TESTING STAGE / FITTING PHASE: 1. VULNERABILITY MAPPING

A key component of the UDef-A is a vulnerability map which expresses the relative vulnerability of locations to unplanned deforestation. The map is required to have 30 non-zero ordinal classes with 30 being the highest vulnerability and 0 being used to delineate areas outside the jurisdiction and land to be excluded from consideration, such as planned deforestation concessions.

The inputs here will vary depending upon whether the vulnerability map is to be based on the benchmark model or an alternative (both types will eventually be needed). The benchmark is based on a map of distance from the forest edge (non-forest). Alternative models should be based on transition potentials – maps with continuous values from 0.0 (no potential) to 1.0 (highest potential).

Note that in the case of the Benchmark procedure, the NRT establishes the boundary between vulnerability class 1 and class 2.

Important: Be sure to specify the proper file extension (".tif" or ".rst") for all inputs and outputs. The folder location is not needed since the working folder is specified separately.

INPUTS: BENCHMARK MODEL

WORKING FOLDER

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

DISTANCE FROM THE FOREST EDGE AT START OF THE CAL

A map of Euclidian distance from non-forest at the start of the Calibration Period, expressed in meters. **Important:** Be especially careful to avoid map errors which cause small inclusions of non-forest in areas that are actually forest. These can cause substantial problems with the resulting distance map. Where appropriate, apply an area (sieve) filter to remove these errors beforehand (see the general instructions on the Start Page for suggestions).

DEFORESTATION IN THE HRP

This is a binary map (contains 0's and 1's) where the 1's indicate deforestation during the full Historical Reference Period (HRP). Note that maps with 1's and NAN are not equivalent. All binary maps must be 1's and 0's with this tool. This map is used at this stage to determine the Negligible Risk Threshold (NRT).

MASK OF THE NON-EXCLUDED JURISDICTION

This is also 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.

NEGLIGIBLE RISK THRESHOLD (NRT) IN THE HRP

This is a floating point number that expresses the distance (in meters) from the forest edge (non-forest) beyond which deforestation is considered to be negligible. Negligible is defined as that distance beyond which 0.5% of deforestation has occurred during the historical period (HRP). A button on the right allows you to calculate this value automatically based on the inputs above.

INPUTS: ALTERNATIVE MODELS

WORKING FOLDER

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

EMPIRICAL TRANSITION POTENTIAL IN THE CAL

A map of the potential to transition from forest to non-forest in the Calibration Period (CAL). Transition potentials are expressed on a 0.0-1.0 continuous scale.

MASK OF THE NON-EXCLUDED 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.

FOREST AREAS AT START OF CAL

This is a binary map (contains 0's and 1's) where the 1's indicate areas forest areas at the start of the Calibration Period (CAL).

OUTPUT

BENCHMARK VULNERABILITY MAP FOR THE CAL / ALTERNATIVE VULNERABILITY FOR THE CAL

This is the output vulnerability map name that should be used. Be sure to specify the desired file extension, and clearly identify if it's the Benchmark or an Alternative.