$$GHDVI(a,b,c,d) = E_1CB(a,c,d \times \Lambda) \underset{\Lambda}{\wedge} GGamma(a,b,c,d),$$
 where the density of  $GGamma(a,b,c,d)$  is

 $f(\lambda) = \frac{e^{-\lambda} \lambda^{b-1} \times_1 F_1(a; c; \lambda d)}{{}_2F_1(a, b; c; d) \Gamma(b)}$