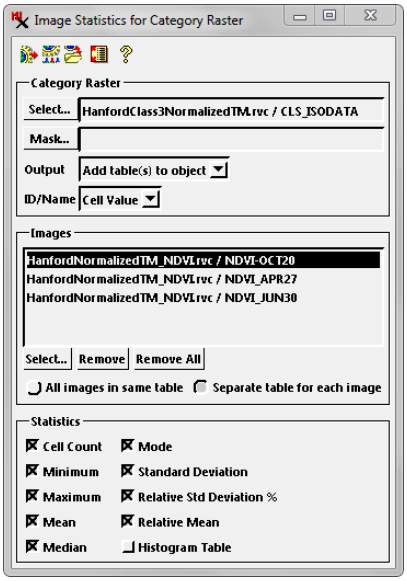
Image Statistics for Category Raster

The Image Statistics for Category Raster process in TNTmips (Image / Interpret / Statistics by Category Raster) computes statistics from one or more source images over areas defined by cell values in a category raster. Class rasters created in the Automatic Classification or Feature Mapping processes are examples of category rasters.



Category Raster

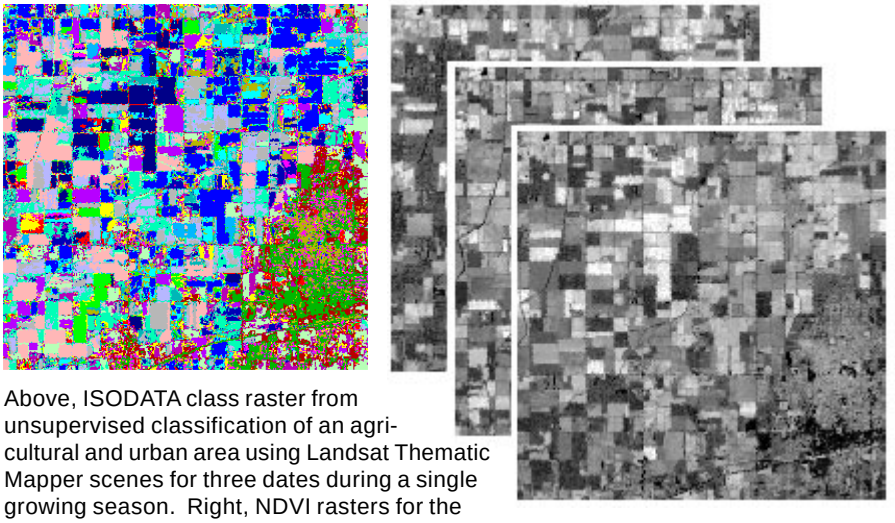
Press the Select pushbutton in the Category Raster box to select a category raster. You can limit processing to specific portions of the selected category raster if desired using a region object or a binary mask raster that matches the category raster in area, cell size, and row/column dimensions. Press the Mask pushbutton to select the mask raster or region.

Use the Output menu to specify how to save the resulting statistics. Choose *Add table(s) to object* to save the statistics in one or more tables in the category raster database, or *Text file(s)* to save as one or more CSV files. Use the ID/Name menu to specify how the categories will be identified in the table records. Choose *Cell Value* to use the category cell value as the identifier, or select *Choose...* to open a dialog and select a database table and field containing category names.

Images

Press the Select pushbutton in the Images box to choose one or more images from which to compute the statistics. All of the selected images must match the category raster in area, cell size, and row/column dimensions. You can choose grayscale, hyperspectral, or color composite images; statistics are automatically computed for each of the color components for color composites.

The file and object names of the selected images are shown in the list in the Images box. To remove any image, left-click on its list entry to highlight it and press [Remove]. Press the Remove All button to clear the list. When you are analyzing multiple images, use the radio buttons below the list to choose whether to combine or separate the statistics by image (*All images in same table* or *Separate table for each image*).



Above, ISODATA class raster from unsupervised classification of an agricultural and urban area using Landsat Thematic Mapper scenes for three dates during a single growing season. Right, NDVI rasters for the three dates, used as input images for statistics compilation. A statistics table for one of the NDVI rasters is shown below.

Statistics

The Statistics box lists the available statistical measures with a checkbox allowing you to select or deselect each. The options include Cell Count and standard statistical measures such as Minimum, Maximum, Mean, and so on. *Relative Std Deviation %* is a dimensionless value computed by dividing the class standard deviation by the class mean and multiplying by 100 to express the value as percentage. The Relative Mean is computed by dividing the class mean by the overall image mean. The Histogram Table option creates a separate table with category histogram data: a set of records for each category with the image cell value, cell count, and area.

NDVI_JUN30_Statistics_by_CLS_ISODATA \ CLS_ISODATA

Table Edit Record Field Help

Cell_Value	Cell_Count	Minimum	Maximum	Mean	Median	Mode	Std_Dev	RelStdDevPct	Relative_Mean
1	12058	-73	93	73.2147	76	78	11.5481	15.7729	1.7090
2	3237	6	91	62.5706	64	66	15.5716	24.8864	1.4606
3	5345	0	90	61.7710	62	60	11.6057	18.7883	1.4419
4	2072	9	86	48.9160	49	42	13.0539	26.6864	1.1418
5	4955	-10	74	31.8440	32	33	10.4586	32.8433	0.7433
6	5694	-21	76	24.9586	24	24	10.7135	42.9251	0.5826
7	5193	-5	78	31.3497	31	26	12.3235	39.3098	0.7318
8	10301	-1	75	39.0120	40	50	11.2523	28.8432	0.9107
9	7565	-58	64	17.0966	19	20	11.6249	67.9955	0.3991
10	1771	-71	89	55.9616	61	86	23.9638	42.8218	1.3063
11	4893	-50	83	43.9949	45	50	14.0217	31.8711	1.0270
12	9858	-37	91	69.0792	74	81	14.4783	20.9590	1.6125
13	5524	-24	68	13.1836	13	15	9.7085	73.6406	0.3077
14	4639	-17	71	12.1802	10	9	7.9784	65.5028	0.2843
15	6645	-18	64	14.9895	14	10	7.8658	52.4756	0.3499
16	8149	-18	68	12.5083	10	7	9.3774	74.9695	0.2920
17	5857	-40	82	42.7659	44	45	12.0523	28.1821	0.9983