* QSUB, VILSUB?
  + Not clear enough in text?

Would a time-line plot be helpful here to show the periods of data collection for turbidity, rainfall, PT, grab sampling, etc? Your period of turbidity and PT collection goes outside of the field campaigns.

Is that level of detail really necessary? Seems like reader would just want to know what was measured. Maybe Appendix?

Scatter vs variability

Probably “noise” is more accurate?

Present example storm before SSC T-SSC relationship?

During periods with high pre-storm SSC, sheetwash erosion in the quarry during storm events causes higher SSY than during baseflow periods, but instantaneous SSC values during stormflows are sometimes lower due to dilution by water discharged from surrounding forest areas. During periods with low pre-storm SSC, SSC increased during the storm (Figure 6). Riverine discharge of fine sediment by rinsing from aggregate was discontinued in 2013, corresponding with a lack of high SSC grab samples during low discharges (Figure 8).

Figures 10-11

T-SSC relationships: it wasn’t a foregone conclusion that a T parameter and SSC would have a good enough relationship to model SSC. These results show how the final T parameter was selected.

What do plots a-h represent? I would remove the BS since you didn’t use it. Also remove all but one of the SS—just include the one you used to calculate final SSC.

Why does the max go to 1000 instead of 500? Probably mean since it’s more intuitive?

But isn’t it the RMSE/(observed mean) that goes into Eq4? Put those % values here.

Or does Eq4 use the relative RMSE, or the coefficient of variation?

* The RMSE for each selected T-SSC relationship was computed and used in the estimate of Probable Error. The RMSE for the T-SSC relationship was 5, 82, 25, 40 mg/L for the YSI at FG1, YSI at FG3, CampbellSci OBS500 at FG3 (2013), and CampbellSci OBS500 at FG3 (2014), respectively. The RMSE for YSI at FG1 was also used for the TS at FG1 since the same T-SSC relationship was used.

P value?

Where should Discussion start?

Using all SSY data measured at FG1 (SSYUPPER), SSY for 70% of annual precipitation (2780 mm) of precipitation (~4,000 mm) were measured. Storm data for Table 2 and 3 Annual SSY from the UPPER subwatershed was estimated from Table 2 and Table 3 to be 40-60 tons/yr and 70-90 tons/yr, respectively.

Using all SSY data measured at FG1 (SSYUPPER), SSY for 69% of annual precipitation (2767 mm) of precipitation (~4,000 mm) were measured. Storm data for Table 2 and 3 Annual SSY from the UPPER subwatershed was estimated from Table 2 and Table 3 to be 450-450 and 380-470, respectively

Statistical significance of Beta values?

Rankl (2004) found that Beta coefficients were not statistically different, and he assumed that the Beta exponent was a function of rainfall intensity on hillslopes. Rankl (2004) hypothesized that variability in alpha (the intercept) was a function of sediment availability and erodibility in watersheds, but Duvert et al. (2012) argued that alpha values are also dependent on the regression fitting method, arguing that, for instance, the Nonlinear method results in a model fit to higher SSY values at lower discharge compared to Linear methods.

Move to Study Area?

Faga'alu, like many watersheds on Pacific high islands, is characterized by large areas of undisturbed, steeply-sloped, forested hillsides in the upper watershed, and relatively little flat area in the lower watershed that is urbanized or densely settled (Figure 1). Faga'alu is a narrow, V-shaped watershed covering approximately 2.48 km2 from Mt. Matafao, the highest point on Tutuila (653 m), to its outlet at the Pacific Ocean. Small tributaries from the hillsides feed a single perennial stream which runs the length of the watershed (~3 km), and drains an area of 1.86 km2. Several small ephemeral streams drain the lower portions of the watershed (0.63km2) directly to the ocean.

Discussion section

What have we learned about how humans impact sediment loads on remote tropical islands? How does your SSY compare with other mined areas? About the best predictors of SSY? What was the utility of turbidity measuremetns, and have others constructed sediment budgets like this with tubidity? What was their cumulative RMSE? You have much of this in the results, but I think the impact of the paper will be stronger if you interpret the results vis-à-vis other work in a separate discussion.

* Figure 4. What’s the RMSE in L/s and rRMSE?