specific recommendations will definitely increase the innovativeness of the manuscript. In this way the quality of the paper will definitely increase.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 2263, 2011.

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