

# Evaluation of the GMTED2010 (250m) to derive topographic variables at 1km resolution (first results)

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## GMTED2010 7.5 arc-seconds (250m)

- Median Statistic
- Minimum Statistic
- Mean Statistic
- Maximum Statistic
- Standard Dev. Statistic
- Breakline Emphasis
- Systematic Subsample

## GMTED2010 7.5 arc-seconds (250m)

- Derived variables
  - Percent area in 1km pixels of values over a specific threshold (from -500 to 8700m)
    - Using
      - Minimum Statistic
      - Maximum Statistic

Useful for altitudinal ranges

## GMTED2010 Roughness vs EARTHENV-DEM90 Roughness

GMTED2010 - 250	EARTHENV-DEM90 – 90m	Pearson Coeff.
1km-median (Roughness of Systematic Subsample )	1km-median (Roughness of -DEM90)	0.989316
1km-median (Roughness of Median Statistic)	1km-median (Roughness of -DEM90)	0.988585
1km-median (Roughness of Mean Statistic)	1km-median (Roughness of -DEM90)	0.987848
1km-median (Roughness of Breakline Emphasis )	1km-median (Roughness of -DEM90)	0.982874

I will compute the same analysis for:  
Terrain Ruggedness Index (TRI)  
Topographic Position Index (TPI)

GMTED2010

1km-median  
(Roughness of  
Systematic  
Subsample )



1km-median  
(Roughness of  
EARTHENV-  
DEM90)

