

Input variables

Target variables

Sentinel 1

ALOS-Palsar

Sentinel 2

GEDI

Preprocessing and filtering

Composites

Spectral Indices

Permanent forest mask

Predictors calculation:

- a. 3x3 mean filter
- b. Texture metrics

Grid cell computation

Metrics calculation of relative heights:

- 1. Coefficient of variation
- 2. Skewness
- 3. Kurtosis

Metrics calculation of normalised structural variables (rh50, rh75, rh98 and cover):

- 4. Standard deviation of canopy height
- 5. Standard deviation of cover
- 6. Shannon-Weaver index
- 7. Rao's Q diversity index
- 8. Convex hull volume

Random Forest model (for each GEDI metric)

Backward elimination regression based on **spatial cross validation**

Forest structural diversity dataset

