Title: A simple water-energy balance framework to predict the sensitivity of streamflow to climate change

Author: M. Renner, R. Seppelt, and C. Bernhofer

This manuscript proposed a method for predicting the sensitivity of streamflow to climate change based on the hypothesis on catchment efficiency. The topic is suitable for HEES. The hypothesis $CE = \frac{E_T}{P} + \frac{E_T}{E_P}$ can be transformed into $E_T = CE\frac{E_P P}{P + E_P}$, which is similar to the so-called Mezentsev equation $E_T = \frac{E_P P}{\left(P^n + {E_P}^n\right)^{1/n}}$ with n being 1. Compared with the Mezentsev equation considering the catchment characteristics using the parameter n, the equation considers it using the parameter CE. According to the Budyko hypothesis, Yang and Yang (2011) proposed an analytical derivation of the sensitivity of streamflow to climate change. In this manuscript, the sensitivity of streamflow to climate change was derived based on the hypothesis $CE = \frac{E_T}{P} + \frac{E_T}{E_P}$ (assuming CE keeping constant for a special catchment).

I think that the major contribution of this manuscript is suggesting a derivation of the sensitivity of streamflow to climate change based on a different hypothesis, and this hypothesis may be more suitable for some situations compared with the Budyko hypothesis. However, more evidences or investigations on the validity of the hypothesis are necessary.

Minor comments:

1. P.8804, line 20, I suggest more accurate expression. The formula proposed by Pike (1964) is E = Ep*P/(Ep^2 + P^2)^(1/2), with Ep being Penman equation. Mezentsev (1955) derived the formula E = Ep*P/(Ep^n + P^n)^(1/n) in mathematics. Choudhury introduced an adjustable parameter into Pike equation and replaced Ep with net radiation Rn, E = Rn*P/(Rn^n + P^n)^(1/n). Yang et al. (2008) analytically derived the equation E = Ep*P/(Ep^n + P^n)^(1/n).

2. P.8828, Fig.6, the elasticity of runoff to precipitation has a very large slope when CE = 1.3 or 1.2. This is very different from the elasticity from the Budyko hypothesis. If the causes (situations in real world) can be explained in physical, it will show the hypothesis a better theoretical frame than the Budyko hypothesis.
3.