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Documentation


I can't find Dinamica's pdf guidebook file anywhere. Where was it installed at?

 **Fix Me!** Dinamica's guidebook is installed as a pdf file named Dinamica_EGO_guidebook.pdf inside the folder "Dataset". The default directory should be: C:\Documents and Settings\My Documents\Dinamica EGO\Dataset If you still can't find it on these default locations it probably means that you have not installed the guidebook files while installing the software. We suggest you to reinstall Dinamica EGO making sure that the option to install the guidebook files is checked.

Installation

After installing Dinamica EGO it tells me that the Java Platform should be updated. However, even after I updated it keeps showing me the following message:

"Unable to load library "JavaBinding": c:\Program Files\DinamicaEGO\JavaBinding.dll": Please reinstall Dinamica EGO and if the problem persists report it as a bug to dinamica@csr.ufmg.br". What should I do?


 **Fix Me!** It might be possible that because of different versions of Dinamica and Java Platform previously installed the Windows is not sure where to find the correct files to run the system. This is what you should try:

1. Uninstall any previous version of Java (Java Runtime) present in your machine.
2. Uninstall Dinamica EGO.
3. Completely remove the folder where Dinamica EGO was first installed. Make sure you have backed up any model you would have inside that folder.
4. Search for any of the files below in your computer. In case you find any of these, they should be removed.
 - Dinamica.dll

- ImagePlugin.dll
- CalibrationPlugin.dll
- RegionPlugin.dll
- ValidationPlugin.dll
- JavaBinding.dll
- Base.dll
- SimulationPlugin.dll,

5. Install Dinamica EGO again.

Dinamica EGO will not start because it says 'Could not create the Java virtual machine'. What is wrong?

 **Fix Me!** The computer where Dinamica was installed has probably less than 1300 megabytes of available memory. To workaround, edit the file Dinamica.l4j.ini located in the Dinamica EGO installation folder using a raw text editor (like notepad) and change the line

```
-Xmx1300m
```

to something like

```
-Xmx1000m
```

The number represents the maximum amount of memory available to Dinamica Graphical Interface (in megabytes). If Dinamica still not launching, lower the value and try again. Only lower the value just far enough to allow Dinamica to launch, as the lower this value is, the less memory it is allowed to use. So, you may run into performance problems if the value is too low.

General

Some times when I try to load a model in Dinamica EGO I get the following error message: “The input port "<>" is not defined.” What am I doing wrong?

It’s probably caused by an old Dinamica EGO version. Please update Dinamica by downloading the latest version (1.6.2). It will likely solve your problem.

I’m getting the following error message: “[ERROR] "Group": Contained functor "LoadCategoricalMap" found an error: The value -2147483647 (typed"Signed 32 Bit Integer") does not fit null (typed "Unsigned 8 Bit

Integer”).” What is causing it?

It’s caused by a wrong null value inputted inside a Load Categorical Map functor. When the type “Unsigned 8 Bit Integer” is chosen, the null value should be between 0 and 255. The boundaries of each cell type are as follows:

Cell Type	Value Range
Signed 8 bit Integer	-128 ~ 127
Unsigned 8 bit Integer	0 ~ 255
Signed 16 bit Integer	-32768 ~ 32767
Unsigned 16 bit Integer	0 ~ 65535
Signed 32 bit Integer	-2147483648 ~ 2147483647
Unsigned 32 bit Integer	0 ~ 4294967295

What is CARLUC? Where can I find further information regarding it?

CARLUC algorithm is described in the following articles: Hirsch, A.I., Little, W.S., Houghton, R.A., Scott, N.A., and White, J.D. 2004. The net carbon flux due to deforestation and forest re-growth in the Brazilian Amazon: analysis using a process-based model. Global Change Biology, 10, 908-924.

I'm interested in purchasing Dinamica EGO software for using it in my dissertation. How can I do that?

Dinamica EGO is a freeware software for non-commercial use. Go to the Download section of this website and get it. It includes everything you need to get it started (guidebook and examples files).

What languages is Dinamica EGO available in?

For now, the software is only available in English.


The operator CalcDistanceToFeatureMap has as an output a map with only zero values. What is wrong?

The operator CalcDistanceToFeatureMap identifies as a feature any not null cell. Any cells not representing features should be identified as null cells. However, when the features map comes from a GeoTiff image file, it's not always possible to identify which cells are null cells, therefore all the cells in the map are considered features. So before using the CalcDistanceToFeatureMap operator the map should be used to calculate distances and the null value set by the CalculateMap operator.

That happens because GeoTiff file format has not defined a standardized way for storing null value. Because of that, each software has to define its own mechanism. ArcGIS stores the null values in a file which extension is .aux, not readable by Dinamica EGO, so every time you open a GeoTiff image created by ArcGIS, Dinamica will ignore the null values. However, if the image is created by Dinamica EGO, it will certainly be able to recognize the null value information every time you need to reopen it on Dinamica.

Performance

How much memory (RAM) is Dinamica able to handle?

 **Fix Me!** If you are working on the graphical user interface the memory is limited to 1Gb, it doesn't matter how much memory you have available in the system. In order to use more than that amount of memory you should run Dinamica EGO from Console Launcher (inside tools sub-menu). Besides that, Dinamica EGO is also limited by the Windows Operating System (~2 Gigabytes each process in a 32-bit architecture). Further information on how to surpass this memory limitation can be found at <http://en.wiki.mcneel.com/default.aspx/McNeel/LargeAddressAware.html>.

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10- Unfortunately it might happen because Dinamica EGO is only able to handle a few projections and datums. (projections: Geodetic, UTM Datum: SAD69, NAD27, WGS83, Corrego Alegre). When an image with another projection system and/or datum is written in a different format than the one from which their geographic information was originally acquired, the georeferencing information is discarded.

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11- Make sure the operator CalcDestinationMap has as an input an attractiveness map with not null values. Make sure the parameter destinationsPerQuadrant is greater than zero. Make sure the map of roads inputted in CalcCostMap and CalcPathwayMap has both null values and not null values. In this map, the presence of roads is represented by a not null value while the absence of roads by a null value. If this map is a GeoTiff image not generated by Dinamica it probably won't have any information regarding null value, consequently, all cells will be interpreted as roads.

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12- Technically it's not needed, although it's important for the results to be consistent. It's only required the two images have the same number of rows and columns. Currently, information regarding projection and cell dimension is neither used nor validated by the DetermineTransitionMatrix operator.

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13- The probability map created is a multi-layer map in which each layer correspond to a certain transition used in the model. Each layer is named "probability_i_to_j", where i and j are the transition category values. Unfortunately, if the map is saved as a GeoTiff file format the name of the layers will be lost as it doesn't support layer names.

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14- There isn't any mechanism for automatic calibrating those values in Dinamica EGO. In case you don't want to use trial and error we recommend using a different software like Fragstats(link <http://www.umass.edu/landeco/research/fragstats/fragstats.html> pode colocar como hiperlink) to calculate the parameters.

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15- 1. Open the model. 2. Before you run it, click on Edit menu, then "Log Level" and set is as "Debug" 3. Run the model. 4. As soon as Dinamica EGO crashes and close go to the folder where it was installed and make a copy of these two files: hs_err_pidXXXX.log (XXXX is a number). There may be more than one file with that name inside the installation folder. Make sure you get the most recent one. debug.txt. 5. Compact these two files in a zip file and send it to dinamica@csr.ufmg.br so we can try to find out what's causing Dinamica EGO to crash.

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16- If the reason for doing this is to limit memory usage, you don't have to worry with that any more. The new version of Dinamica EGO can handle memory issued a lot better than it used to.

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17- The log level available in Dinamica EGO are as follows: Nível

Nome

Descrição

5

DEBUG

Displays debug information and all the informations from the levels below this.

INFO

Displays progress information and all the informations from the levels below this. This is the standard log level.

3

WARNING

Displays warnings regarding any potential problem that may occur and all the information from the levels below this.

2

ERROR

Displays any error occurred and all the information from the levels below this.

1

RESULT

Displays the result only.

In order to change the log level go to menu EDIT, then Log Level and choose which one you want.

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19- No, you don't have to do this. This message is only telling you that Java is already installed so you don't have to install it again.

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21- It means that the use of this operator is no longer recommended as it will be eliminated in the future. Please do not use it or if used, replace this operator in existing models with new ones that perform the same function.

9 - Why is the null value in my GeoTiff images ignored by Dinamica EGO but not by ArcGIS?

10 - Every time I try to use a GeoTiff image created by Dinamica in ArcGIS it lacks the spatial reference. What's wrong?

11 - The road constructor is not building any roads. What's happening?

12 - Do I have to know the upper left corner coordinates and the cells dimensions of an image used to calculate the transition matrix?

13 - Are the probability maps created by the operator CalcWeightsOfEvidence combined probabilities for all the transitions?

14 - Is it possible to automatically calibrate the values for "mena patch size", "patch variance" and "patch isometry" using Dinamica EGO?

15 - When I'm running a simulation model, Dinamica EGO closes without informing any error message. What should I do?

16 - Can I convert all the input images of the model (static variables and initial land use map) into signed integer 16-bit with a null value equal to -32768?

17 - What are difference between each log level available in Dinamica EGO?

19 - When I install Dinamica EGO it shows me a message with the current version of java already installed. Do I have to uninstall Java and reinstall it again?

21 - I am seeing the following message "This operator is deprecated and should be removed in future releases of Dinamica." What does it mean?