My thanks to Referee #1 for comments

The transformation approach is not necessarily better or worse at achieving convergence to a limit extreme value distribution, so it is not advocated as an improved means of reducing risk. Depending on the situation, application of the Weibull distribution to transformed annual maxima could result in greater or lesser risk, or risk largely unchanged. The main point is rather that there is as much extreme value theory justification in applying the Weibull distribution to transformed maxima as there is for applying the generalized extreme value distribution (GEV) directly to annual maxima. Of course, if there are many data-estimated parameters involved in the transformation then there is an increased chance that a Weibull fit to the transformed maxima is just fortuitous data matching and not extreme value convergence. However, fortuitous data fits can apply for the GEV as well.

Estimation via transformed data is not unusual in statistical applications. For example, for estimating a quantile of a lognormal distribution from a lognormal data set, the logs of the data values might be fitted by a normal distribution and the lognormal quantile value estimated as a normal quantile value.

There is certainly a need for further investigations – with respect in particular to seeking if applicable general transformations can be found which lead to relatively rapid convergence to the limit Weibull distribution for a range of different positive-valued text-book univariate distributions. The hope would then be that such transformations yielding Weibull fits to transformed annual maxima are in fact indicative of convergence to the Weibull limit distribution of minima and not simply data matching. However, reporting a full investigation of this type is beyond the scope of a HESS Technical note. Hopefully the present brief communication may encourage others reporting some further work along these lines.