

Forest Loss Ensemble Functions

Forest Mask Functions

Function Name	<code>getGladGFCForestMask</code>
Inputs	<code>aoi</code> (GEE feature collection / geometry)
Outputs	<code>forestMask</code> (GEE image, binary forest mask)
Description	Creates a forest mask using the GLAD lab's Global Forest Change product and the UN's forest cover definition.

Function Name	<code>addForestMask</code>
Inputs	<code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>aoi</code> (GEE feature collection / geometry)
Outputs	<code>forestMask</code> (GEE image, binary forest mask)
Description	Adds specified forest mask if none is provided, and ensures that the forest mask image is properly formatted. Inputting null means no mask is used, and "gladGfc" will create a GLAD Global Forest Change (GFC) based mask. If using your own mask, it should be a single band, binary, GEE image (1:forest, 0:non-forest).

BULC-D Functions

Function Name	<code>getBulcdModalityDict</code>
Inputs	<code>modalityList</code> (array of strings)
Outputs	<code>modalityDictionary</code> (dictionary: modality name → boolean)
Description	Creates a dictionary mapping each possible modality to true/false. Ensures 'constant' is always included since this is necessary to run BULC-D.

Function Name	<code>getBulcdYoi</code>
Inputs	<code>modalityList</code> (array of strings) <code>trgStartDate</code> (string, MM-DD) <code>trgEndDate</code> (string, MM-DD) <code>trgYearsList</code> (array of integers) <code>expStartDate</code> (string, MM-DD) <code>expEndDate</code> (string, MM-DD) <code>expYearsList</code> (array of integers) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>bulcdYoi</code> (BULCD result)
Description	Runs the BULC-D algorithm for the specified parameters and returns the results for the period of interest.

Function Name	<code>getBulcdYoiStable</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>bulcdYoiStable</code> (BULCD results)
Description	Runs the BULC-D algorithm using parameters optimized for dense forests with minimal seasonality. This version sets the modality to ['constant', 'unimodal'] and calculates the expectation period as the 90 days immediately preceding the target start date.

Function Name	<code>getBulcdYoiSeasonality</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image)

Outputs	<code>bulcdYoiSeasonality</code> (BULCD results)
Description	Runs the BULC-D algorithm using parameters optimized for forests with stronger seasonal variation. Sets modality to ['constant', 'unimodal'] and uses a multi-year expectation period from the same date window in the three years preceding the target year.

Function Name	<code>getBulcdMask</code>
Inputs	<code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>bulcdMask</code> (GEE binary image)
Description	Makes the "mask" for BULC-D. (Equal to the mask used for your export.)

Function Name	<code>getBulcdStratumIds</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>bulcdAssetFolder</code> (string, file path)
Outputs	<code>bulcdIds</code> (GEE image, stratum IDs)
Description	Creates stratum IDs based on where the two BULC-D outputs agree and do not.

Function Name	<code>getBulcdInputDict</code>
Inputs	<code>modalityList</code> (array of strings) <code>trgStartDate</code> (string, MM-DD) <code>trgEndDate</code> (string, MM-DD) <code>trgYearsList</code> (array of integers) <code>expStartDate</code> (string, MM-DD) <code>expEndDate</code> (string, MM-DD)

	<code>expYearsList</code> (array of integers) <code>aoi</code> (GEE feature collection/geometry)
Outputs	<code>bulcD_input</code> (dictionary of BULCD input collections and parameters)
Description	Prepares and organizes all necessary BULCD algorithm input parameters and image collections for the given modality, target period, and expectation period. This includes sensor selection dictionaries, study area buffering, band reduction settings, cloud masking thresholds, and conversion of dates to day-of-year format.

Function Name	<code>addBulcdHarmonicChart</code> CURRENTLY NOT FUNCTIONAL
Inputs	<code>modalityList</code> (array of strings) <code>trgStartDate</code> (string, MM-DD) <code>trgEndDate</code> (string, MM-DD) <code>trgYearsList</code> (array of integers) <code>expStartDate</code> (string, MM-DD) <code>expEndDate</code> (string, MM-DD) <code>expYearsList</code> (array of integers) <code>aoi</code> (GEE feature collection/geometry)
Outputs	Adds a UI panel for interactive BULC-D harmonic chart inspection.
Description	Allows user to investigate how well the BULC-D output is working in their area of interest by displaying the fitted line for the target and expectation period along with the band value observations.

CCDC Functions

Function Name	<code>getCcdc</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ccdcStartDate</code> (string, YYYY-MM-DD) <code>ccdcEndDate</code> (string, YYYY-MM-DD) <code>ccdcParams</code> (dictionary)
Outputs	<code>ccdcFullOutput</code> (GEE array image)

Description	Runs CCDC for the specified AOI and POI using Landsat time series and outputs the full array result. Output is kept as an array image to save space.
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Function Name	<code>createCoveringGrid</code>
Inputs	<code>featureCollection</code> (GEE feature collection)
Outputs	<code>grid</code> (covering grid of GEE geometries)
Description	Creates a grid that covers your AOI with a buffer. (Credit to Peter Clary.)

Function Name	<code>exportImageTiles</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>assetFolder</code> (string, file path) <code>exportCrs</code> (string) <code>ccdcStartDate</code> (string, YYYY-MM-DD) <code>ccdcEndDate</code> (string, YYYY-MM-DD) <code>ccdcFullOutput</code> (GEE array image)
Outputs	Exports CCDC output by grid cells.
Description	Cuts up CCDC image with the grid and exports piece by piece. (Credit to Peter Clary.)

Function Name	<code>getCcdcPoi</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ccdcStartDate</code> (string, YYYY-MM-DD) <code>ccdcEndDate</code> (string, YYYY-MM-DD)
Outputs	<code>ccdcImage</code> (GEE image)

Description	Converts the CCDC array output into an image and then calculates the magnitude of change for that period.
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Function Name	<code>getCcdcProbabilities</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ccdcCFG</code> (string, file path)
Outputs	<code>ccdcProbabilities</code> (GEE image, 0-100 probability)
Description	Thresholds the CCDC magnitudes, stretching the values between 0 and the threshold to 0-100 to represent a probability.

Function Name	<code>getCcdcMask</code>
Inputs	<code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>ccdcMask</code> (GEE binary image)
Description	Makes the "mask" for CCDC. (Equal to the mask used for your export.)

Function Name	<code>getCcdcStratumIds</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ccdcCFG</code> (string, file path)
Outputs	<code>ccdcIds</code> (GEE image, stratum IDs)
Description	Creates stratum IDs based on where the two thresholded CCDC band outputs agree and do not.

CCDC-SMA Functions

Function Name	<code>getCcdcSma</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>startYear</code> (integer, YYYY) <code>premadeAssetsEndYear</code> (integer, YYYY)
Outputs	<code>ccdcSmaImage</code> (GEE image)
Description	Runs CCDC-SMA for the specified <code>aoi</code> and <code>forestMask</code> using Landsat time series, applies classification based on defined thresholds, and returns the resulting <code>ccdcSmaImage</code> .

Function Name	<code>getCcdcSmaYoi</code>
Inputs	<code>year</code> (integer, YYYY) <code>ccdcSmaImage</code> (GEE image)
Outputs	<code>ccdcSmaYoi</code> (GEE image)
Description	Extracts the CCDC-SMA classification for the year of interest and returns a binary band.

Function Name	<code>getCcdcSmaProbabilities</code>
Inputs	<code>year</code> (integer, YYYY) <code>ccdcSmaImage</code> (GEE image)
Outputs	<code>ccdcSmaProb</code> (GEE image, 0-100 probability)
Description	Extracts the CCDC-SMA output for the specified year and converts to a probability (0-100).

Function Name	<code>getCcdcSmaMask</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry)

	<code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>ccdcSmaMask</code> (GEE image)
Description	Creates a binary mask image (value = 1) clipped to the forestMask extent.

Function Name	<code>getCcdcSmaStratumIds</code>
Inputs	<code>year</code> (integer, YYYY) <code>ccdcSmaImage</code> (GEE image)
Outputs	<code>ccdcSmaIds</code> (GEE image, stratum IDs)
Description	Creates stratum IDs for CCDC-SMA, 0 being "No Change" and 1 being "High Certainty".

GLAD Alert Functions

Function Name	<code>getGladAlerts</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (GEE image, binary forest mask) <code>gladAlertsStartArchived</code> (T/F) <code>gladAlertsEndArchived</code> (T/F)
Outputs	<code>gladAlertsYoi</code> (GEE image)
Description	Retrieves GLAD alerts for the specified period of interest.

Function Name	<code>getGladAlertProbabilities</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (GEE image, binary forest mask) <code>gladAlertsStartArchived</code> (T/F)

	<code>gladAlertsEndArchived</code> (T/F)
Outputs	<code>gladAlertsProb</code> (GEE image, 0-100 probability)
Description	Retrieves GLAD alerts for the specified period, remaps confidence values to a 0-100 probability.

Function Name	<code>getGladAlertMask</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>gladAlertsStartArchived</code> (T/F) <code>gladAlertsEndArchived</code> (T/F) <code>gladAlertsMaskArchived</code> (T/F)
Outputs	<code>gladMask</code> (GEE image, binary mask of GLAD forest extent)
Description	Creates the mask used by the GLAD alerts, based on the GLAD GFC map and alerts that occurred within the past year.

Function Name	<code>getGladStratumIds</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask) <code>gladAlertsArchived</code> (T/F)
Outputs	<code>gladIds</code> (GEE image, stratum IDs)
Description	Retrieves and GLAD confirmed and unconfirmed alerts (only available for current collection) for the specified year, and converts alerts to stratum IDs.

GLAD GFC Map Functions

Function Name	<code>getGladGfcMap</code>
Inputs	<code>year</code> (string, YYYY) <code>aoi</code> (GEE feature collection/geometry)
Outputs	<code>gladGfcYoi</code> (GEE image)
Description	Retrieves the GLAD Global Forest Change map for the year of interest.

Function Name	<code>getGladGfcProbabilities</code>
Inputs	<code>year</code> (string, YYYY) <code>aoi</code> (GEE feature collection/geometry)
Outputs	<code>gladGfcProb</code> (GEE image, 0-100 probability)
Description	Scales the binary GLAD GFC map to a probability of 0-100.

Function Name	<code>getGladGfcMask</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry)
Outputs	<code>gladGfcMask</code> (GEE binary image)
Description	Creates the "mask" used by GLAD GFC (since this map can detect forest growth, there is effectively no forest mask).

Function Name	<code>getGladGfcStratumIds</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>gladGfcIds</code> (GEE image, stratum IDs)
Description	Converts the GLAD GFC binary loss map into stratum IDs.

LandTrendr Functions

Function Name	<code>getLtSvColl</code>
Inputs	<code>LT_startYear</code> (number) <code>LT_endYear</code> (number) <code>LT_startDay</code> (string) <code>LT_endDay</code> (string) <code>LT_index</code> (string) <code>LT_ftvList</code> (list) <code>LT_maskThese</code> (list) <code>aoi</code> (GEE feature collection/geometry)
Outputs	<code>svCollection</code> (GEE imageCollection)
Description	Builds a Landsat source value image collection for the specified years, AOI, and index.

Function Name	<code>getYearBandNamesModd</code>
Inputs	<code>startYear</code> (number) <code>endYear</code> (number)
Outputs	<code>years</code> (list of strings)
Description	Builds a list of year band names in the format yrYYYY for the specified range of years.

Function Name	<code>getLtSv</code>
Inputs	<code>LT_startYear</code> (number) <code>LT_endYear</code> (number) <code>LT_startDay</code> (string) <code>LT_endDay</code> (string) <code>LT_index</code> (string) <code>LT_ftvList</code> (list) <code>LT_maskThese</code> (list) <code>aoi</code> (GEE feature collection/geometry)

	<code>forestMask</code> (null, "gladGfc", or GEE mask image)
Outputs	<code>svImage</code> (GEE image)
Description	Builds SV collection and converts it into a single image with yearly bands.

Function Name	<code>getFittedDataModd</code>
Inputs	<code>lt</code> (GEE image, LT full output) <code>startYear</code> (number) <code>endYear</code> (number) <code>index</code> (string) <code>ftv</code> (boolean)
Outputs	<code>fittedData</code> (GEE image)
Description	Extracts and flattens fitted LandTrendr values into year-named bands.

Function Name	<code>getLtFtv</code>
Inputs	<code>LT_startYear</code> (number) <code>LT_endYear</code> (number) <code>LT_startDay</code> (string) <code>LT_endDay</code> (string) <code>LT_index</code> (string) <code>LT_ftvList</code> (list) <code>LT_maskThese</code> (list) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary)
Outputs	<code>ftvImage</code> (GEE image)
Description	Runs LandTrendr and extracts full FTV value image.

Function Name	<code>getLtFtvDiff</code>
Inputs	<code>ftvImage</code> (GEE image)

Outputs	<code>ftvDiffImage</code> (GEE image)
Description	Computes LT's FTV year-to-year differences.

Function Name	<code>getLtSvDiff</code>
Inputs	<code>svImage</code> (GEE image)
Outputs	<code>svDiffImage</code> (GEE image)
Description	Computes year-to-year difference from source value collection.

Function Name	<code>getLtSvFtvDiff</code>
Inputs	<code>ftvDiffImage</code> (GEE image) <code>svDiffImage</code> (GEE image)
Outputs	<code>svFtvDiffImage</code> (GEE image, yearly SV–FTV difference)
Description	Computes the difference between SV and FTV year-to-year differences.

Function Name	<code>getLtFtvDiffYoi</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ftvDiffImage</code> (GEE image)
Outputs	<code>ltFtvDiffYY</code> (GEE image)
Description	Pulls the LT FTV difference for the year of interest.

Function Name	<code>getLtSvFtvDiffYoi</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry)

	<code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>svFtvDiffImage</code> (GEE image)
Outputs	<code>ltDisagreeMeasYY</code> (GEE image)
Description	Pulls the LT SV–FTV differences (a measure of disagreement) for the year of interest.

Function Name	<code>getLtProbabilities</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ftvDiffImage</code> (GEE image)
Outputs	<code>ltProbabilities</code> (GEE image, 0-100 probability)
Description	Taking the FTV difference image, the values between 0 and a chosen threshold are scaled to a 0-100 probability, with anything below 0 being 0 and anything above the threshold being 100.

Function Name	<code>getLtMask</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>ltMask</code> (GEE binary image)
Description	Makes the "mask" for LandTrendr. (Equal to the mask used for your export.)

Function Name	<code>getLtStratumIds</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>ftvDiffImage</code> (GEE image)

	<code>svFtvDiffImage</code> (GEE image)
Outputs	<code>ltIds</code> (GEE image, stratum IDs)
Description	Combines thresholded FTV and SV–FTV differences into a stratum ID image for the specified year.

RADD Alert Functions

Function Name	<code>getRaddAlerts</code>
Inputs	<code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>raddAlertsYoi</code> (GEE image)
Description	Retrieves RADD alerts for the period of interest.

Function Name	<code>getRaddAlertProbabilities</code>
Inputs	<code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>raddAlertProbabilities</code> (GEE image, 0-100 probability)
Description	Retrieves RADD alerts for the specified period, remaps alert values to a 0-100 probability.

Function Name	<code>getRaddMask</code>
Inputs	<code>startDate</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry)
Outputs	<code>raddMask</code> (GEE binary image)

Description	Creates the forest mask used by the RADD alerts, primarily based on the Turubanova primary forest map, and removing prior RADD alerts. Despite this being the mask we were instructed to use, it does not line up perfectly with the output.
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Function Name	<code>getRaddStratumIds</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>raddIds</code> (GEE image, stratum IDs)
Description	Retrieves RADD alerts for the specified year, and assigns low certainty and high certainty alerts to stratum IDs.

SERVIR SAR Alert Functions

Function Name	<code>getServirSar</code>
Inputs	<code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>servirSarProbYoi</code> (GEE image)
Description	Computes the maximum cumulative (across the three time step bands) SERVIR SAR alert probability for the specified period and AOI, and takes the average probability from that date.

Function Name	<code>getServirSarBinary</code>
Inputs	<code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)

Outputs	<code>servirSarAlertYoi</code> (GEE image, SERVIR SAR binary alert)
Description	(*NOT IMPLEMENTED) Computes the SERVIR SAR binary alert map for the specified period and AOI, where an alert is defined as >60% loss probability in all three bands.

Function Name	<code>getServirSarProbabilities</code>
Inputs	<code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Outputs	<code>servirSarProbabilities</code> (GEE image, 0-100 probability)
Description	Gets the maximum loss probability for the period of interest.

Function Name	<code>getServirSarMask</code>
Inputs	<i>(none)</i>
Outputs	<code>servirSarMask</code> (GEE binary image)
Description	Creates a binary mask of Cambodia's extent. Used as the SERVIR SAR alert "mask" since no forest mask is used.

Function Name	<code>getServirSarStratumIds</code>
Inputs	<code>year</code> (string, YYYY-MM-DD) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary forest mask)
Output	<code>servirSarIds</code> (GEE image, stratum IDs)
Description	Combines SERVIR SAR confirmed and unconfirmed alerts to get the stratum ID image.

Stratum Functions

Function Name	<code>getOpticalStratum</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>gladAlertsArchived</code> (T/F) <code>landTrendrAssetFolder</code> (string, file path) <code>premadeAssetsEndYear</code> (string, YYYY) <code>ltIndex</code> (string)
Outputs	<code>opticalStratum</code> (GEE image, stratum IDs)
Description	Computes GLAD alerts, GLAD GFC map, and LandTrendr stratum IDs using their respective functions, combines them into unique IDs, remaps to the optical stratum categories.

Function Name	<code>getSarStratum</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (null, "gladGfc", or GEE mask image)
Outputs	<code>sarStratum</code> (GEE image, stratum IDs)
Description	Computes SEVIR SAR alerts, and RADD stratum IDs using their respective functions, combines them into unique IDs, remaps to the SAR stratum categories.

Function Name	<code>getFinalStratum</code>
Inputs	<code>year</code> (integer, YYYY) <code>aoi</code> (GEE feature collection/geometry) <code>forestMask</code> (GEE image, binary or null)
Outputs	<code>finalStratum</code> (GEE image, stratum IDs)
Description	Produces the final stratum layer by combining optical and SAR strata.

Naive Average Functions

Function Name	<code>getOpticalNaiveLossAverage</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>changeProducts</code> (list of strings) <code>bulcdAssetFolder</code> (string, file path) <code>ccdcSmaAssetFolder</code> (string, file path) <code>landTrendrAssetFolder</code> (string, file path) <code>premadeAssetsEndYear</code> (string, YYYY) <code>ltIndex</code> (string) <code>gladAlertsStartArchived</code> (T/F) <code>gladAlertsEndArchived</code> (T/F) <code>gladAlertsMaskArchived</code> (T/F) <code>ccdcCFG</code> (string, file path)
Output	<code>optInputsProb</code> (GEE image, 0-100 probability)
Description	Computes naive average loss probability for the optical change products.

Function Name	<code>getSarNaiveLossAverage</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>changeProducts</code> (list of strings)
Output	<code>sarInputsProb</code> (GEE image, 0-100 probability)
Description	Computes naive average loss probability for the SAR change products.

Function Name	<code>getNaiveLossAverage</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry)

	<code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>changeProducts</code> (list of strings) <code>bulcdAssetFolder</code> (string, file path) <code>ccdcSmaAssetFolder</code> (string, file path) <code>landTrendrAssetFolder</code> (string, file path) <code>premadeAssetsEndYear</code> (string, YYYY) <code>ltIndex</code> (string) <code>gladAlertsStartArchived</code> (T/F) <code>gladAlertsEndArchived</code> (T/F) <code>gladAlertsMaskArchived</code> (T/F) <code>ccdcCFG</code> (string, file path)
Outputs	<code>naiveAverageMap</code> (GEE image, 0-100 probability)
Description	Computes naive average loss probability for all change products.

Random Forest Functions

Function Name	<code>getPredictorImage</code>
Inputs	<code>aoi</code> (GEE feature collection/geometry) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>forestMask</code> (null, "gladGfc", or GEE mask image) <code>changeProducts</code> (list of strings) <code>bulcdAssetFolder</code> (string, file path) <code>ccdcSmaAssetFolder</code> (string, file path) <code>landTrendrAssetFolder</code> (string, file path) <code>premadeAssetsEndYear</code> (string, YYYY) <code>ltIndex</code> (string) <code>gladAlertsStartArchived</code> (T/F) <code>gladAlertsEndArchived</code> (T/F) <code>ccdcCFG</code> (string, file path)
Outputs	<code>predictorImage</code> (GEE image)

Description	Creates a combined predictor image for the specified period by merging: - Subannual Products: GLAD Alerts, RADD Alerts, SERVIR SAR - Annual Products (if period = full Gregorian year): LandTrendr (FTV and SV), GLAD GFC, and CCDC-SMA The resulting image includes all relevant predictor bands, masked to the forest extent if desired.
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Function Name	<code>getReferencePoints</code>
Inputs	<code>predictorImage</code> (GEE image) <code>labelToPredict</code> (string) <code>assetFolder</code> (string, file path)
Outputs	<code>referencePts</code> (FeatureCollection, interpreter points with predictor bands)
Description	Loads interpreter reference points from the configured asset folder, extracts predictor values from the provided predictor image, and returns the points with associated predictor values and original attributes.

Function Name	<code>trainRfClassifier</code>
Inputs	<code>predictorImage</code> (GEE image) <code>startDate</code> (string, YYYY-MM-DD) <code>endDate</code> (string, YYYY-MM-DD) <code>labelToPredict</code> (string) <code>assetFolder</code> (string, file path)
Outputs	<code>rfClassifier</code> (trained Random Forest classifier)
Description	Loads a reference points collection from the configured asset folder, retrieves predictor band names from the provided predictor image, and trains a Random Forest classifier using the specified label and all predictor bands.