

Watershed Management Ugum, Piti-Asan, and Geus Watersheds

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Funded by the NOAA and USGS



Background

1990 – Section 6217, Coastal Zone Act Reauthorization Amendment (Guam Coastal Nonpoint Pollution Control Program)

requires multi-year watershed restoration strategy

1998 – Clean Water Action Plan, Unified Watershed Assessment 13 of 20 Guam watersheds in need of restoration, including Ugum, Piti-Asan, Geus

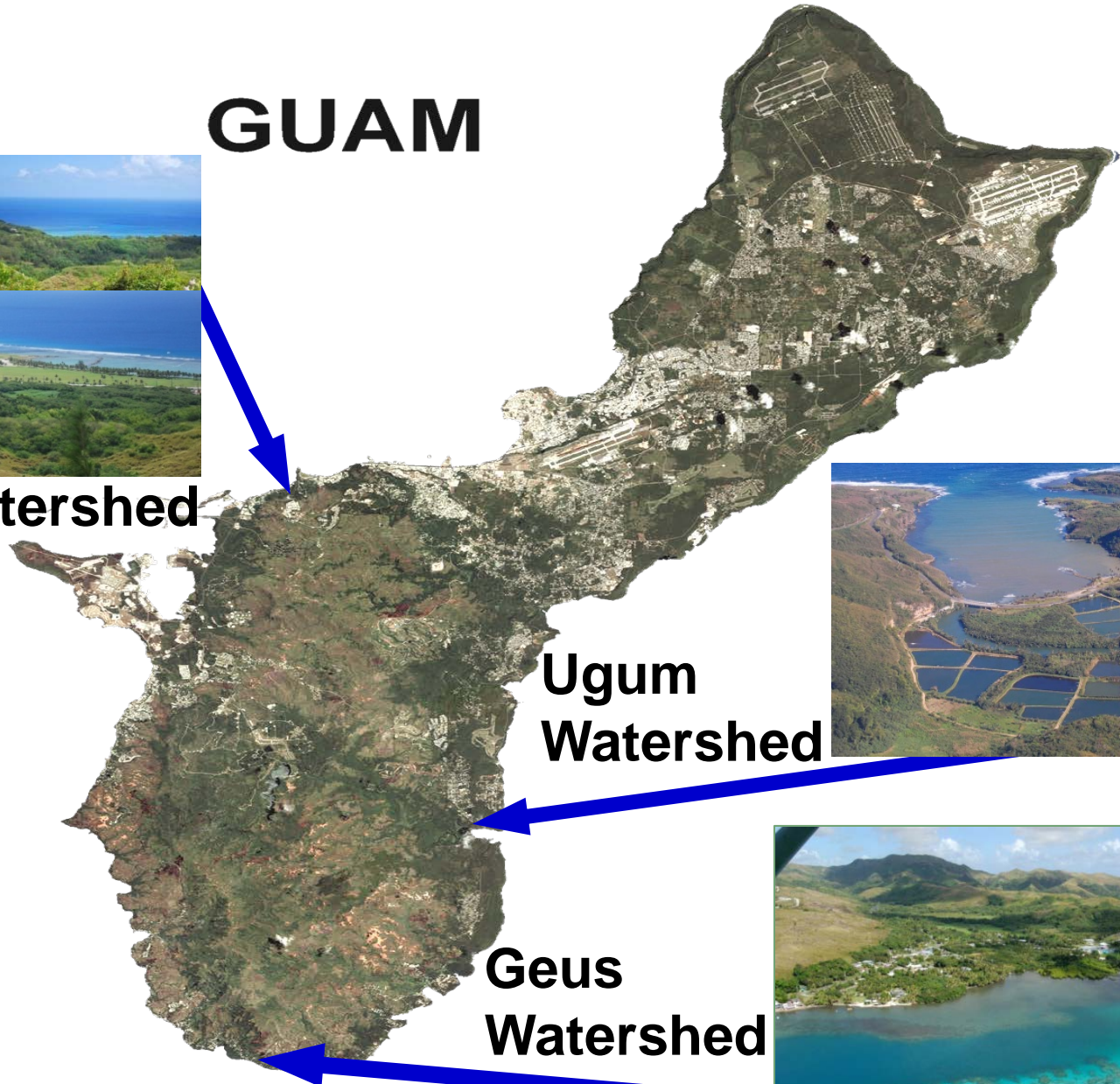
However.....

**There is no baseline data or previous study on
The selected Watershed dynamics!**

GUAM



Piti-Asan Watershed



Ugum Watershed



Geus Watershed



Project Objectives

- Correlate field hydrological data to determine dynamic behavior of the watershed
- Develop baseline information for stream level, flow, and turbidity
- Provide recommendations for restoration and/or preservation



Rainfall = 0 in.

Turbidity = 0.72 NTU



Rainfall = 1.70 in.

Turbidity = 21.45 NTU



Rainfall = 3.68 in.

Turbidity = 41.00 NTU

Data Collection

- From previous studies and field visits
- Hydrologic field data
- Soil samples and analyses
- Aerial Photography

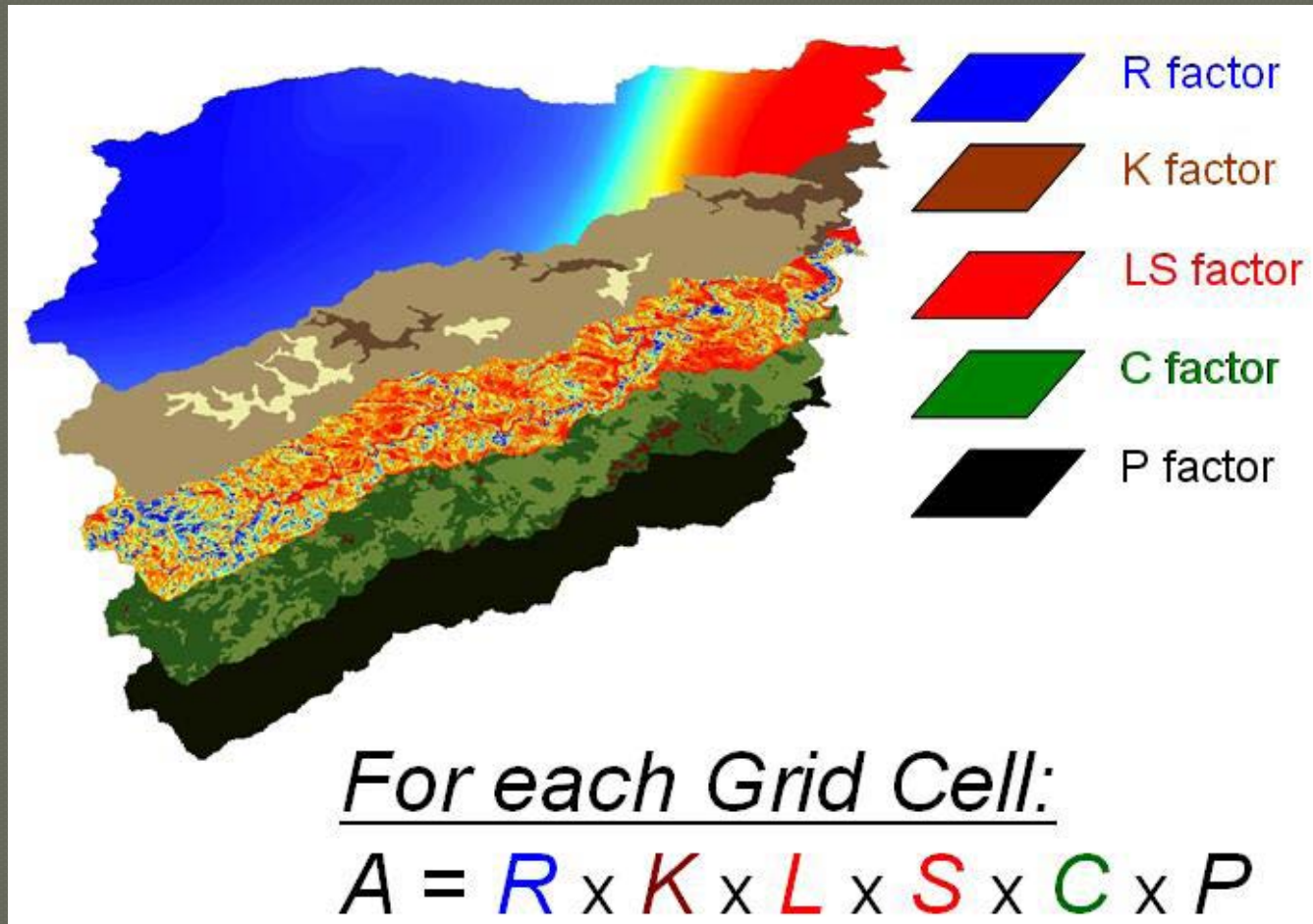


Data Collection



Available Information

- GIS-based RUSLE Erosion Model (Park, 2007)



Field Observations - Ugum



June 25 04



Aug 31 04



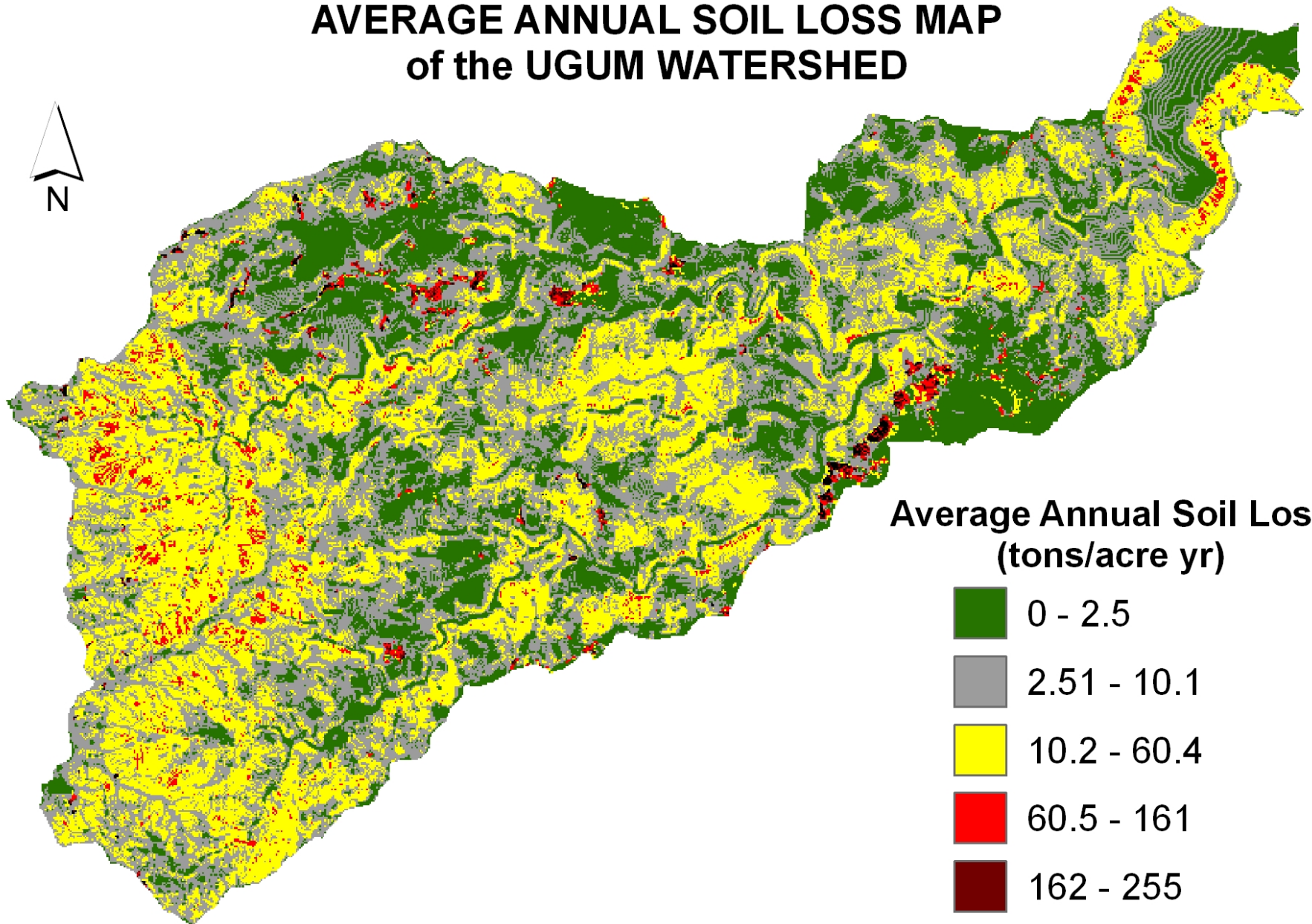
Field Observations - Ugum



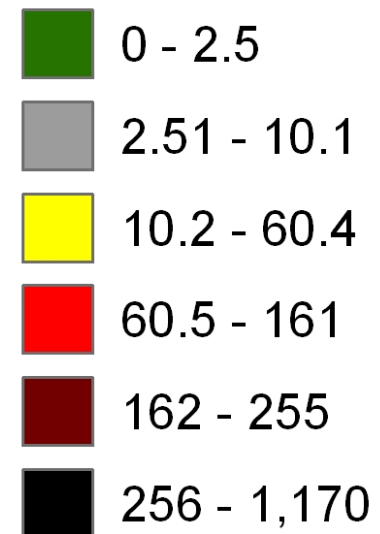
Field Observations - Ugum



AVERAGE ANNUAL SOIL LOSS MAP of the UGUM WATERSHED



**Average Annual Soil Loss
(tons/acre yr)**



Piti



Piti-Asan Watershed

Asan



Natural Erosion Contribution

