



# ECO GUIDE TO Stratifying a Complete Inventory

If you have decided to conduct a **complete inventory**, you will be collecting data for all of the trees located in your study area. In this type of project, you can choose to stratify or subdivide your trees by smaller units, such as land uses or zones, which can help clarify differences across the study area. Your Eco results will be estimated for all the trees in your study area as well as by strata. The decision to stratify should ultimately be based on your current and future project objectives and available resources.



## Tip

The directions in this guide assume that you are working with a new or existing Eco project that has already been designed and created as described in the **User's Manual**. See the **User's Manual** for help if you have not completed these steps.

## Stratification Methods

The decision to stratify your complete inventory can be made before or after you collect your field data. However, that decision may be influenced by how you intend to assign a stratum to each measured tree. For example, if you plan to collect strata during field data collection, the best option for you is to pre-stratify your complete inventory. The option to post-stratify a complete inventory is more suitable for projects in which strata will be assigned to each tree based on a different source of information other than field data, such as a land use map.

Whether you decide to pre-stratify or post-stratify, the methods will be the same. i-Tree Eco offers a three-step method for stratifying your complete inventory project. First, indicate that you will be including strata in the project configuration. Second, classify the stratification schema. Third, assign strata to your trees. To begin stratifying your project in Eco, click on your computer's **Start button** > **(All) Programs** > **i-Tree** > **i-Tree Eco v6**.

To open an existing project:

- 1 Click **File** > **Open Project**
- 2 Browse to the folder where you saved your project, click on the file name, and click **Open**.



### Tip

If you are post-stratifying an existing project, we recommend that you save a copy of your original project. Saving a master copy allows you to go back and view your original results, as well as explore several different post-stratification options.

## Configuring Project

Configuring your project is one of the first things that you do when you create an Eco project. This allows you to provide the Eco application with important information, such as what type of project you will be doing, where your study area is located, and what data you will be collecting. All of this takes place in the **Project Configuration** tab of the Eco application.

For a **pre-stratified** complete inventory, perform the following actions before collecting your field data. For a **post-stratified** complete inventory, these actions can be performed after collecting your field data, if you wish.



### Tip

If you have already sent your data to the server and retrieved your results, the **Project Configuration** tab will be in View-only mode. Switch to Editing mode by clicking on the **Editing Mode** function. When the function is greyed out and reads “Editing Mode: On” you will be able to modify your project configuration.

To stratify your complete inventory project you must inform Eco that you will be collecting strata data.

- 1 Click on the **Project Definition** function in the **Project Configuration** tab.
- 2 Click on the **Data Collection Options** tab.
- 3 Check the box next to “Strata” under the list of “General Site Fields.”

## Classifying Stratification

The next step for stratifying your project is to define the strata. The **Project & Strata Area** function in the **Project Configuration** tab of Eco can be used to classify your stratification schema.

For a **pre-stratified** complete inventory, perform the following actions before collecting your field data. For a **post-stratified** complete inventory, these actions can be performed after collecting your field data, if you wish.

- 1 Click on the **Project & Strata Area** function in the **Project Configuration** tab.
- 2 Use the **New** tool in the **Actions** group to create a new stratum.
- 3 For each stratum that you create, enter a brief description, abbreviation, and area in the table. (**Note:** The size that you enter here should represent the entire area that was sampled. For example, if you collected data for all of the trees in a park then you would enter the area of the park here.)



#### Tip

The size entered in the **Project & Strata Area** function is used to calculate the per unit area, or density, estimates that are included in some of the Eco results on the **Reports** tab. The more accurate the area entered here, the better your density estimates will be.

- 4 When you are satisfied with your strata, click **OK** in the top right-hand corner of the action panel. This will save the edits that you have made to the table.
- 5 Click **Cancel** if you decide to revert to all of the previous values, whether default values or those that you had previously entered manually.

## Assigning Strata

After you classify your stratification schema to include all of the strata that you want, you need to assign the strata to each tree measured in the field.

For a **pre-stratified** complete inventory, strata can be collected during field data collection and recorded using paper forms or the mobile data collector and then entered in Eco. (For more information on data collection and recording, please see the Eco **Field Guide**.) Follow the directions below for the option that best suits your project.

For a **post-stratified** complete inventory, you must follow the process outlined for the manual data entry form.

Adding data from the mobile data collector:

- 1 Click on the **Data** tab.
- 2 Click on the **Retrieve from Mobile** function.

- 3 Enter your password in the space provided. Your password will be the same as the password that you entered when you submitted your project configuration to the mobile data collector.
- 4 Click **Show List** and a description of your data will appear.
- 5 Check the box next to the record(s) that you would like to retrieve. Each record includes a description and date to help you determine which records should be imported.
- 6 Click **Retrieve Data**.

Adding data using the manual data entry form:

- 1 Click on the **Data** tab.
- 2 Click on the **Trees** function. The table seen in the action panel is where you can enter or edit the tree data that you collected in the field.
- 3 In the table, click in the “Strata” box in the row of the tree that you would like to edit.
- 4 Assign the strata of the tree by typing the strata name in the box or choosing the strata from the drop-down list.
- 5 Use the **up and down arrows** on the keyboard to move from top to bottom between records. (**Note:** Using the arrows on the keyboard is especially helpful if you are reassigning strata for many or all of your trees.)

## Running the Eco Model

You will need to run the Eco model in order to view your project results. Running the Eco model is a two-step process that is necessary in order to view your reports or use Forecast. The first step is to send your data to the i-Tree server where the Eco model will be run. The second step is to retrieve your results from the server.

First, send your data to the i-Tree server:

- 1 Click on the **Reports** tab.
- 2 Click on the **Submit Data for Processing** function.
- 3 Read the i-Tree End User’s License Agreement and click **OK** if you consent.
- 4 In the **Contact Information** window, enter your personal information in the spaces provided.
- 5 To confirm your email address, enter the same email address in the spaces labeled “Email” and “Confirm.” This information is critical.
- 6 Click **OK**.

Please be patient – model processing time depends on the number of projects that have been recently submitted to the server as well as the size of your project. You can click on the **Track & Retrieve Results** function to track your status in the queue.

When your data have been processed, an auto-generated email notifying you that the results

are ready to download will be sent to the email address that you provide in the **Contact Information** window. This email will be from [info@itreetools.org](mailto:info@itreetools.org); please check your spam folders if you do not receive the email. Likewise, you will be notified of processing errors that require data to be submitted again. If you do not receive your results within 24 hours, please contact [info@itreetools.org](mailto:info@itreetools.org).

Second, retrieve your results from the i-Tree server:

- 1 Click on the **Reports** tab.
- 2 Click on the **Track & Retrieve Results** function.
- 3 In the **Retrieve Processed Results** window, click **OK**.
- 4 Please be patient while results are downloaded.

You will see that many of the reporting options listed in the ribbon bar are greyed out and unavailable until after you load your results from the server.

If you are unsure whether or not you have run the Eco model, you can check the **Project Metadata** report of the **Reports** tab. This information is especially useful since you may find it necessary to run the i-Tree Eco model more than once throughout the duration of your project.



#### **Caution**

If you make changes to your project settings or add or edit your field data, you will need to send your data to the server and retrieve your results again to ensure that your changes are reflected in your reports.