

Created by: Emil Peter IV Created for: Karner Blue Butterfly Habitat Modeling Project Forest Landscape Ecology Lab Department of Forest Ecology & Management University of Wisconsin – Madison 120 Russell Labs, 1630 Linden Lane Madison, WI 53706 April 11, 2006 As suggested in the document, **Using Biomapper 3 to Create Habitat Models: A Step-By-Step Guide**, using a spreadsheet program to help check your  $R^2$  values is very useful. It allows to you see all of the values you need in order to help determine which of your models is the best or worst choice for your data. Also as mentioned before, as  $R^2$  gets closer to 1.0, the model is getting better. By better, it is meant that your model is predicting the presence or absence points more accurately. The further your  $R^2$  value is from 1.0, the worse your model is at predicting presences or absences dependably. It was also mentioned that if your  $R^2$  value is 1.0, you need to increase the number of random seeds or increase your k value, because 1.0 is possible only in a perfect world. While it would be nice for your model to be perfect, deep down we all know that nature can not be perfectly predicted, but it can be rather well guessed.

Since the data in the **Results** window of BioMapper is space delimited, copying and pasting the data into Excel makes all of the values fall into individual cells. If all of the values are in individual cells then it makes it much easier to read and follow. Which of these would you rather try to find your data in, this?

	area-	adjusted fre	quencies						
	Repl.	Bin 1 Bin 2	Bin 3 Bin	4 Binned:	Lin. Qual.	Rs P(Rs	=0) Conti	nuous: Lin.	Qu
	1	0.17343	2.8383	0.75162	2.5329	0.047529	0.1349	0.4 0.6	0
	2	0.22318	2.0313	0.92318	2.0504	0.060259	0.12356	0.8 0.2	0 🗍
	3	0.32237	1.4165	0.65316	3.0757	0.12033	0.37009	0.8 0.2	0
- 11	4	0.10024	2.6062	0.75518	2.9862	0.057223	0.17088	0.8 0.2	0
- 1	5	0.024797	3.0692	0.75114	2.7741	0.048791	0.14975	0.4 0.6	0
	6	0.22318	2.1222	0.75137	2.7741	0.067306	0.18672	0.8 0.2	0
H	7	0.3007	2.2583	0.85891	2.3158	0.053162	0.12311	0.8 0.2	0
H	8	0.099192	2.1246	1.0451	2.5329	0.080023	0.20269	0.8 0.2	0
	9	0.17359	2.0265	0.77914	2.7138	0.07304	0.19822	0.8 0.2	0
	10	0.20047	1.4464	0.69311	2.6205	0.10908	0.28585	0.8 0.2	0
	Mean: SD:	0.18412 0.091821	2.194 0.79 0.53573	619 2 0.11599	.6376 0.071 0.30313	L674 0.19 0.025046	458 0.72	0.28 0 0.16865	0 0.
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Repl.		Bin 1	Bin 2	Bin 3	Bin 4	Binned: Lir	Qual.	Rs	P(Rs=0)	Continuou	Qual.	Rs	P(Rs=0)	Res	AVI	CVI
	1	0.17343	2.8383	0.75162	2.5329	0.047529	0.1349	0.4	0.6	0	0	0	1	1.6129	0.67708	0.1856
	2	0.22318	2.0313	0.92318	2.0504	0.060259	0.12356	0.8	0.2	0	0	0	1	1.6129	0.58333	0.16237
	3	0.32237	1.4165	0.65316	3.0757	0.12033	0.37009	0.8	0.2	0	0	0	1	1.6129	0.73958	0.2479
	4	0.10024	2.6062	0.75518	2.9862	0.057223	0.17088	0.8	0.2	0	0	0	1	1.6667	0.76842	0.26116
	-5	0.024797	3.0692	0.75114	2.7741	0.048791	0.14975	0.4	0.6	0	0	0	1	1.5385	0.71875	0.22706
	6	0.22318	2.1222	0.75137	2.7741	0.067306	0.18672	0.8	0.2	0	0	0	1	1.7241	0.71875	0.22716
	- 7	0.3007	2.2583	0.85891	2.3158	0.053162	0.12311	0.8	0.2	0	0	0	1	1.4706	0.67368	0.18232
	8	0.099192	2.1246	1.0451	2.5329	0.080023	0.20269	0.8	0.2	0	0	0	1	1.6129	0.77083	0.27915
	9	0.17359	2.0265	0.77914	2.7138	0.07304	0.19822	0.8	0.2	0	0	0	1	1.5385	0.69792	0.23106
	10	0.20047	1.4464	0.69311	2.6205	0.10908	0.28585	0.8	0.2	0	0	0	1	1.5873	0.56842	0.22864
Mean:		0.18412	2.194	0.79619	2.6376	0.071674	0.19458	0.72	0.28	0	0	0	1	1.5977	0.69168	0.22324
SD:		0.091821	0.53573	0.11599	0.30313	0.025046	0.078571	0.16865	0.16865	0	0	0	0	0.070672	0.06946	0.036649

Or this?

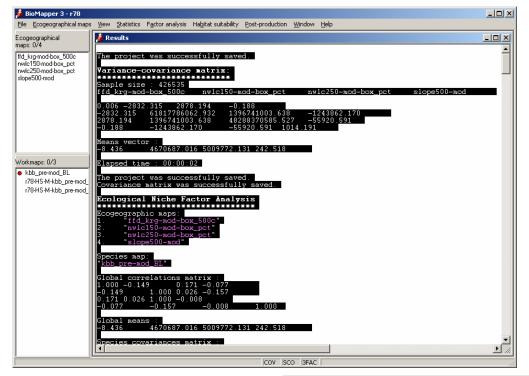
Agreed, the bottom is easier to read and find your values in more efficiently. The following steps will guide the reader to an easy to read and follow spreadsheet.

#### Initial Steps...

- ⇒ Open Microsoft Excel and save the workbook as something meaningful like Stats.xls or BioMapper\_Modeling\_Statistics.xls. Whatever you like so long as the name is recognizable to you.
- $\Rightarrow$  Open BioMapper 3.
  - Click **OK** at the splash screen.
- $\Rightarrow$  Open your project.
- ⇒ Once you have run all of the map verification steps and have created a number of models you are happy with, you are ready to extract your values.

## Data Extraction...

⇒ Select all of the text in your **Results** window by holding the **shift** key and dragging your mouse cursor to the top of the screen or by clicking your mouse cursor at the bottom of all of the text, scrolling up to the top, holding the **shift key**, and then click your mouse cursor at the top of the screen. All of the text should be highlighted like so:



- ⇒ Pressing the ctrl + c keys together will copy your selected text.
- ⇒ Now return to Excel and in the first cell at the top left (your left, not the monitor's) right-click your mouse and select **paste**.

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 $\Rightarrow$  All of your selected text will then be placed into your worksheet. If you scroll down you will see the rest of your data.

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⇒ You can rename the worksheet by doubleclicking in the tab at the bottom of your Excel window and typing in a name for your sheet. This sheet is named **78** 

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because it is the 78<sup>th</sup> iteration of the model.

- ⇒ Save your workbook. Save your workbook often as you move through these steps.
- $\Rightarrow$  Now that you have all of your text pasted into your worksheet you are now ready to extract the useful parts, but first you need a place to put them.

# R<sup>2</sup> Values Table...

⇒ In one of the other worksheets Excel opens when you create a new document, rename it **Rsq.** or some other meaningful name so you know which worksheet tab has your table of R<sup>2</sup> values.

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⇒ This table has all of the spaces for the Sheet, Map Name, the Number of Factor Maps, how many Bins the map was classified or reclassified into, the k Value for the map, the number of Random Seeds used in validation, and a column for the Mean R<sup>2</sup> Value.

	Sheet	Map Name	# Factor Maps	# Factor Maps determined by:	# Bins	k	Random Seed	Mean R <sup>2</sup> _1
n	78	nwlc150&250_slope_ffd						

There are also spots for more **k Values** and **Random Seeds**, as well as **Mean R<sup>2</sup> Values** for further validation and more random seeds. Also included are columns for whether or not the grid was converted in **ESRI format** and which **Smoothing Method** was used. These two issues are outlined in a different guide, but they are pointed out here for consideration if you are using ArcGIS for analysis or mapping instead of Idrisi. Formatting of the table (i.e. the highlighting of boxes, font sizes, bolding or italicizing) is up to the user.

Random Seed	Mean R <sup>2</sup> _3	k	Random Seed	Mean R <sup>2</sup> _2	Random Seed	Mean R <sup>2</sup> _4	ESRI Converted?	Smoothing Method
							N	
							N	

	0.9	Bright Green
	0.8	Yellow
	0.7	Gold
	0.6	Light Orange
Banking Color	0.5	Orange
<ul> <li>Ranking Color</li> <li>Codes</li> </ul>	0.4	Red
Codes	0.3	Brown
)	0.2	Dark Red
	0.1	Violet
2	0.0	Dark Blue
}	Error	Black
ŀ		
ESRI	Y	Rose
	N	Plum
, Conversion	N/A	Black

⇒ Also in this table, there is a legend for the color coding of different R<sup>2</sup> values and Conversion Values. This makes it easier to glance at the

table and find which values are best or worst, converted or not. More about this in a minute.

- ⇒ By filling in each of these columns with the proper values, we can easily compare models by any of the values associated with them. Remember: as you build more models, in order to compare them reliably by their  $R^2$  values, the other variables need to be consistent. If you change the **number of bins** or the **number of factor maps** you calculated, then you have changed your model and cannot say that it is necessarily better than a model with different values in those places.
- ⇒ Go to the worksheet you pasted all of your values from BioMapper in and scroll down until you find your Area-Adjusted Frequencies section. This is the output from your cross-validation method and contains your R<sup>2</sup> value. Your R<sup>2</sup> value is in the column labeled Rs. This is just BioMapper's notation for R<sup>2</sup>.

area-ad	ljust	ted frequen	cies													
Repl.		Bin 1	Bin 2	Bin 3	Bin 4	Binned: Lir	Qual.	Rs	P(Rs=0)	Continuou	Qual.	Rs	P(Rs=0)	Res	AVI	CVI
	1	0.17343	2.8383	0.75162	2.5329	0.047529	0.1349	0.4	0.6	0	0	0	1	1.6129	0.67708	0.1856
	2	0.22318	2.0313	0.92318	2.0504	0.060259	0.12356	0.8	0.2	0	0	0	1	1.6129	0.58333	0.16237
	3	0.32237	1.4165	0.65316	3.0757	0.12033	0.37009	0.8	0.2	0	0	0	1	1.6129	0.73958	0.2479
	4	0.10024	2.6062	0.75518	2.9862	0.057223	0.17088	0.8	0.2	0	0	0	1	1.6667	0.76842	0.26116
	-5	0.024797	3.0692	0.75114	2.7741	0.048791	0.14975	0.4	0.6	0	0	0	1	1.5385	0.71875	0.22706
	6	0.22318	2.1222	0.75137	2.7741	0.067306	0.18672	0.8	0.2	0	0	0	1	1.7241	0.71875	0.22716
	-7	0.3007	2.2583	0.85891	2.3158	0.053162	0.12311	0.8	0.2	0	0	0	1	1.4706	0.67368	0.18232
	8	0.099192	2.1246	1.0451	2.5329	0.080023	0.20269	0.8	0.2	0	0	0	1	1.6129	0.77083	0.27915
	9	0.17359	2.0265	0.77914	2.7138	0.07304	0.19822	0.8	0.2	0	0	0	1	1.5385	0.69792	0.23106
	10	0.20047	1.4464	0.69311	2.6205	0.10908	0.28585	0.8	0.2	0	0	0	1	1.5873	0.56842	0.22864
Mean:		0.18412	2.194	0.79619	2.6376	0.071674	0.19458	0.72	0.28	0	0	0	1	1.5977	0.69168	0.22324
SD:		0.091821	0.53573	0.11599	0.30313	0.025046	0.078571	0.16865	0.16865	0	0	0	0	0.070672	0.06946	0.036649

⇒ Copy and paste your R<sup>2</sup> value into the appropriate cell for that iteration. Remember: If you cross-validated more than one time with different **k** values or random seeds, you will need multiple fields for your multiple R<sup>2</sup> values and thus, will repeat this step until you have all of your values placed in the table.

	Sheet	Map Name	# Factor Maps	# Factor Maps determined by:	# Bins	k	Random Seed	Mean R <sup>2</sup> _1
h	78,	nwlc150&250_slope_ffd	3	Default Value	4	10	1	0.720

⇒ Once you have all of your values filled in, you can move onto the next iteration of your model. By right-clicking on the tabs at the bottom of the Excel screen, you can select *Insert…* and insert another worksheet when prompted. Repeat the steps used to get to this point for your new worksheet.

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- ⇒ Filling in the remainder of the table is a matter of repeating the previous steps until all of your iteration data has been migrated into Excel and you can compare their R<sup>2</sup> values.
- ⇒ To facilitate the viewing of your data values, a color coded legend may be helpful to color code your values. If you set up a color code for your table, you can sort or organize the table by R<sup>2</sup> values and look at which sheets (iterations of your model) are ranked highest.

	0.9	Bright Green
	0.8	Yellow
	0.7	Gold
	0.6	Light Orange
Ranking Color	0.5	Orange
Codes	0.4	Red
codes	0.3	Brown
)	0.2	Dark Red
	0.1	Violet
2	0.0	Dark Blue
3	Error	Black
F		
5 ESRI	Y	Rose
Conversion	N	Plum
Conversion	N/A	Black

## Ranking Your Models...

 $\Rightarrow$  To do this, fill in your table completely and color code each of the model iterations according to your legend.

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No.         No. <th>nking 0.5 olor 0.4</th> <th>Yellow</th> <th>LogReg</th> <th>log_re_2</th> <th>3</th> <th>Default Value</th> <th>4</th> <th>10</th> <th>1</th> <th>0.860</th> <th>200</th> <th>-</th> <th>100</th> <th>1</th> <th>0.728</th> <th>200</th> <th>-</th> <th>Y</th> <th>Alecto</th> <th></th> <th></th> <th></th>	nking 0.5 olor 0.4	Yellow	LogReg	log_re_2	3	Default Value	4	10	1	0.860	200	-	100	1	0.728	200	-	Y	Alecto			
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1       647       64				dc67_nvlc110&161&175&190_lfd_slope	3	Default Value	4	10	1					1		200		N				
Image: Sector of the secto			45		3	Default Value			1				100	1	0.770							
International			43	dc67 nwlc110 lfd slope		Default Value	4	10		0.920	200		100	1	0.838	200						
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Image numbers below by the second of the					3		4	10	1	1,000	200	1.000		1	0.881	200	0.858	N N				
Image with the set of the s			38 37				4	10	1	1.000	200			1	0.895			N				
Image minices with Sign in the service Sign in the serv				all minus nwlo255 & 161	3	Default Value	4	10		1.000	200	4000	100		0.887	200	0.001	N				
1       1       1       1       1       1       1       0       1       0.05       200       1       0.05       200       1       0       1       0.05       200       0.05       200       0.05       200       0.05       200       0.05       200       0.05       200       0.05       200       0.05       200       0.05       0.05       0.05       0.05       200       0.05       200       0.05       200       0.05       200       0.05			34	all minus nwlo255 & 110		Default Value	4	10	1	1.000	200	1.000	100	1	0.888	200	0.861	Ň				
1       0       Infrace mice258 doi:       0			32	all minus nwic255 & dc6			4	10		1.000	200			1	0.865			N N				
1       2       drinker wick255 kic3       3       Deriker Vike       4       0       1       0.00       200       10       0.055       200       N							4	10						1				N N				
1       2       Intrastructure 258 is id       3       Derived Value       4       0       1       1000       200       000       10       0.076       200       0.075<			29	all minus nwlo255 & do3	3	Default Value	4	10		1.000	200		100		0.895	200		N				
1       1       1       1       1       1       1       1       0       1       0       1       0       0       1       0       0       1       0       0       1       0			27	all minus nwic255 & do1	3	Default Value	4	10		1.000	200		100	1	0.876	200						
1       2       diminuzi miciză       3       Deristări Value       4       0       1       0.000       1       0.055       2.00       V       M         2       2.657       miciz miciză       3       Deristări Value       4       0       1       0.000       10       0.015       2.00       V       M       1       1       1       0.015       2.00       V       M       1       1       0.015       2.00       V       M       1       0.015       2.00       V       M       1       0.015       1       0.015       2.00       M       M       1       1       0.015       1       0.015       2.00       M       M       1       1       0.00       1       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015			26 25		3		4	10	1	1.000	200 200		100	1	0.905	200						
1       2       467_med_stope       3       Default Value       4       0       1       0.000       1       0.072       200       M       M         2       6457_med_stope       3       Default Value       4       0       1       0.000       10       0.027       2.00       M       M       1       0.000       1       0.027       2.00       M       M       1       0.000       1       0.027       2.00       M       M       1       0.000       1       0.027       2.00       M       M       1       1       0.000       1       0.027       2.00       M       M       1       1       1       0.000       1       0.027       2.00       M       M       1       1       1       0.000       1       0.027       2.00       M       M       1       1       1       0.000       1       0.027       2.00       M       M			24 23	all minus nylo255 & slope all minus nylo255			4	10	1		200			1	0.872	200		N				
200       667; mod_lef, stope       3       Def with Yube       4       10       1       0.00       1       0.627;       2.00       N       N          1       0.647; mod_lef, stope       3       Def with Yube       4       10       10       0.00       1       0.627;       2.00       N       N          1       0.6457; mod_lef, stope       3       Def with Yube       4       10       1000       2.00       100       1       0.637;       2.00       N       N          1       0.6457; Mod_lef, stope       3       Def with Yube       4       10       1000       2.00       100       1       0.637;       2.00       N       N         10       1000       2.00       1000       10       0.637;       2.00       0.015       N       N         10       10       0.000       100       10       0.637;       0.015       N       N         10       10       0.000       10       0.637;       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015       0.015			22	dc67_nvlc			4	10	1		200			1	0.773	200		N				
18       64-87, sice       3       Default Value       4       10       1       0.00       1       0.87       2.00       N       N         17       def477       30       Default Value       4       10       1       0.00       10       0.01       0.877       2.00       N       N       N         18       64/87_1/d_super       3       Default Value       4       10       100       200       100       10       0.877       2.00       0.97       N			20	de67 pule lid	3	Default Value	4	10		0.940	200		100	1	0.827	200						
17       de487			18	dc4567_slope		Default Value	4	10		1.000	200		100	1	0.897	200						
16       del 457, list, loga-       30       Del wise Value       4       40       10       10       0.000       100       10       0.956       200       0.053       N         13       del57, list, loga-       30       Delvale Value       4       10       10       0.800       200       100       10       0.956       200       0.833       Y         13       del57, list, loga-       30       Delvale Value       4       10       1       0.800       200       100       1       0.802       200       N       N         14       del57, list, loga-       30       Delvale Value       4       10       1       0.800       200       100       1       0.802       200       N       N         14       del57, list, loga-       30       Delvale Value       4       10       1       0.800       200       100       1       0.802       200       N				dc4567	3		4		1			1.000		1			0.911					
10       6657       4657       4567       5       0+siget Value       4       10       1       0.200       100       1       0.002       200       M         11       6557       457       14       0       1       0.904       200       100       1       0.902       200       M         11       6557       14       0.904       200       100       1       0.904       200       M         11       6557       14       0.904       200       100       1       0.904       200       M       M         10       molec, dispect       3       Divisitivitation       4       10       1       0.900       200       100       1       0.904       200       M       M       M       M       10       0.900       200       100       1       0.826       200       M       M       M       10       10       0.900       100       10       0.826       200       M       M       10       10       0.900       100       10       0.826       200       M       M       10       10       0.900       10       0.826       200       M       M       10				dc4567_lfd_slope	3		4						100	1	0.905	200	0.893	Ň				
11       de567       de_d_stope       2       Default Value       4       10       1       0.200       100       1       0.946       2.00       M         0       0m/def_d_stope       3       Default Value       4       10       1       0.900       100       1       0.946       2.00       M         0       9       de_d_st_d_stope       3       Default Value       4       10       1       0.900       100       1       0.826       2.00       M         0       de_d_st_d_stope       3       Default Value       4       10       1       0.000       10       0.826       2.00       M         0       de_d_st_d_stope       3       Default Value       4       10       1       0.000       10       0.826       2.00       M         0       de_d_st_d_stope       3       Default Value       4       10       1       0.000       10       0.010       2.000       M       M         0       de_d_st_d_stope       3       Default Value       4       10       1       0.000       2.00       0.011       0.010       2.00       M         0       de_d_st_d_stope       3 <td></td> <td></td> <td>13</td> <td>dc567</td> <td></td> <td>Default Value</td> <td>4</td> <td>10</td> <td>1</td> <td>0.820</td> <td>200</td> <td>0.520</td> <td>100</td> <td>1</td> <td>0.802</td> <td>200</td> <td>0.000</td> <td>N</td> <td></td> <td></td> <td></td> <td></td>			13	dc567		Default Value	4	10	1	0.820	200	0.520	100	1	0.802	200	0.000	N				
9       de_life_idope       3       Default Value       4       10       1       1000       200       100       1       0.025       200       N         9       de.dfr.net60.0502.01d       3       Default Value       4       10       1       1000       200       100       1       0.025       200       N         7       Interfluit-200_stapping       3       Default Value       4       10       1       1000       200       100       1       0.012       200       V         6       de.057_rindef0.0250_int_stapping       3       Default Value       4       10       1       0.800       200       100       1       0.012       200       V       V         6       5       de.057_rindef0.0250_int_stapping       3       Default Value       4       10       1       0.800       200       100       1       0.012       200       N       A         6       5       de.057_rindef0.0250_int_stapping       3       Default Value       4       10       1       0.800       200       100       1       0.751       200       N         6       3       Default Value       4       10       1			11	dc567_lfd_slope	3	Default Value	4	10	1	0.820	200		100	1	0.846	200		N				
6         de67         fmc/st0x/st20         tidd         3         Default         4         10         1         1000         200         100         1         0.852         2.00         N           7         mole/St0x250         tsppe         3         Default         Value         4         10         1         0.020         100         1         0.852         2.00         M           6         mole/St0x250         tsppe         3         Default         44         10         1         0.600         200         100         1         0.564         200         M         M           5         de67         mole/St0x250         tsppe         3         Default         44         10         1         0.660         200         100         1         0.550         200         M			10 9	nvlc_lfd_slope dc_lfd_slope		Default Value Default Value	4	10	1	1.000	200		100	1	0.826	200		N N				
6         InviceSpu25By (dir_dispect         3         Defende Value         4         10         1         0.680         200         100         1         0.564         200         N           5         d-657_rinder/S025By (dir_dispect         3         Defende Value         4         10         1         0.680         200         100         1         0.562         200         N           4         d-657_rinder/S025By (dir_dispect         3         Defende Value         4         10         1         0.680         200         100         1         0.761         2.00         N           3         d-657_rinder/S025By (dir_dispect         3         Defende Value         4         10         1         0.800         200         100         1         0.761         2.00         N			8	dc65/7_pwlc#5051615/250_lfd	3	Default Value	4	10	1	1.000	200		100	1	0.862	200		N				
4 de667 med/5006250 lid_slope 3 De4auk Value 4 10 1 0.680 200 100 1 0.781 200 N 3 de667 med/500250 lid_ 300 4 10 1 1.000 200 100 1 0.681 200 N			6	nv/c150&250_lfd_slope	3	Default Value	4	10	1	0.600	200		100	1	0.540	200		N				
3 dc6b7_rwlo150b250_l/d 3 Default Value 4 10 1 1.000 200 100 1 0.881 200 N				dc6&7 nwlc150&250 lfd slope	3	Default Value	4	10		0.860	200		100	1	0.761	200		N				
		-	3	dc6&7_nvlc150&250_lfd dc6&7_lfd_slope	3	Default Value Default Value	4	10	1	1.000	200 200		100	1	0.881 0.798	200 200		N N				

⇒ Next, highlight all of the values in your table by dragging from the top corner cell of your table all the way to the bottom opposite corner cell. In the example table, the top corner cell is named **Sheet** and the opposite bottom corner is empty.

	•	<i>f</i> ∡ Sheet	🚉   ≵ 🗈 🖎 - 🖋   約 - № - L					🔊 💂 Ari						· \$ % ,	.000			<b>v</b>		
No.         No. <th>2 3</th> <th></th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> <th>11</th> <th>12</th> <th>13</th> <th>14</th> <th>15</th> <th>16</th> <th>17</th> <th>18</th> <th>19</th> <th>20</th> <th>21</th> <th>22</th>	2 3		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Normal         Normal<	<i>a</i> 6	Sheet	Map Name	# Factor Maps	# Factor Maps determined by:	# Bins	*		Mean R'_		Mean R ′_3	*		Mean R ' _ 2		Mean R'_4		Smoothing Method		
Norma         Norma <th< td=""><td>0.9 Bright Gre</td><td>LogReg I</td><td>log te_2 FBB0B</td><td>3</td><td>Default Value</td><td>4</td><td>10</td><td>1</td><td>0.860</td><td>200</td><td></td><td>100</td><td>1</td><td>0.728</td><td>200</td><td></td><td>Y N/A</td><td></td><td></td><td></td></th<>	0.9 Bright Gre	LogReg I	log te_2 FBB0B	3	Default Value	4	10	1	0.860	200		100	1	0.728	200		Y N/A			
2         Method         3         Dec Nation         4         Dec Nation         Col         Addit         Dec Nation         Col         Addit         Dec Nation         Col         Nation	0.7 G	old re li	nwlc150&250 slope ffd	3	Default Value	4	10	1	0.720	200	0.720		1	0.617		0.635	<u>N</u>	enverine		
2         Method         3         Dec Nation         4         Dec Nation         Col         Addit         Dec Nation         Col         Addit         Dec Nation         Col         Nation	g 0.5 Oran	nge 76 i	dc567 pwlc110&150&190&240&250 ffd lfd slope	3	Default Value	4	10	1	1.000	200	1.000	100	1	0.898	200	0.895	Ŷ	gaossian		
Number         1         Number         2         Nu	0.3 Bro	wn 74	dc567 slope Há Há	3	Default Value	4	10		0.517			100 <i>100</i>	1				Y			
		led 73   blet 72	dc567_slope_ffd all minus dc567 lifd slope	3		4	10	1		200	1.000	100	1	0.897 0.554	200	0.895				
V         V		lue 71 -	all minus dc567_lfd	3		4	10 10	1		200		100	1		200					
M         M		69 -	all minus do567	3	Default Value	4		1	0.820	200			1	0.563	200					
0         Non-Altrian         2         Dirak Max         4         8         1         800         00         1         0000         1         0000         1000	si N Pl	um 67 :	slope dc0	2	Number of Factors	4	10	1	0.703	200		100	1	0.566	200					
	N/A Bla			2		4		1					1							
0       04       04       0       1       0.000       200       000       1       0.057       200       1       0         00       047_m01021(1)       0.000		64 .	all minus slope dc567	3		4		1		200		100	1		200					
Image: Section of the sectio		62	dc67_nwlc110&211	3	Default Value	4	10	1	0.900	200		100	1	0.835	200		N			
16       60       60       70       70       70       70       70         61       627       648       70      <		60	dc67_nwlc110&211_slope	3	Default Value	4	10	1	0.960	200		100	1	0.816	200		N			
16       60       60       70       70       70       70       70         61       627       648       70      <		58	do67_nwlo110&161&175&190&240	3	Default Value	4	10	1	0.960	200		100	1	0.788	200		N			
35       667       66		57 56	dc67_nvlc110&161&175&190&240_lfd dc67_nvlc110&161&175&190&240_slope	3		4	10	1	1.000	200 200		100	1	0.782 0.799	200		N		-	
10       000       000       1       0.000       1       0.000       1       0.000       000       1       0.000       000       1       0.000       00		55	do67_nwlo110&161&175&190&240_lfd_slope	3		1	10	1	1.000	200		100	1	0.809	200		N			
1       0.5		53	dc67_nwlc110&161&175&190&211_slope	3	Default Value		10		0.960	200		100		0.816	200		N			
40       647       0.000       0.00       1       0.000       0.00 <td< td=""><td></td><td>51</td><td>dc67_nwlc110&amp;161&amp;175&amp;190&amp;211</td><td>3</td><td>Default Value</td><td>1</td><td>10</td><td></td><td>0.940</td><td>200</td><td></td><td>100</td><td>1</td><td>0.815</td><td>200</td><td></td><td>N</td><td></td><td></td><td></td></td<>		51	dc67_nwlc110&161&175&190&211	3	Default Value	1	10		0.940	200		100	1	0.815	200		N			
47       def 7       def 7 <thdef 7<="" th=""> <thdef 7<="" th=""> <thdef 7<="" th=""> <thdef 7<<="" td=""><td></td><td>49</td><td>dc67_nwlc110&amp;161&amp;175&amp;190_lfd</td><td>3</td><td></td><td>1</td><td>10</td><td></td><td>1,000</td><td>200</td><td></td><td>100</td><td>1</td><td>0.828</td><td>200 200</td><td></td><td>N</td><td></td><td></td><td></td></thdef></thdef></thdef></thdef>		49	dc67_nwlc110&161&175&190_lfd	3		1	10		1,000	200		100	1	0.828	200 200		N			
44       86       0		48 47	dc67_nvlc110&161&175&190_slope dc67_nvlc110&161&175&190_lfd_slope	3		1	10		0.980	200			1	0.798	200 200		N N			
41       647, mol 10, Me, Jogo M       3       Defaul Yalas       4       10       1       0.03       200       0       0       1       0.03       200       0 <t< td=""><td></td><td>46 1</td><td></td><td>3</td><td>Default Value</td><td></td><td>10</td><td></td><td>0.440</td><td>200</td><td></td><td>100</td><td></td><td>0.483</td><td>200</td><td></td><td>Y</td><td></td><td></td><td></td></t<>		46 1		3	Default Value		10		0.440	200		100		0.483	200		Y			
442       affinizer mick256 ± 34       3       Detail Value       4       0       1       0.00       1       0.055       200       0.041       N         440       affinizer mick256 ± 34       3       Detail Value       4       0       1       1000       200       1000       100       001       0.001       200       0.051		44 .	dc67_nwlc110_slope	3	Default Value		10		0.760	200		100		0.700	200		Ň			
Image: market 75 s 211       9       0       1       100 <td></td> <td>43 42</td> <td>ac67_nwichtu_tra_stope all minus nwic255 &amp; 250</td> <td>3</td> <td></td> <td>4</td> <td>10</td> <td></td> <td>1.000</td> <td>200</td> <td></td> <td>100</td> <td>1</td> <td>0.838 0.856</td> <td>200</td> <td></td> <td>N</td> <td></td> <td></td> <td></td>		43 42	ac67_nwichtu_tra_stope all minus nwic255 & 250	3		4	10		1.000	200		100	1	0.838 0.856	200		N			
30       31       Detail Yale       4       0       1       0.000       1       0.055       2.00       N       N         31       attimus ruc255 6 19       3       Detail Yale       4       0       1       0.000       1       0.055       2.00       N		41 - 40 -	all minus nvic255 & 240 all minus nvic255 & 211	3		4	10		1.000	200	1.000	100	1	0.905	200		N		-	
1       7       3       Detail Vale       4       0       1       0.00       200       00       1       0.037       200       N       N         2       a finite rule256 is 10       3       Detail Vale       4       00       1       0.037       200       000       0.01       0.037       200       0.01		38 .		3		4	10		1.000	200		100 100	1	0.895	200		N			
34       at minus mic256 k07       3       Defail Value       4       0       1       1.000       200       100       1       0.888       200       N       N       Image: Second S				3		1 1		1	1.000				1		200		N			
23       all minus mic258 6:d2       3       Defail Yales       4       10       1       1000       200       100       1       0.081       200       0.0       1       0.081       200       0.0       1       0.081       200       0.0       1       0.081       200       0.0       1       0.081       200       0.0       0.0       1       0.078       200       0.057       1       0.0       1       0.078       200       0.057       1       0.0       1       0.078       200       0.057       1       0       1       0.00       1       0.078       200       0.057       1       0       1       0.00       1       0.078       200       0.057       1       0       1       0.00       1       0.078       200       0.057       1       0.057       0.00       1       0.078       200       1       0.01       0.018       200       0.01       0.018       200       0.01       0.018       0.01       1       0.017       0.01       1       0.017       0.01       1       0.017       0.01       0.018       0.01       0.018       0.01       0.018       0.01       0.018       0.01       0.		35 -	all minus nwlc255 & 150	3	Default Value	4	10	1	1.000	200	1.000	100	1	0.911		0.861	N			
20       at minus muc256 dx2       3       Defail Yales       4       10       1       1000       200       100       1       0.081       200       0.0       N       <		33 .	all minus nwlc255 & dc7	3	Default Value		10		1.000			100		0.825	200					
20       at minus muc256 dx2       3       Defail Yales       4       10       1       1000       200       100       1       0.081       200       0.0       N       <		31	all minus nwlo255 & do5	3	Default Value		10		1.000	200		100	1	0.859	200		N			
20       at minus muc256 dx2       3       Defail Yales       4       10       1       1000       200       100       1       0.081       200       0.0       N       <				3		4				200			1	0.892	200 200		N N			
20       at minus mud255 di di       0       Defauit Value       4       10       1000       1000       100       10       0.976       200       0.677       N         2       attimus mud255 di di       0       Defauit Value       4       0       1       1000       200       1000       100       10       0.975       200       0.677       N       N         2       4.87       Minus mud256 di di       0       Defauit Value       4       0       1       1000       200       100       10       0.975       200       7       N       N       1       1000       200       100       10       0.972       200       N       N       N       N       1       1000       200       100       10       0.972       200       N       N       N       N       1       1000       200       100       10       0.982       200       N <td< td=""><td></td><td>28 .</td><td>all minus nylo255 &amp; do2 all minus nylo255 &amp; do1</td><td>3</td><td></td><td>4</td><td>10</td><td>1</td><td>1.000</td><td>200</td><td></td><td>100</td><td>1</td><td>0.861</td><td>200</td><td></td><td>N</td><td></td><td></td><td></td></td<>		28 .	all minus nylo255 & do2 all minus nylo255 & do1	3		4	10	1	1.000	200		100	1	0.861	200		N			
24       at minus muc256 scipe       3       Default Value       4       0       1       1.000       200       100       1       0.872       200       N         2       at minus muc256 scipe       3       Default Value       4       0       1       0.000       100       1       0.872       200       Y       N         2       d striggt met       3       Default Value       4       0       1       0.000       100       1       0.872       200       N       N         2       d striggt met       3       Default Value       4       0       1       0.000       100       1       0.872       200       N       N       N         3       Default Value       4       00       1       0.000       100       1       0.872       200       N       N         4       0       0       1       0.000       100       100       0.814       200       N       N       N       N       N         4       0.0457       Default Value       4       0       1       1.000       200       100       1       0.816       N       N       N       N       N <td></td> <td>26 .</td> <td>all minus nylo255 &amp; do0</td> <td>3</td> <td>Default Value</td> <td>1</td> <td>10</td> <td></td> <td>1.000</td> <td>200</td> <td>1.000</td> <td>100</td> <td>1</td> <td>0.916</td> <td>200</td> <td></td> <td>N</td> <td></td> <td></td> <td></td>		26 .	all minus nylo255 & do0	3	Default Value	1	10		1.000	200	1.000	100	1	0.916	200		N			
22       def7_me6_ide       3       Default Value       4       10       1       0.892       000       100       1       0.773       200       N         21       def7_me6_ide       3       Default Value       4       10       1       0.000       100       1       0.872       200       N       N         20       def7_me6_id       3       Default Value       4       10       1       0.000       100       1       0.827       200       N		24 -		3		4	10	1	1.000	200		100	1	0.872	200	0.007	N			
20       def7_me_Bd       30       Default Value       4       10       1       0.90       100       1       0.827       200       N         1       def7_me_Bd       30       Default Value       4       10       1       0.000       100       1       0.827       200       N <td></td> <td>22</td> <td>de67_nwle</td> <td>3</td> <td>Default Value</td> <td>4</td> <td>10</td> <td>1</td> <td>0.960</td> <td>200</td> <td></td> <td>100</td> <td>1</td> <td>0.773</td> <td>200</td> <td></td> <td>N</td> <td></td> <td></td> <td></td>		22	de67_nwle	3	Default Value	4	10	1	0.960	200		100	1	0.773	200		N			
10       def7_m0c_Md_dope       3       Defailt Value       4       10       1       1000       200       100       1       0.844       200       N         10       def67_m0c_Md_dope       3       Defailt Value       4       10       1       1000       200       100       1       0.844       200       N		20	de67_nwle_lifd	3	Default Value	4	10		0.940	200		100	1	0.827	200		N			
17       dx4557       3       Default Value       4       10       1       1.000       2.00       100       10       0.882       2.00       N         16       dx4557_idid_clope       3       Default Value       4       10       1       1.000       2.00       100       10       0.882       2.00       0.873       N         16       dx4557_idid_clope       3       Default Value       4       10       1       1.000       2.00       1.000       10       1       0.505       2.00       0.873       N         10       dx557_idid_clope       3       Default Value       4       10       1       0.602       2.00       0.873       N         10       dx557_id_id_slope       3       Default Value       4       10       0.810       2.00       0.002       2.00       N       N         10       dx557_id_id_slope       3       Default Value       4       10       1       0.802       2.00       100       1       0.022       2.00       N       N       N       N       N       N       N       N       N       N       N       N       N       N       N       N       N		19	dc67_nwlc_lfd_slope dc4567_slope	3	Default Value	4	10	1	1.000	200 200		100 100	1	0.844	200 200		N N			
H         disfler_stope         O         Default Value         4         10         0.800         200         100         1         0.513         200         0.573         Y           1         disfler_stope         3         Default Value         4         10         0.800         200         100         1         0.0513         200         0.573         Y           10         disfler_stope         3         Default Value         4         10         0.620         200         100         1         0.0762         200         100         1         0.0764         200         100         1         0.0764         200         100         1         0.0764         200         100         1         0.0764         200         100         1         0.0764         200         100         1         0.0764         200         100         1         0.076         200         100         1         0.076         200         100         1         0.076         200         100         1         0.076         200         100         1         0.076         200         100         1         0.076         200         100         1         0.076         200 <td< td=""><td></td><td>17</td><td>dc4567</td><td>3</td><td>Default Value</td><td>4</td><td>10</td><td>1</td><td>1.000</td><td>200</td><td>1000</td><td>100</td><td>1</td><td>0.882</td><td>200</td><td>0.911</td><td>N</td><td></td><td></td><td></td></td<>		17	dc4567	3	Default Value	4	10	1	1.000	200	1000	100	1	0.882	200	0.911	N			
11       def67       3       Default Yalue       4       10       0.120       200       100       1       0.802       200       N         12       def67 yet       3       Default Yalue       4       10       1       0.802       200       100       1       0.802       200       N       N         11       def67 yet       3       Default Yalue       4       10       1       0.802       200       100       1       0.846       200       N       N         11       def67 yet       3       Default Yalue       4       10       1       0.802       200       100       1       0.846       200       N       N         12       defa yet       3       Default Yalue       4       10       1       1000       200       100       1       0.828       200       N       <		15	dc4567_lfd_slope	3	Default Value	4	10	1	1.000	200	1.000	100	1	0.905	200	0.893				
11         defety fig_isper         3         Default Value         4         10         1         0.820         100         1         0.846         200         N           10         med_ing_isper         3         Default Value         4         10         1         0.800         200         100         1         0.846         200         N           9         de_ing_isper         3         Default Value         4         10         1         1.000         200         100         1         0.828         200         N         N           6         des51, methods/8bc20 id         3         Default Value         4         10         1         1.000         200         100         1         0.828         200         N         N           7         methods/8bc20 id         3         Default Value         4         10         1         0.020         100         1         0.828         200         N         N           7         methods/8bc20 id         3         Default Value         4         0         1         0.800         200         100         1         0.828         200         N         N         N         N         N		13	dc567_slope dc567	3	Default Value	4	10	1		200	0.820	100	1	0.802	200	0.939	N			
0         de5827 mid:508.5520 jid         3         Default Value         4         10         1         1000         200         100         1         0.882         200         N           7         mid:508.2501 jid         jid         0         Default Value         4         10         1         0.0200         100         1         0.882         200         N           6         mid:508.2501 jid         jidspe         3         Default Value         4         10         1         0.680         200         100         1         0.853         200         N           6         dis63.27 jids jidspe         3         Default Value         4         10         1         0.680         200         100         1         0.654         200         N         N           6         dis63.27 jidspe         3         Default Value         4         10         1         0.680         200         100         1         0.751         200         N           4         dis63.27 jidspe         3         Default Value         4         10         1         1.080         200         100         1         0.751         200         N         N		11 -	dc567_lfd_slope	3	Default Value	4	10	1	0.820	200		100	1	0.846	200 200		N			
0         de5827 mid:508.5520 jid         3         Default Value         4         10         1         1000         200         100         1         0.882         200         N           7         mid:508.2501 jid         jid         0         Default Value         4         10         1         0.0200         100         1         0.882         200         N           6         mid:508.2501 jid         jidspe         3         Default Value         4         10         1         0.680         200         100         1         0.853         200         N           6         dis63.27 jids jidspe         3         Default Value         4         10         1         0.680         200         100         1         0.654         200         N         N           6         dis63.27 jidspe         3         Default Value         4         10         1         0.680         200         100         1         0.751         200         N           4         dis63.27 jidspe         3         Default Value         4         10         1         1.080         200         100         1         0.751         200         N         N		10 1	nwlc_lfd_slope	3		4	10	1		200			1	0.760	200 200		N		-	
6         mid:0502201/id_stope         3         Default Value         4         10         1         0.660         200         100         1         0.654         200         N           5         de647_r0xpe         3         Default Value         4         10         1         0.660         200         100         1         0.870         200         N         N           4         de647_rm/c50x201/dt_stope         3         Default Value         4         10         1         0.680         200         100         1         0.751         200         N         N           3         de647_rm/c50x201/dt_stope         3         Default Value         4         10         1         0.680         200         100         1         0.871         200         N         N		8 1	dc6&7_nwlc150&161&250_lfd	3	Default Value	4	10	1	1.000	200		100	1	0.862	200		N			
4 de567_me/550/250 (M_10ppe 2 Defeat/Value 4 10 1 0.686 200 100 1 0.0751 200 N de562_me/550/250 (M_10ppe 3 Defeat/Value 4 10 1 1000 20 100 1 0.681 200 N		6 1	nwlc150&250 lfd slope	3	Default Value	4	10	1	0.600	200		100	1	0.540	200		Ň			
3 de682 mel680220 dd 3 De4aut Nalue 4 10 1 1000 200 100 1 0881 200 N		4 1	do6&7 pwlo150&250 lifd slope	3	Default Value	4	10	1	0.860	200		100	1	0.761	200 200		Ň			
		3 1	dc6&7_nwic150&250_lfd dc6&7_lfd_slope	3	Default Value Default Value	4	10		1.000	200		100 100	1	0.881 0.798	200		N			

- $\Rightarrow$  From the *Data* menu, select *Sort...*
- $\Rightarrow$  The **Sort...** dialogue will come up and look similar to this:

Sort		?)
Sort by		
Mean R2_2	-	C <u>A</u> scending
,		Descending
Then by		
Mean R2_4	-	C As <u>c</u> ending
	_	Oescending
Then by		
	-	Ascending
		C Descending
My data range has -		
Header row	$ \odot$ No	o header ro <u>w</u>
Options	0	OK Cancel

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:2	<u>File E</u> d	it j	<u>V</u> iew <u>I</u> nser	rt F <u>o</u> rr	nat <u>T</u> ools	Dat	a <u>W</u> indow <u>H</u> elp	Ado	be PDF	
80	💕 🔛	3	8161	à   🍣	Å↓	<u>S</u> ort		🧕 Σ 🗕	AZ	
	R2C4			Shee			Eilter	۲		
1	1	2	3	4			Validation		6	
2	4/1.312006			Sheet			T <u>e</u> xt to Columns		Factor Maps	i i de
3		0.9	Bright Green		log_re_2		Import External <u>D</u> ata	•	3	
4		0.8	Yellow Gold	All 78	All2 nwlc150&250 s		1.1-6		3	
6		0.6	Light Orange		all minus na		List	•	3	D
	Ranking	0.5	Orange		dc567_nwlc1108		XML	•	3	
8	Color	0.4	Red	75	all minus nwlo2		<u> </u>		3	
9	Codes	0.3	Brown		dc567_slop	9	Refresh Data		3	D
10		0.2	Dark Red		dc567_slope_f		-		3	
11		0.1	Violet	72	all minus dc567		*		3	
12		0.0	Dark Blue	71	all minus de567				3	
13		Error	Black	70	all minus de567		9		3	
14				69	all minus dc567				3	
15	FSBI	Y	Bose	68	all minus slone	nwlo2	2508450		- 3	

- ⇒ Using the dropdown menus, select the names of the columns you want to sort by. Sorting by your R<sup>2</sup> values is and selecting the **Descending** radio button will sort the values from **Highest to Lowest**. Since the closer R<sup>2</sup> is to 1.0, this would be the recommended way of sorting the values. If you do not see your column names appear in the dropdown menu and only letters or numbers, make sure you selected your header row in your worksheet, and then make sure to select the **Header Row** radio button at the bottom of the dialogue to include your header row. It should select itself by default, but on occasion it will not and you will have to click it.
- $\Rightarrow$  Click **OK** to sort.

$\Rightarrow$	Your data should be sorted and if	you color coded, will look similar to this:
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1		¥ 4/13/	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
11312006	1	Sheet	Map Name	# Factor Maps	# Factor Maps determined bg:	# Bins	*	Random Seed	Mean R ' _ I	Random Seed	Mean R'_S	*	Random Seed	Mean R'_2	Random Seed	Mean R'_1	ESRI Converted?	Smoothing Method			
	0.9 Bright Green 0.8 Yellow 0.7 Bold	# 77	dc567_slope all minus nwic255 & Hd_plus_Hd	3 5	Default Value Default Value		10 16		0.880 <b>1.666</b>	200 <b>200</b>	0.920 1.000	100 <i>100</i>		0.939 <i>6. 525</i>	200 <b>200</b>	0.939 <b>6.887</b>	Y	gaussian			
	0.6 Light Orange	74 26	do567_slope_Hd_Hd all minus nwlo255 & do0	3	Default Value Default Value	1	<b>16</b> 10	1	<i>0.517</i> 1.000	200 200	1.000 1.000	<b>100</b> 100	1	<i>0.517</i> 0.916	200	0.853	N				
inking Color	0.5 Orange 0.4 Red	16 35	dc4567_lfd all minus nwlc255 & 150	3	Default Value Default Value	1	10 10		1.000	200 200	1.000	100 100	1	0.914 0.911	200 200	0.911 0.861	N N				
odes	0.3 Brown 0.2 Dark Red	15 41	dc4567_lid_stope all minus nwlc255 & 240	3	Default Value Default Value	1	10 10	1	1.000	200 200	1.000 1.000	100 100	1	0.905	200 200	0.893 0.841	N N				
	0.1 Violet 0.0 Dark Blue	25	all minus nwio255 & lfd all minus nwio255 & 211	3	Default Value Default Value	4	10 10		1.000	200	1.000	100 100		0.905	200	0.857	N				
	Error Black	76	dc567_nvlc110&150&190&240&250_ffd_lfd_slope	3	Default Value	4	10	1	1.000	200 200	1.000 1.000	100	1	0.898	200 200	0.895	Y				
SBI	Y Bose	73 18	dc567_slope_ffd dc4567_slope	3	Default Value Default Value	4	10 10		1.000 1.000	200 200	1.000	100 100	1	0.897	200 200	0.895	Y N				
nversi on	N Plum N/A Black	29 23	all minus nwio255 & do3 all minus nwio255	3	Default Value Default Value	4	10 10	1	1.000	200 200		100 100	1	0.895	200 200		N Y				
011	Tors Diack	38	all minus nwic255 & 190	3	Default Value	4	10	1.1	1.000	200		100	1	0.895	200		N				
		30 37	all minus nwio255 & do4 all minus nwio255 & 175	3	Default Value Default Value	4	10 10		1.000 1.000	200 200		100 100	1	0.892 0.891	200 200		N N				
		75 34	all minus nwlc255 & dc0_plus_ffd all minus nwlc255 & 110	3	Default Value Default Value	4	10 10		1.000	200 200	1.000	100 100	1	0.889	200 200	0.870	N N				
		36	all minus nwic255 & 161	3	Default Value	4	10		1.000	200		100		0.887	200 200		N				
		21 17	dc67_nwlo_slope dc4567	3	Default Value Default Value	- 1	10 10		1.000	200		100 100	1	0.882 0.882	200		N				
		39	all minus nwlo255 & 200 do6&7_nwlo150&250_lfd	3	Default Value Default Value	4	10 10		1.000 1.000	200 200		100 100	1	0.881 0.881	200 200		N N				
		27 24	all minus nwio255 & do1 all minus nwio255 & slope	3	Default Value Default Value	4	10 10		1.000	200 200		100 100		0.876	200 200		N				
		32	all minus nwlo255 & do6	3	Default Value	- 2	10		1.000	200		100	1	0.865	200		Ň				
		8 28	dc6&7_nvlc150&161&250_lfd all minus nvlc255 & dc2	3	Default Value Default Value	4	10 10		1.000 1.000	200 200		100 100		0.862 0.861	200 200		N N				
		31 42	all minus nwlo255 & do5 all minus nwlo255 & 250	3	Default Value Default Value	1	10 10	1	1.000 1.000	200		100 100	1	0.859 0.856	200		N				
		11	dc567_lfd_slope	3	Default Value	- i	10		0.820	200 200		100	1	0.846	200 200		N				
		19 43	dc67_nvlc_lfd_slope dc67_nvlc110_lfd_slope	3	Default Value Default Value	4	10 10		1.000 0.920	200 200		100 100		0.844 0.838	200 200		N N				
		62 52	dc67_nvlc110&211 dc67_nvlc110&161&175&190&211_lfd	3	Default Value Default Value	1	10 10		0.900 1.000	200 200		100 100	1	0.835 0.832	200 200		N				
		49	dc67_nwlc110&161&175&190_lfd	3	Default Value	4	10 10		1.000	200		100		0.828	200		N				
		20 9	dc67_nwlc_lfd dc_lfd_slope	3	Default Value Default Value	4	10		0.940 1.000	200		100		0.827	200		N N				
		33 59	all minus nvlo255 & do7 do67_nvlo110&211_lfd_slope	3	Default Value Default Value	4	10 10		1.000	200 200		100 100	1	0.825 0.822	200 200		N				
		5 60	dc6&7_slope	3	Default Value	4	10 10		0.680	200 200		100 100		0.820	200		N				
		53	dc67_nvlc110&211_slope dc67_nvlc110&161&175&190&211_slope	3	Default Value Default Value	4	10		0.960	200		100	1	0.816	200 200		N				
		63 51	dc567_nvlc150&250_lfd_slope dc67_nvlc110&161&175&190&211	3	Default Value Default Value	4	10 10		0.940	200 200		100 100		0.816 0.815	200 200		N N				
		50 55	dc67_nvlc110&161&175&190 dc67_nvlc110&161&175&190&240_lfd_slope	3	Default Value Default Value	4	10 10		0.940	200 200		100		0.811	200 200		N N				
		13	dc567	3	Default Value	- 2	10		0.820	200		100	1	0.802	200		N				
		56 48	dc67_nvlc1108;1618;1758;1908;240_slope dc67_nvlc1108;1618;1758;190_slope	3	Default Value Default Value	4	10 10		0.920 0.980	200 200		100 100	1	0.799 0.798	200 200		Y N				
		2 54	dc6&7_lfd_slope dc67_nvlc110&161&175&190&211_lfd_slope	3	Default Value Default Value	4	10 10	1	0.620	200 200		100 100	1	0.798 0.796	200 200		N N				
		12	dc567_lfd	3	Default Value	- 4	10	1.1	0.940	200		100	- i -	0.790	200		N				
		58 47	dc67_nvlc110&161&175&190&240 dc67_nvlc110&161&175&190_lfd_slope	3	Default Value Default Value	4	10 10		0.960	200 200		100 100	1	0.788 0.784	200 200		N N				
		57 22	dc67_nvlc1108;1618;1758;1908;240_lfd dc67_nvlc	3	Default Value Default Value	4	10 10	1	1.000 0.960	200 200		100 100	1	0.782	200 200		N N				
		45	dc67_nwlc110_lfd	3	Default Value	4	10		0.700	200		100		0.770	200		Ň				
		4 10	dc6&7_nwlc150&250_lfd_slope nwlc_lfd_slope	3	Default Value Default Value	4	10 10		0.860 0.900	200 200		100 100		0.761 0.760	200 200		N N				
		LogReg 61	log_re_2 dc67_nvlo110&211_lfd	3	Default Value Default Value	4	10 10		0.860 0.820	200 200		100 100	1	0.728 0.724	200 200		Y N				
		44	dc67_nvlo110_slope	3	Default Value Default Value	4	10 10		0.760	200 200		100	1	0.700	200		N				
		66	all minus slope_nwlc250&150 lfd_dc0	2	Number of Factors	÷.	10		1.000	200		100	1	0.620	200 200 200		Ň				
		78	nvic1508/250_slope_ffd all minus do567 lfd	3	Default Value Default Value	4	10 10	1	0.720	200 200	0.720	100 100	1	0.617 0.572	200 200	0.635	N Y				
		67	slope_dc0 all minus slope_dc567	2	Number of Factors Default Value	4	10	1	0.703	200 200		100 100	1	0.566 0.563	200 200		N N				
		64 69	all minus de567	3	Default Value	4	10		0.820	200		100		0.563	200		Ň				
		70	all minus dc567_stope all minus dc567 lfd_stope	3	Default Value Default Value	4	10 10		0.820	200 200		100 100		0.563	200 200		N N			<u> </u>	
		65	slope_lfd_dc0 nvict506250_lfd_slope	3	Default Value	4	10	1	0.560	200 200		100 100	1	0.552	200 200 200		N				
		46	dc67_nwlc110	3	Default Value Default Value	4	10		0.440	200		100	1	0.483	200		Y				
			nwlc1506/250 slope		Default Value										200		Y				

⇒ The values at the top of the list are closest to 1.0 and should therefore be the better models at predicting habitat suitability. In this case, the  $2^{nd}$  and  $3^{rd}$  models are the recommended models to look at due to one variable.

### Tab Colors...

- ⇒ The tabs in this example have been color coded to agree with their iterations in the table for ease in finding them at the bottom of the screen as there are more than 80 models in this example. Color coding the tabs is not a difficult task and makes for a quick way to organize your worksheets.
- ⇒ To color your tabs, right-click on the tab and choose Tab Color...

524	
525	
526	Insert
527	Delete
528	Rename
529	-
530	Move or Copy
531	Select All Sheets
532	Tab Calar
533	Tab Color
534	🐺 View Code
H + H Mean Rsq. 7	78 / 77 / All / LogReg / 2 / 3 / 4 / 5 / 6 /

⇒ The Format Tab Color dialogue box will appear and you can then choose which color you would like your tab to be.



#### Also and maybe most importantly...

It cannot be stressed enough to save your work when working with Microsoft Excel, BioMapper or any other program where you have done a lot of work. If the program you are working with encounters a problem, and it will, the problem *\*may\** be fatal. Chances are <u>very good</u> that the problem *\*is\** fatal and the program will need to be shut down and restarted at which point you will wish you had saved your work before taking that last step or making that last calculation.