# Basic Tools

## Purpose

This module offers the following set of functions:

* Classify R2
* Model performance
* Extract by time
* Import netCDF
* Spatial statistics (batch)

## Installation

Install the .sav files in the save\_add folder (see also [ENVI .sav files: Installation and configuration](http://www.itc.nl/personal/nieuwenh/installations.html).

nrsmenu.pro Define NRS menu item in ENVI

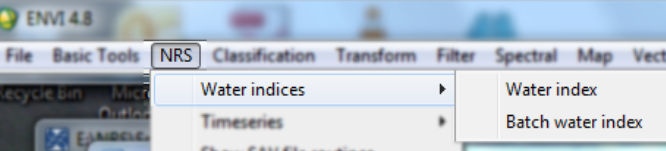
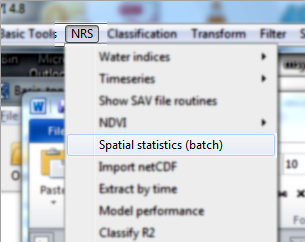
nrs\_Utils.sav Library with utility routines

nrs\_basic\_tools.sav The actual software

## Usage (gui)

|  |  |
| --- | --- |
| nrs\_statistics\_batch\_gui | Start the user interface of the spatial statistics (batch) |

Alternatively the command can be started from the ENVI menu: ‘NRS | Spatial statistics (batch):

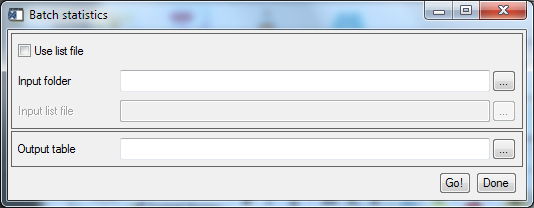


### Spatial Statistics (Batch)

Menu option is ‘NRS | Spatial statistics (batch), the command line is ‘nrs\_statistics\_batch\_gui’. This function accepts a series of input images and processes each input image separate to calculate the spatial statistics. It calculates: minimum, maximum, mean and standard deviation.

The software either accepts a file list in a text file or a folder name where the files to process are located. In case of the text file: each line contains the name of a single band image with a fully specified path. If the folder option is chosen, make sure that only images are located here; other files will cause problems

Below is the user interface:



Explanation of all the fields:

|  |  |
| --- | --- |
| Use list file | Toggle between the list-file or folder option |
| Input folder | Select the folder where all images are located |
| Input list file | Select a text file with one image on each line (for example see below) |
| Output table | The name of the file to store the results of the statistics |

### Example list file

E:\NRS\Lin Lin Li\data\_folder\batch\_in\file1.dat

E:\NRS\Lin Lin Li\data\_folder\batch\_in\file2.dat

E:\NRS\Lin Lin Li\data\_folder\batch\_in\file3.img

E:\NRS\Lin Lin Li\data\_folder\batch\_in\file4.img

Note: ENVI files are accompanied by .HDR files; these header files should **not** be in the list file!

### Example output table

filename,min,max,mean,stdev

file1.dat,0.00000,0.603201,0.300600,0.12000

file2.dat,-1.02260,-1.02260,-1.02260,0.23000

file3.img,-0.42857,-0.42857,-0.42857,0.20560

file4.img,-1.00000,-1.00000,-1.00000,0.00000