

## ***Interactive comment on “Statistical forecast of seasonal discharge in Central Asia for water resources management: development of a generic linear modelling tool for operational use” by Heiko Apel et al.***

**Samuel G. Dixon**

s.g.dixon@lboro.ac.uk

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### Comments

Figure 1: Some gauges are located downstream of impoundments (e.g. catchment 12, Amu Darya). Are the data used corrected for management of upstream reservoirs or does management impact the flow record? A figure showing the annual regime could help to depict whether flows are natural or managed.

Table 2: Adjusted R<sup>2</sup> values may be more suitable to report due to small sample sizes

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Table 2: Model performance could be benchmarked against the long term average or persistence forecast to quantify additional skill provided by MLR models

General: Winter hydropower production is also a key use of water in the region as well as irrigation provision. Comment might be made as to whether these models could be useful for hydropower planning as well as summer irrigation demands.

General: The inclusion of local stakeholders in the authorship adds significant insight into the paper. This could be enhanced via the authors commenting on how the forecasts presented here facilitate improved water management in the region, possibly providing examples of better decisions made possible by the forecasts. Furthermore, insight could be provided regarding if the forecasts produced here fulfil the requirements of hydromet agencies, or if there are any specific areas in which the models do not perform satisfactorily requiring further research.

### Minor corrections

P6, L11: Typo - capitalised while

P7, L3: States “continuous time series for all data and stations were available” when later it is stated that there is some missing data (e.g. Figure 2)

P11, L27: “Figures presented in 4.3” – should this be 4.2?

P19, L19 and P21, L12: Catchment 9 is referred to as Andijan rather than Karadarya.

Figure 7: Possibly label x-axis as Jan, Feb, etc. rather than 1-6 to ease interpretation

General: Inconsistent spelling of Murgab/Murgap, e.g. Table 1 and Figure 1