**2021 i-Tree International Academy**

**Participant Action Plan**

i-Tree International Academy participants are encouraged to develop an action plan to apply i-Tree or further consider i-Tree for project uses in their home cities. The plan will help reinforce training with practical experience and help identify ways that i-Tree may add value to in-country initiatives.

Your action plan should help you and your organization, and can be flexible depending on time, resources and capabilities. For example, you may explore integrating i-Tree with ongoing activities you are already working on such as introducing Canopy or Eco to students or volunteers. You may consider an i-Tree Canopy survey for an area where you are planting trees within a city, or documenting tree cover loss due to development.

For countries without Eco functioning, you can consider establishing a new city location in i-Tree Database as a first step. Or, consider trying to do a local i-Tree Eco pilot project using a substitute city while exploring availability of local pollution and precipitation data to submit in i-Tree Database. Lastly, action plans can include ongoing i-Tree project efforts already in progress to help consider next steps, opportunities and partners.

Submit your completed action plan to [info.itreeacademy@gmail.com](mailto:info.itreeacademy@gmail.com). Some participants will be asked to discuss their action plans or project ideas briefly during session 8 on Dec 15th. For those willing to share, you can also prepare 1 or 2 pptx slides with images to share with the group as you discuss your plan. A basic pptx template for this purpose in the Action Plans folder.

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**Action Plan or Project Title: Ecosystem Services Quantification of planting projects in Madrid**

**Name of city and geographic area Involved:**

The project will be for the entire city of Madrid (Spain).

**Action plan or project objective – What Issue will you address:**

Madrid City Hall is working with the Forestry School to develop a method for tree officers to calculate ecosystem services (ES) provided by planting projects in the city of Madrid. Madrid City Hall wants to be able to provide to private companies investing in planting projects a report on the benefits those plantations provide to the citizens of Madrid.

We have worked together on a list of different ES and we are working for the first stage of the project with i-Tree model to calculate part of those ES, leaving other ES more qualitative for a next stage in which we will explore other methodologies.

**Key i-Tree tool(s) to be used:**

i-Tree Eco, complete inventory

**Brief description of plan, activity or project idea:**

We are using the tree inventory data from the city hall to calculate with i-Tree Eco the ecosystem services provided by the average tree in Madrid for the different species, for different diametric classes (or ages) and site typology (distinguishing between street trees and not street trees).

We are using the complete tree inventory because we wanted to be able to project ES over time for the planted trees and because we wanted to reflect how trees grow in Madrid, therefore including all the climatic, maintenance, planting and pruning practices and even the street morphology of the city.

We want to also use the tree data base and ecosystem services associated with each individual tree to better understand which other factors might have an impact in the ecosystem services provided.

**Key partners & others who will assist (If any):**

**Forestry School Urban Forestry Research Lab (Technical University of Madrid)**

**Madrid City Hall**

**What resources are needed and what are anticipated challenges:**

Even having a very detailed inventory form Madrid City Hall, as we are not conducting our own specific inventory we have the challenge to “match” some variables with those that i-Tree is expecting and we are having to purge a very big data base (over 500.000 trees).

We have also calculated some of the missing variables. For example, we have needed the help of a team of GIS technicians to calculate azimuth and distance to building of all the individual trees using tree coordinates and building footprints for the city of Madrid.

**Describe any related outreach or engagement opportunities, ideas or efforts:**

We hope the method will be useful for planting projects financed by private companies but will also extend to other internal evaluations the City Halls conducts such as choosing tree species for development projects or running scenarios for making planning decisions.

The idea of providing ES over time was important for us to be able to explain that while tree planting is important, it is not until trees reach maturity that they maximize those ES and that process needs the care from municipalities and takes years and years.