

a.) Soil %OC based OC_{petro} oxidation estimates (this study)

landslide-based τ

median = 5.6; IQR = [3.6, 9.7]; $\mu = 8.1$



denudation-based τ

median = 17.1; IQR = [13.4, 21.3]; $\mu = 17.6$



POC-flux-based τ


median = 6.0; IQR = [4.1, 8.4]; $\mu = 6.6$



b.) Previous OC_{petro} oxidation estimates (Hilton *et al.* 2011, 2014)

 WuLu River (12 – 22)

 LiWu River (20 – 35)

 Taiwan average (7 – 13)

 Taiwan average (≤ 12)

c.) OC_{bio} burial CO_2 consumption (Hilton *et al.* 2012)

 WuLu River (13.8 ± 4.8)

 LiWu River (6.8 ± 2.7)

 Taiwan average (21 ± 10)

d.) Silicate weathering CO_2 consumption (Calmels *et al.* 2011)

 LiWu River total (7.04)

 LiWu River deep weathering (2.68)

