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Hydrology and Earth System Sciences Discussions

Interactive comment on "Balancing energy and environmental concerns: the case of the Kayraktepe dam, Turkey" *by* Ö. Sever et al.

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I would like to express my congratulations to all the authors (Sever et al, 2012), who did a very interesting research through a deep engineering insight. When reading the paper, the famous phrase by Vít Klemeš (2007) came to my mind: "Nothing can be green without water-except "green" politics".

I fully agree with the author's view, that the WCD report was the biggest victory of environmentalists and non-governmental organizations against large dams. I would like to contribute by representing some thoughts:

1. The authors should take into consideration a similar paper about the scale of wa-

ter resources exploitation (Koutsoyiannis, 2011), which provides additional arguments on the necessity of developing major hydraulic structures and highlights their multipurpose role. 2. The analysis should take into account additional positive effects from reservoirs, such as the development of a new biotic and abiotic environment and the formulation of an attractive landscape, which are also beneficial for the local economy (Christofides et al. 2005). 3. I strongly believe that the optimal management policy is the key to ensure sustainability. It is important to emphasize that the exploitation of natural resources is not in conflict with environmental protection (Efstratiadis and Hadjibiros 2011). 4. In this context, the establishment of a suitable environmental flow policy is a key issue, which requires a multidisciplinary approach (Acreman and Dunbar 2004). Yet, the engineering viewpoint remains essential, since most of the proposed approaches for environmental flow assessment are not feasible to implement in areas suffering from data scarcity (Varveris et al, 2010).

Specific comment: 11774 line 6: Replace 65.25 m2 with 65.25 km2

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