The third step of the prediction phase undertakes an assessment of the quality of the model prediction for the Confirmation Period (CNF). The primary purpose is to provide a basis for comparing models to select the best approach. To do this, it divides up the jurisdiction into a coarse grid where the grid cells have an area the same size as typical REDD projects. Cells which intersect the edge of the jurisdiction are removed (loss of data is not a concern – the purpose is simply to yield a representative assessment for model comparison). The suggested size is the median area (in ha) of REDD projects in the jurisdiction. If this is unknown, a size of 100,000 ha is suggested.

The procedure then displays a performance chart with actual deforestation on the X axis and predicted deforestation on the Y axis. Each dot represents one of the coarse grid cells on these axes. Two lines are provided. The red line is the 1:1 line which indicates the expected predicted deforestation if it matched the actual deforestation within a coarse grid cell. A summary statistic called the Median Absolute Error (MedAE) shows the median departure of the blue dots from the 1:1 line. It is measured in hectares.

The 1:1 line is the important reference line. However, the OLS best-fit regression line is also provided as a visual reference. Ideally, the best-fit line will coincide with the 1:1 line. Commonly, it will be found to have a slope that is flatter than the 1:1 line. In the prediction, the cause of this attenuation is a combination of map error and non-stationarity. Non-stationarity is caused by deforestation activity not behaving in a manner similar to that observed during the time the model was fit. It is expected that the slope bias during the prediction will be stronger that that observed during the fit. This difference is indicative of the effect of non-stationarity.

To qualify for use in the final assessment, an alternative modeling procedure must beat the benchmark for both the fit and the prediction (this result) using the MedAE statistic. Otherwise, the benchmark procedure should be used.

INPUTS

WORKING FOLDER

The computer folder where inputs are expected and outputs are written.

ADJUSTED PREDICTED CNF DENSITY MAP

This is the final output from Step 2 – the map of predicted density of deforestation in the CNF, adjusted so that predicted deforestation matches actual deforestation during the CNF.

MASK OF THE JURISDICTION

This is a binary map (contains 0's and 1's) where the 1's indicate areas inside the jurisdiction and suitable for consideration. Areas that are to be excluded from consideration (such as planned forestry concessions) should be marked with 0's. Note that maps with 1's and NAN's are not equivalent. All binary maps must be 1's and 0's with this tool.

MAP OF DEFORESTATION IN THE CNF

This is also a binary map (contains 0's and 1's) where the 1's indicate areas that were deforested during the CNF and 0's indicate areas of forest persistence or non-forest at the start of the CNF.

ASSESSMENT GRID CELL AREA

Specify the median size of REDD projects in the jurisdiction, in hectares. If this is unknown, use 100,000 ha.

OUTPUTS

TITLE OF PLOT

A descriptive title to be used for the performance chart.

NAME FOR THE PLOT

Specify a name for the PNG file to be used to save the performance chart graphic. Be sure to include the ".png" file extension. PNG (Portable Network Graphic) files are lossless compressed files that are widely supported.