

Winter 2025

i-Tree International Academy



Winter 2025

i-Tree International Academy



Helpful guidelines for this session:

- Please mute your audio during presentations
- Use chat window for comments and questions
- Please be patient – we will try to answer all questions

i-Tree website:

- www.itreetools.org

i-Tree Support email:

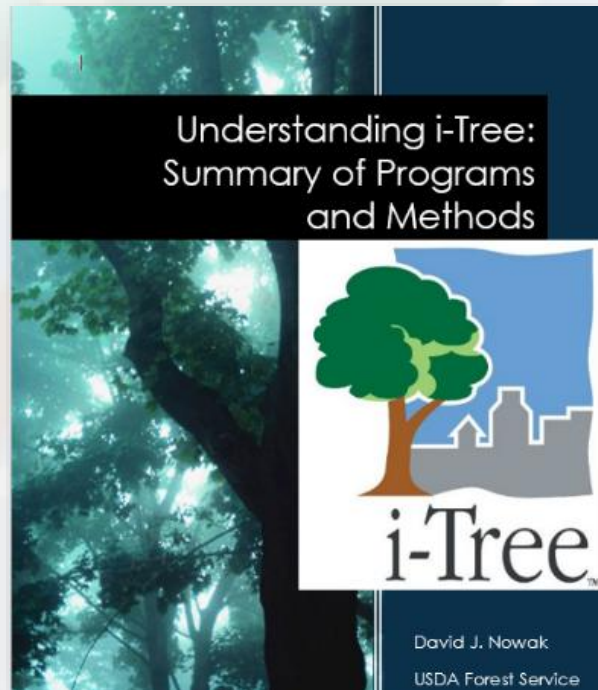
- info@itreetools.org



Website & Course Materials

www.itreetools.org

- Links for all tools
- Manuals and videos
- International reports



i-Tree ABOUT ALL TOOLS **SUPPORT** DOWNLOAD SHOP FAQs CONNECT Search the site

Open office hours December 12th at 2pm ET - join us [here](#).

i-Tree International Academy - Winter 2025

The US Forest Service's [International Programs](#) (FS-IP) and the Northern Research Station, in partnership with the Davey Institute, are offering an international online training program designed to introduce the i-Tree suite of tools to global participants. The Academy instruction will be delivered by experienced members of the i-Tree project team, and guest instructors, focused on helping participants learn i-Tree applications which can be used to assess the value of urban forests and greenspaces. Learn more about the academy [here](#).

For questions specifically about the program, contact [Liza Paqueo](#) - Urban Outreach and Partnerships Specialist, USFS-IP.

Application Eligibility

The course is open to FS-IP staff and international partners by invitation or recommendation. The grant sponsored program is free for accepted applicants.

Session Tracks

Sessions 1 and 2 - For those who are interested in gaining a working knowledge of i-Tree applications for international uses. Participants will be able to help in-country cooperators select the right i-Tree Tool for their project, understand challenges and limitations of the tools, and provide guidance in developing and applying i-Tree locally.

Sessions 1 thru 8 - For those who are interested in advancing i-Tree or applying tools in their own country. The remaining sessions will provide these users with a foundation and working knowledge to integrate and/or use i-Tree internationally.

How to join sessions:

All sessions will be streamed live via Zoom will be recorded and posted to this page so that you can catch up on anything you missed. You are encouraged to submit any questions related to the course via info@itreetools.org. There will be opportunities to ask questions during the live sessions and office hours.

Academy Schedule

Each session is two hours long and offered at 10:00 AM (Eastern US time).

Session 1 - December 4th: Academy Introduction & i-Tree Database overview

- Session outline
 - Course learning objectives, format and instructor introductions
 - i-Tree introduction, key concepts, website, and resources
 - i-Tree Database overview of options for international uses
- Join Zoom Meeting: [Zoom link](#), Meeting ID: 862 7341 5786, Passcode: 767195
- Session resources
 - [Detailed agenda](#)
 - Tell us about your self by completing our [Where in the world?](#) survey

Key Points about i-Tree Database

Using Tools



Winter 2025

i-Tree International Academy

Meet the i-Tree Team!

Scott Maco
The Davey Institute

Jason Henning
The Davey Institute
USDA Forest Service

Krista Heinlen
The Davey Institute
USDA Forest Service

Ana Castillo
The Davey Institute

Dave Bloniarz
USDA Forest Service
Northern Research Station

Akshat Tyagi
Give Me Trees Trust
India



i-Tree website:

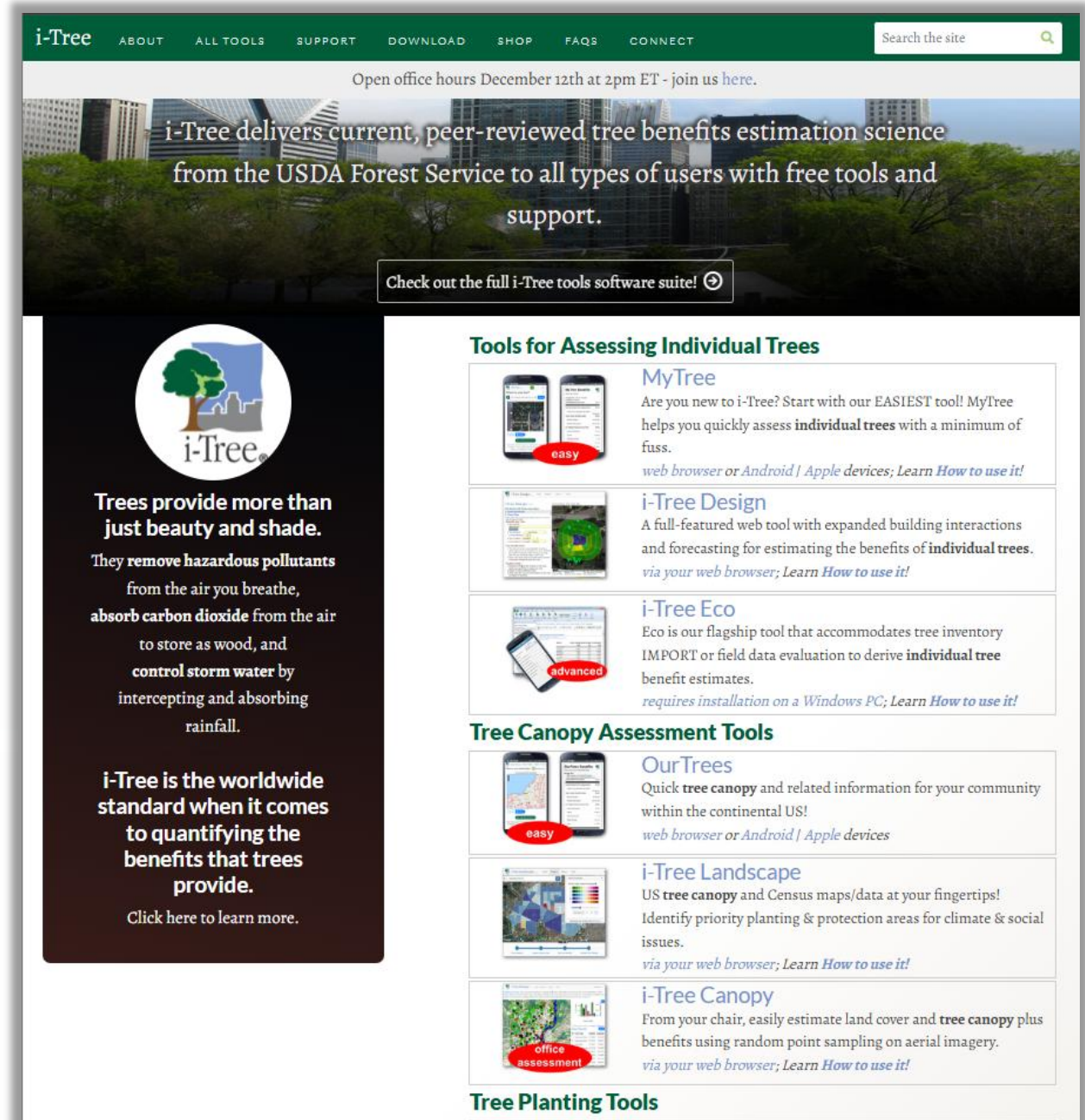
- www.itreetools.org

i-Tree Support email:

- info@itreetools.org

You Are Here/Plan for today

- **Session 6: Processing Data**
 - Inventory methods
 - Input considerations
 - Thinking through project needs
- **Next Steps: Data Reports**
 - Understanding what the data means
 - Communicating data
 - Action Plans



The screenshot shows the i-Tree website homepage. The header is green with navigation links: ABOUT, ALL TOOLS, SUPPORT, DOWNLOAD, SHOP, FAQs, and CONNECT. A search bar is on the right. Below the header, a banner image of a city with trees contains the text: "i-Tree delivers current, peer-reviewed tree benefits estimation science from the USDA Forest Service to all types of users with free tools and support." A button below the banner says "Check out the full i-Tree tools software suite!". The main content area is divided into two columns. The left column has a dark background and features the i-Tree logo, a quote about tree benefits, and a link to learn more. The right column has a light background and lists various tools under the heading "Tools for Assessing Individual Trees".

i-Tree ABOUT ALL TOOLS SUPPORT DOWNLOAD SHOP FAQs CONNECT Search the site

Open office hours December 12th at 2pm ET - join us here.

i-Tree delivers current, peer-reviewed tree benefits estimation science from the USDA Forest Service to all types of users with free tools and support.

Check out the full i-Tree tools software suite!

Tools for Assessing Individual Trees

MyTree
Are you new to i-Tree? Start with our EASIEST tool! MyTree helps you quickly assess **individual trees** with a minimum of fuss.
web browser or Android / Apple devices; Learn [How to use it!](#)

i-Tree Design
A full-featured web tool with expanded building interactions and forecasting for estimating the benefits of **individual trees**.
via your web browser; Learn [How to use it!](#)

i-Tree Eco
Eco is our flagship tool that accommodates tree inventory IMPORT or field data evaluation to derive **individual tree** benefit estimates.
requires installation on a Windows PC; Learn [How to use it!](#)

Tree Canopy Assessment Tools

OurTrees
Quick **tree canopy** and related information for your community within the continental US!
web browser or Android / Apple devices

i-Tree Landscape
US **tree canopy** and Census maps/data at your fingertips! Identify priority planting & protection areas for climate & social issues.
via your web browser; Learn [How to use it!](#)

i-Tree Canopy
From your chair, easily estimate land cover and **tree canopy** plus benefits using random point sampling on aerial imagery.
via your web browser; Learn [How to use it!](#)

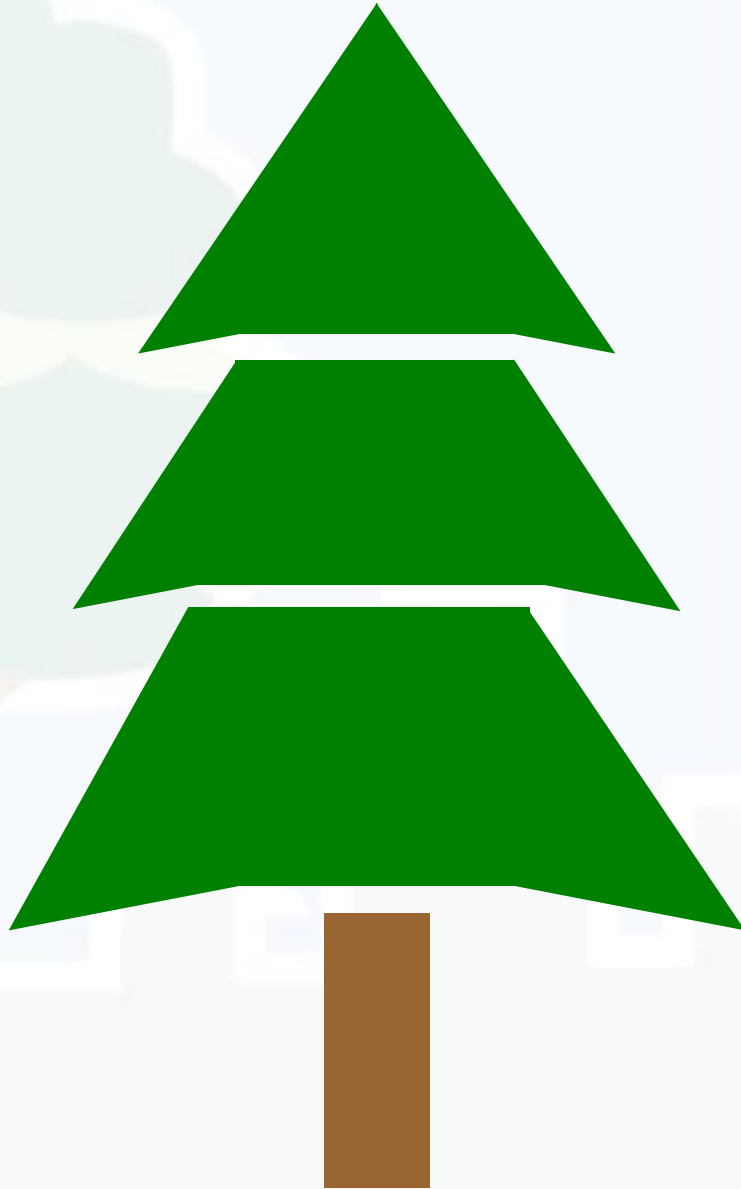
Tree Planting Tools



Turning i-Tree into Action

i-Tree Academy Session 7

How to put the i-Tree tools to work



Showing trees provide benefits

- Education
- Outreach
- Communication

Assessing what you have

- How many trees? How much canopy?
- What benefits are they providing?
- Inform policy makers


Making a plan

- Strategic management
- Where do trees do the most good?
- Maximize tree benefits

Engagement and Outreach

SAMSUNG

MyTree Benefits



Bayard Cutting Example: Northern red oak, (*Quercus rubra*)

Serving Size: 20.00 in. diameter
Condition: Good

Total benefits for this year: \$58.87

Carbon Dioxide (CO ₂) Sequestered	\$4.98
Annual CO ₂ equivalent of carbon ¹	214.04 lbs
Storm Water Runoff Avoided	\$4.06
Runoff Avoided	453.99 gal
Rainfall Intercepted	2,073.69 gal
Air Pollution Removed Each Year	\$4.24
Carbon Monoxide	0.46 oz
Ozone	14.41 oz
Nitrogen Dioxide	2.79 oz
Sulfur Dioxide	0.16 oz
PM _{2.5}	0.59 oz

NORTH TERRACE

TREE TRAIL





I AM A/AN

ALEPPO PINE

(~ 80-90 years old)

I AM

10-6

METRES TALL

I PROVIDE ENOUGH OXYGEN IN ONE YEAR FOR

47 PEOPLE TO BREATHE IN ONE DAY

I PROVIDE 91-6

m² OF SHADE.

THAT'S EQUAL TO 29 BEACH UMBRELLAS

I CLEAN YOUR AIR BY REMOVING 595 GRAMS

OF HARMFUL AIR POLLUTION EVERY YEAR



[Photo Source: J. Garden 2017]



Engagement and Outreach

CLICK ON ANY IMAGE BELOW TO DOWNLOAD AN EDITABLE PDF FILE FOR YOUR OWN USE.



Courtesy Jenni Garden
Edge Env. South Adelaide, AU

Delve into the
wonderful world
of the City of Tea
Tree Gully's trees



<https://www.unri.org/news/treetags042019/>

<https://www.itreetools.org/support/resources-overview/marketing-i-tree>

#EUTreeTag Campaign



Home TreeTags map



www.treetags.eu/en

Nature-Based Tree Management

39 followers
1mo •

Today, as the European TreeTag Campaign unfolds across Europe, the southwest region of Poland, including several participating cities, is facing severe flooding. 🌧️

While local events have prevented some of us from fully carrying out the campaign, this situation only strengthens our belief in the need to raise awareness about the vital role trees play in our environment — especially in their water retention and soil reinforcement capacities.

Despite the challenges, we proudly placed approximately 80 TreeTags on trees across Poland today, reminding everyone of the critical benefits trees provide. 🌳

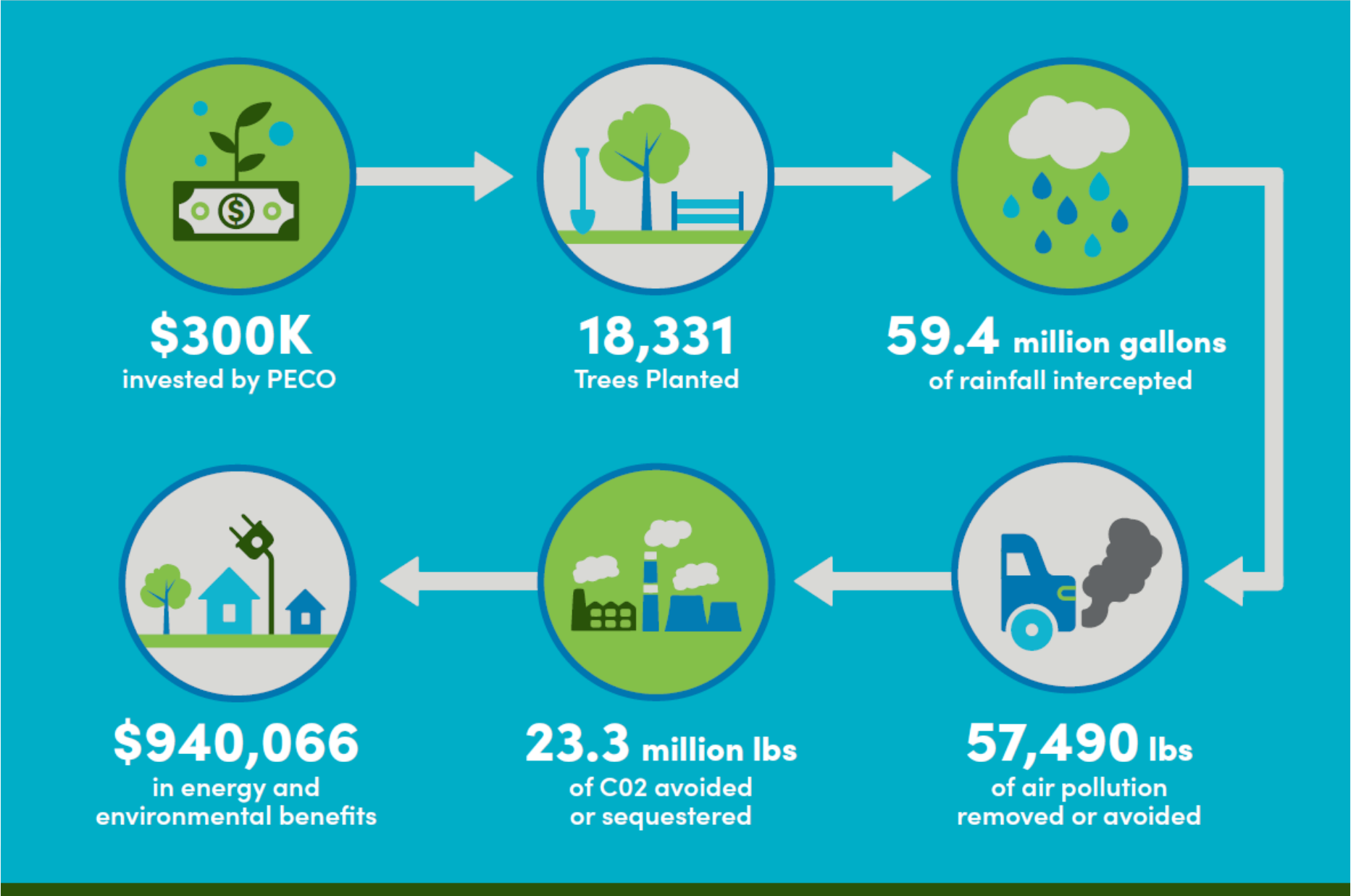
Let's continue working together to spread this important message, now more than ever. 🌍

The map of TreeTagged trees is available here: <https://lnkd.in/d3KJ2AzQ>

#EUTreeTag #TreeTagCampaign #SustainableFuture #UrbanForestry
#ClimateResilience #NBTM

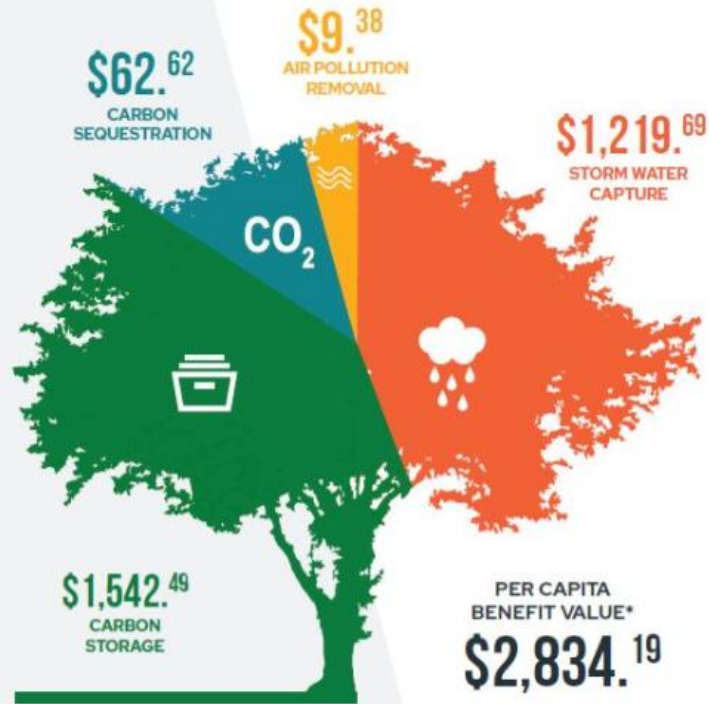


Engagement: Infographics



2019-2021 Tree Planting

Projected 20 year cumulative values
Source: US Forest Service Northern Research Station & iTree



What do your community's trees do for you?

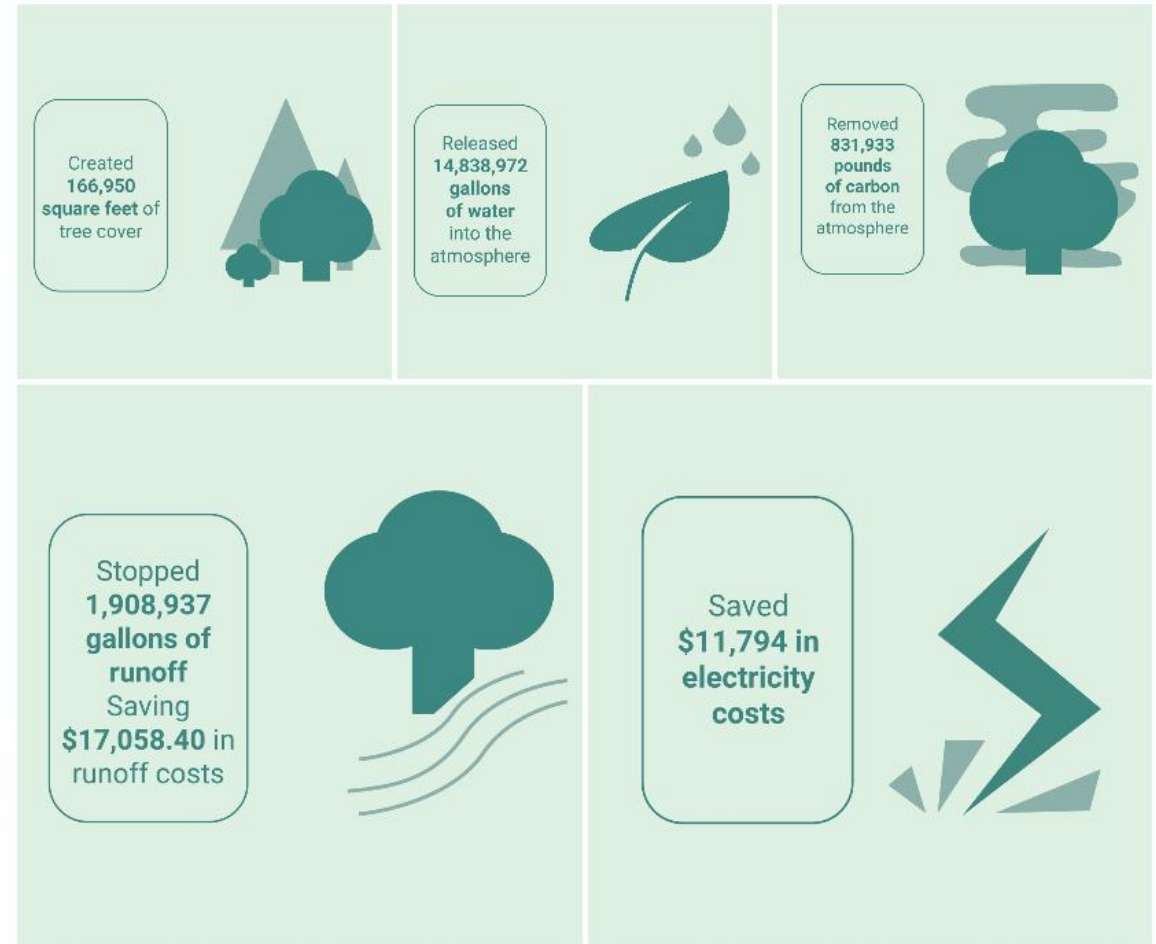
Trees provide substantial added value to the quality of life of Wake County's residents. The ecosystem services contributed to the community by its tree canopy infrastructure can be quantified and valued on an individual level.

Over their lifespan, the county's trees have stored an estimated accumulated total of 9.04 tons of carbon per county resident, translating to a per capita carbon storage value of \$1,542.49.

Per resident, Wake County's tree canopy annually removes 19.5 pounds of air pollution, capture 7,174 gallons of stormwater and absorbs 734 pounds of carbon. These vital eco-services translate to an annual per capita value of \$1,291.70.

The combined per capita benefit value of Wake County's tree canopy is estimated to be \$2,834.19.

*Per capita refers to the average value per Wake County resident. As of 2020, Wake County had a resident population of 1,129,410 with a tree canopy valuation of \$3,200,958,479.



Baltimore Tree Trust

[Spring 2022 Season Analysis](#)

WAKE COUNTY LAND COVER ANALYSIS & TREE CANOPY ASSESSMENT

10 Economic Facts About Trees



The 3.8 billion trees in U.S. cities are worth \$2.4 trillion.

USDA Green Source

Living on a tree-filled block makes you healthier and is equivalent to earning \$10,000 more a year.

US Health Reports



Trees keep us \$7 billion healthier by reducing air pollution.

USDA Green Source

Trees increase your property value by more than \$7,000.

USDA Research Data



Trees can cut air conditioning costs by up to 56%.

USDA Green Source

Trees sell homes nearly 2 days faster.

USDA Research Data



Homeowners get a 109% return for every dollar invested in landscaping - trees included!

USDA Green Source

Trees can reduce heating use by up to 50%.

USDA Green Source



Landscaping adds up to 11% more value to your home.

USDA Green Source

People spend 9-12% more at stores with trees on the street.

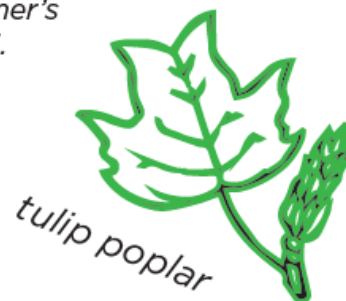
University of Washington



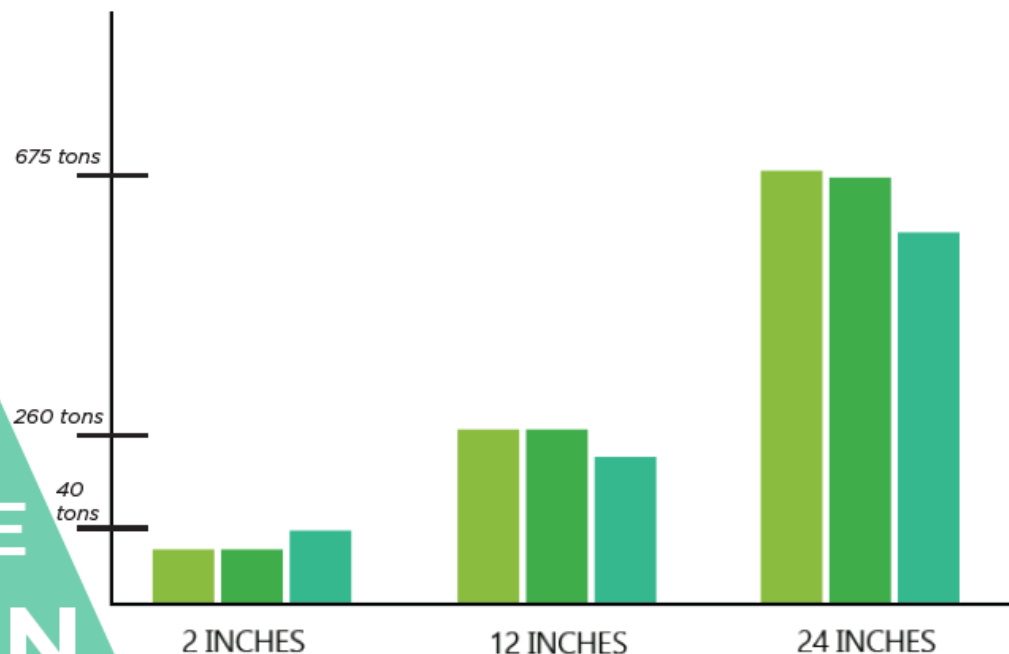
CARBON STORED GRAPH

Below is a table showing the amount of carbon in different size and species of trees. We chose crape myrtle, tulip poplar and elm because they have the highest "importance values" in DC.

These trees measured in last summer's iTree Eco Study conducted in 2015.



CARBON STORED BY DIAMETER



BIGGER
TREES
STORE
MORE
CARBON

Australia: Complete Inventory for Community Engagement



Jenni Garden

Define your goals:

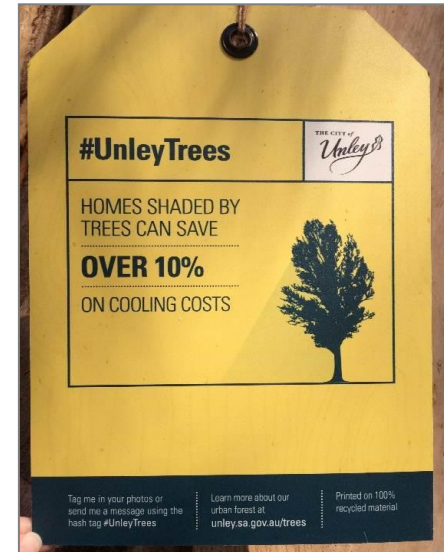
Benefits data for community engagement

Change behavior: people value tree benefits more

Reduce barriers: fear/risk, development/space, lack of knowledge

Desired outcomes: more trees retained on private land, canopy cover across city improved, increased benefits

Strategy: surveys, tree tags



Influencing policy: Street tree value

milliontreesNYC

A PLANYC INITIATIVE WITH NYC PARKS AND NEW YORK RESTORATION PROJECT

Translate this Page | Sign up for Newsletter | Calendar

About MTNYC

Plant

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Quick Links

ATTEND A WORKSHOP

ADOPT A TREE

ATTEND A TREE PLANTING

REQUEST A STREET TREE

PICKUP A FREE TREE

REGISTER YOUR TREE

APPLY FOR A MINI-GRANT

Find Us on Facebook

Follow 7.1K

Loading Images

Please Wait

Newsroom

Press Releases

SHARE

GET INVOLVED

NYC MAYOR MICHAEL BLOOMBERG AND BETTE MIDLER
PLANT TREE ONE - THE FIRST OF ONE MILLION TREES - AND
LAUNCH MILLIONTREESNYC

Today New York City Mayor Michael R. Bloomberg and New York Restoration Project (NYRP) Founder Bette Midler launched the MillionTreesNYC initiative to plant and care for one million trees throughout the City's five boroughs in the next decade. The Mayor and Ms. Midler planted a street tree in the Morrisania section of the Bronx – a neighborhood with too few trees and high rates of asthma – and declared the Carolina Silverbell to be the first of one million trees.

Through a mix of public and private plantings, MillionTreesNYC, an important initiative of *PlaNYC*, will expand New York City's urban forest by 20%. All New Yorkers will share in the many benefits that come from planting trees – more beautiful neighborhoods and parks; cleaner air and water; higher property values; energy savings; cooler summer streets, yards, and public open spaces; and a healthier, more environmentally sustainable City. MillionTreesNYC will get New Yorkers involved in the planting and caring of trees for the next decade.

Mayor Bloomberg and Bette Midler were joined at the announcement by First Deputy Mayor Patricia E. Harris, Deputy Mayor for Economic Development and Rebuilding Daniel L. Doctoroff, Parks Commissioner Adrian Benepe, City Planning Director Amanda M. Burden, Director of the Mayor's Office for Long-term Planning and Sustainability Rohit T. Aggarwala, United States Forest Service Abigail Kimbel and The Home Depot Foundation President Kelly Caffarelli.

"New York City has always been a place of big dreams and big ideas – and our Administration has never been afraid to embrace them," said Mayor Bloomberg. "Over the next decade, with our friends at the New York Restoration Project, we are going to plant an unprecedented one million new trees across the City. *PlaNYC* is our plan to make New York a greener,



NYC Parks

New York City Street Tree Map

Explore and Care For NYC's Urban Forest

Map | My Trees | Learn | Groups

Text Size **T**↑


Language **A**↗

Tree Care Activities

There are no activities reported.

[Record Tree Care](#)


Ecological Benefits

 **Stormwater intercepted each year**


468 gallons Value: \$4.63

 **Energy conserved each year**

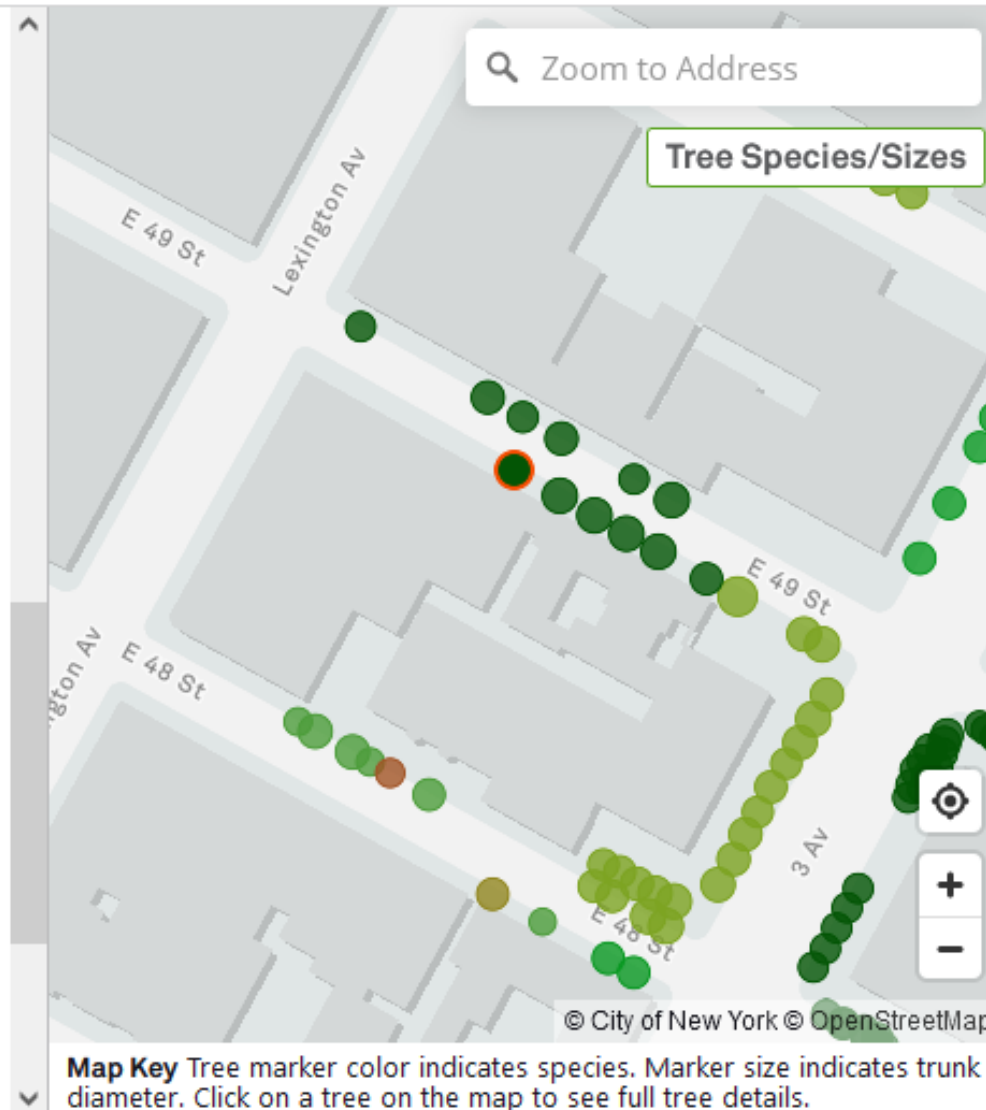
477 kWh Value: \$60.27

 **Air pollutants removed each year**

1 pounds Value: \$4.3

 **Carbon dioxide reduced each year**

224 tons Value: \$0.75



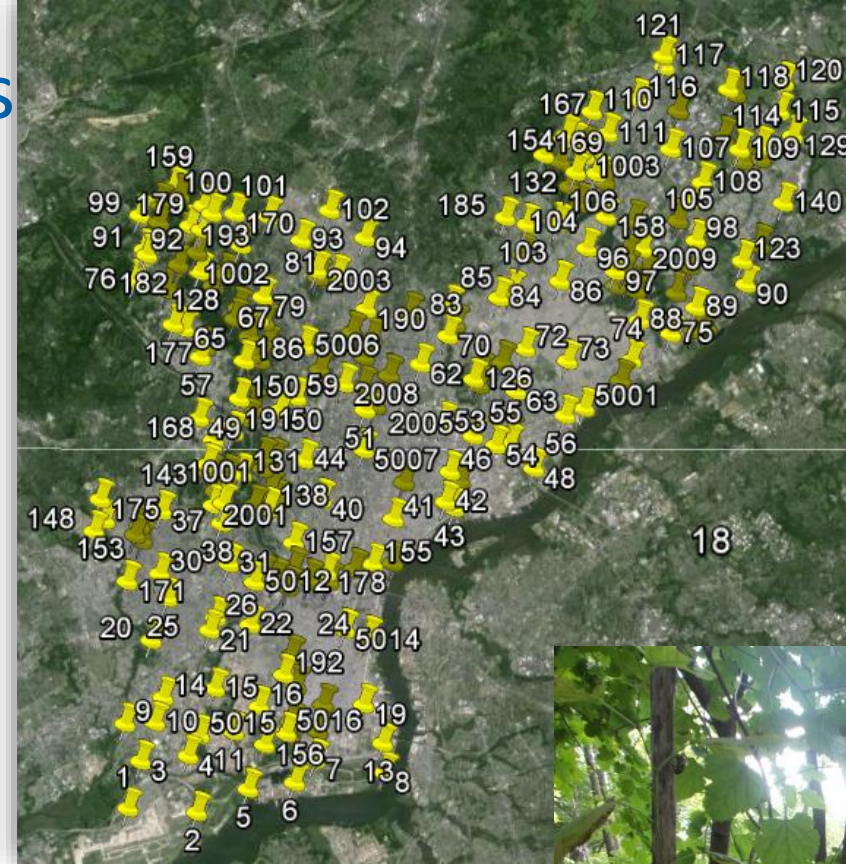
<https://tree-map.nycgovparks.org/tree-map>

i-Tree Eco Example: Citywide projects

Philadelphia Citywide assessment

Sample (plots)

- Typically 200 circular plots
- Random locations in area of interest
- Plot size 1/10th acre



Stratification can be powerful

City owned parkland is **9%** of the city

Trees on city owned parkland account for **40%** of carbon storage and sequestration

Feature	Estimate
Number of trees	1,100,000
Tree Cover	64%
Carbon Storage	273,000 tons (\$19.4 million)
Pollution Removal	179 tons/yr (\$6.6 million/yr)

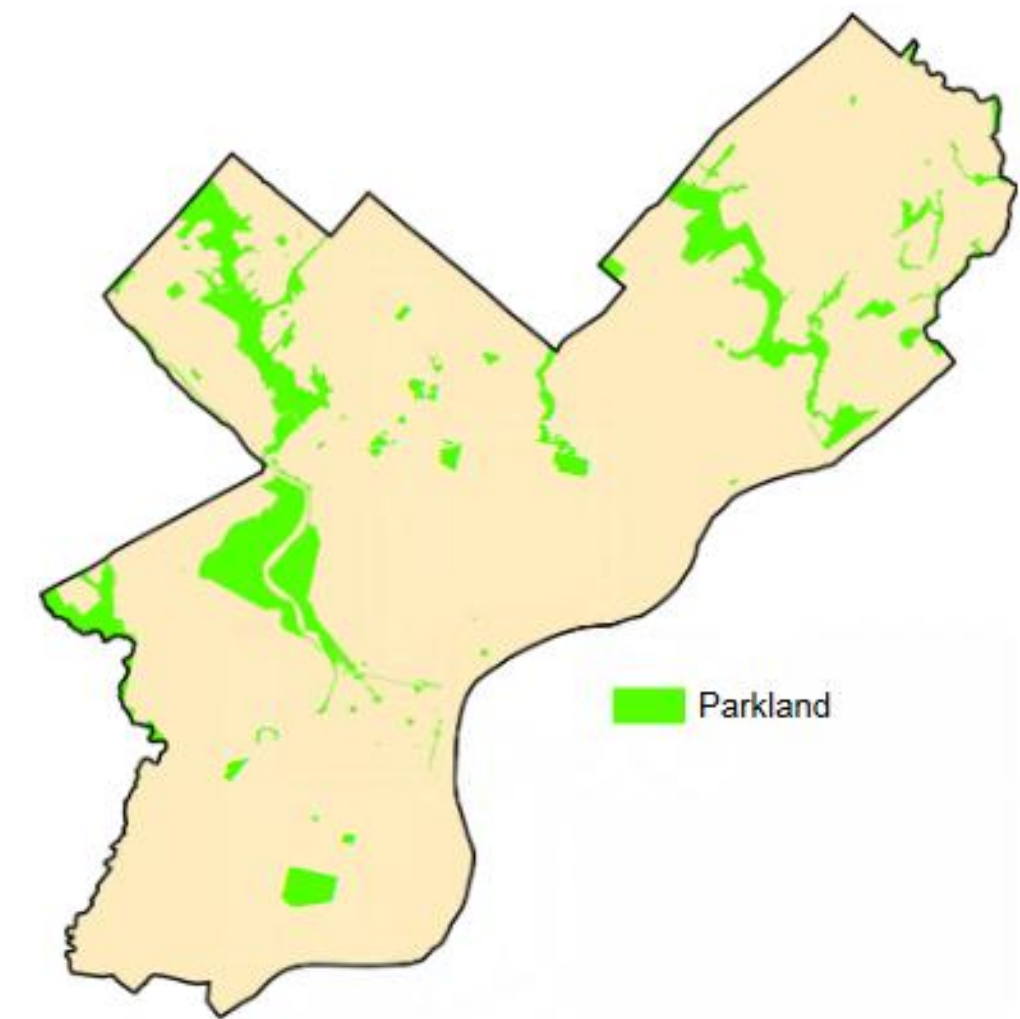
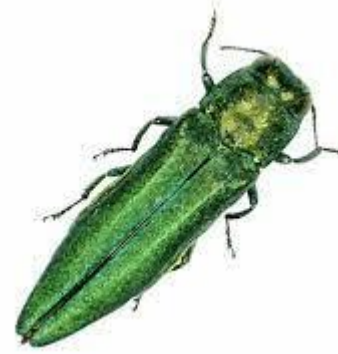


Figure 1.—Philadelphia city boundaries and designated parkland areas, 2012.

i-Tree Eco Example: Large project with targeted results

**Ash Trees:
City stands to lose
7.1% of its forest
and millions in
benefits to
emerald ash borer**

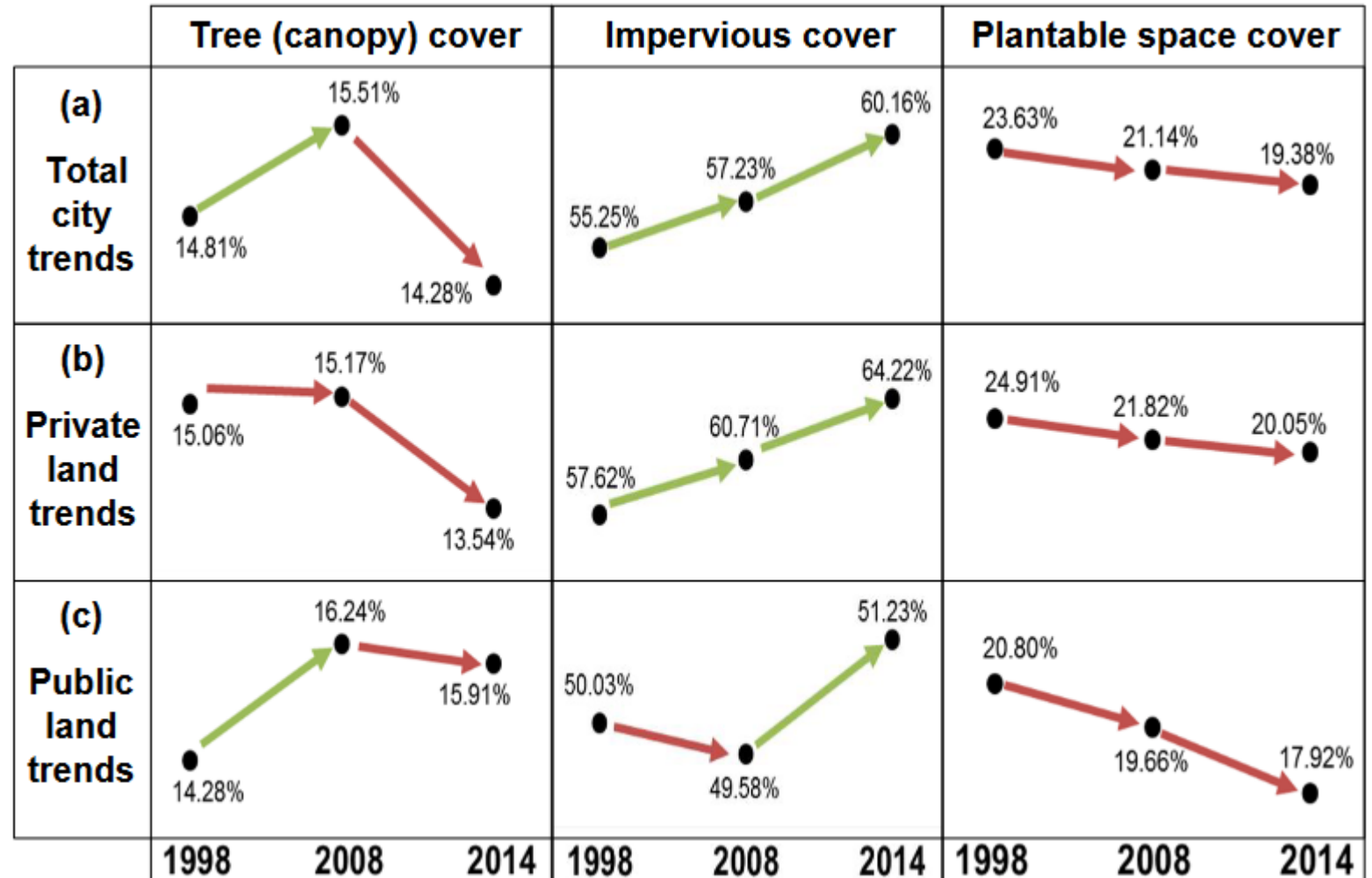
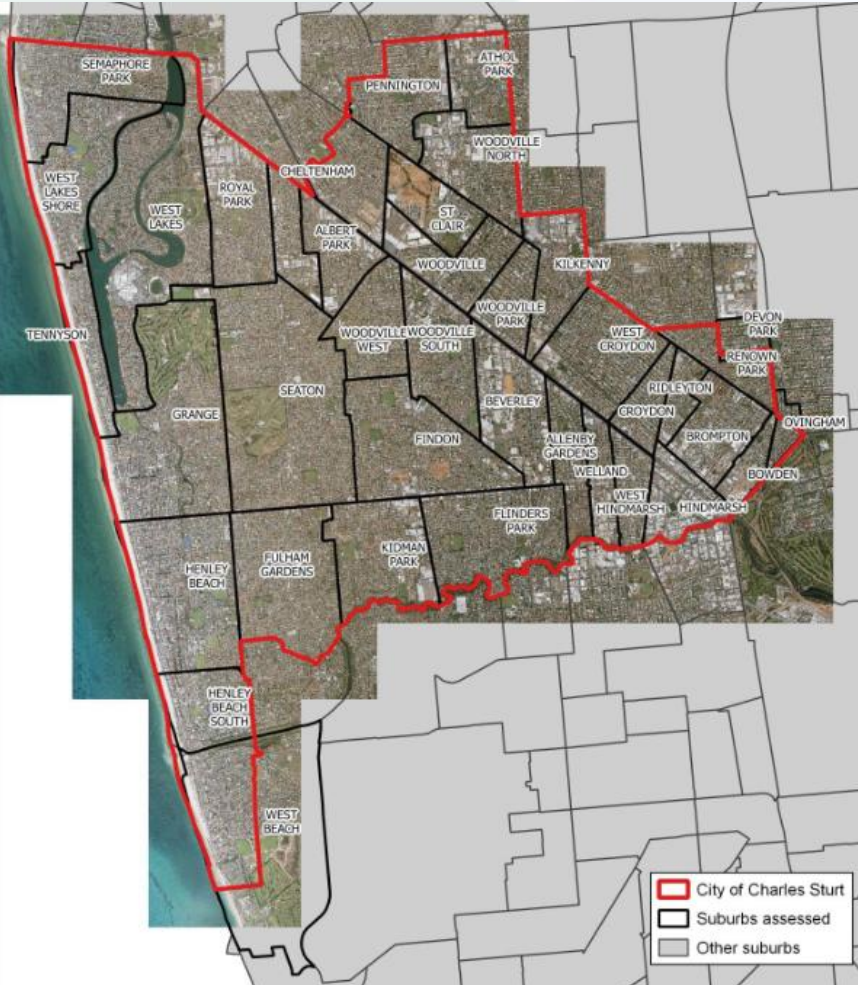


Parameter	Estimate	Units	% of Total City	Species Group Rank
Population	206,996	number	7.1	3
Density	2.3	trees/acre		3
Carbon stored	35,742	tons	5.1	7
Carbon sequestered	1,025	tons/year	3.8	11
Net carbon sequestered	935	tons/year	4.0	10
Leaf area	4,818	acres	5.2	7
Leaf biomass	1,936	tons	6.3	3
Trees, diameter 1-3 in.	111,777	number	54.0 ^a	2
Trees, diameter >18 in.	10,557	number	5.1 ^a	12

^a Percent of all ash trees

Tree Canopy Cover in the City of Charles Sturt

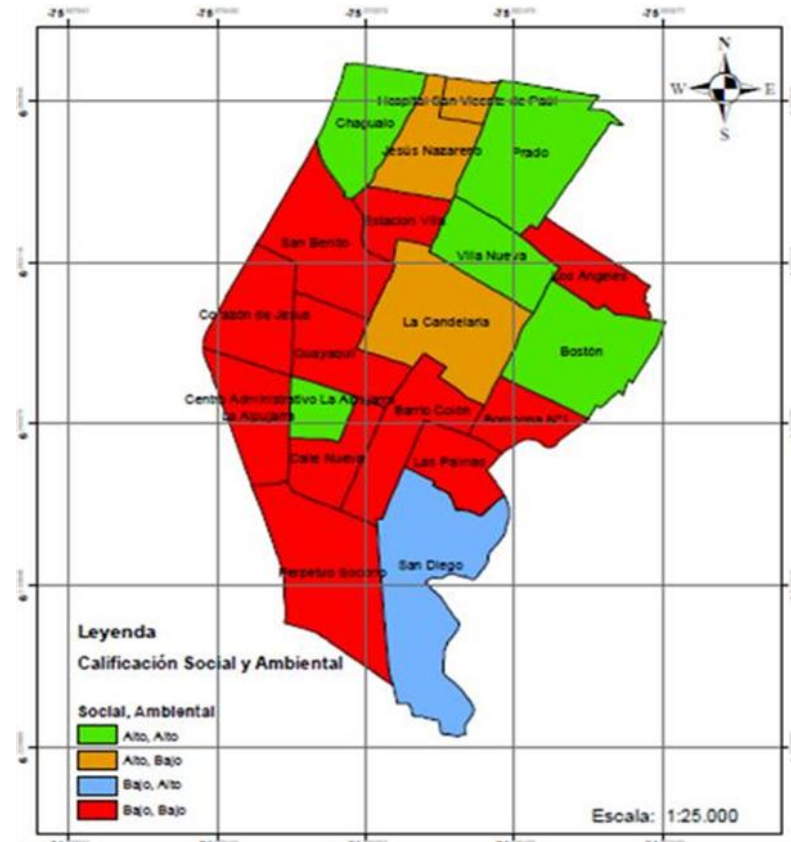
Benchmark Assessment



Ecological and Social Indicators in *Comuna 10*, Medellín

Ecological variables (i-Tree Eco)

- Number of species
- Number of trees/ha
- Carbon sequestration (ton/year*ha)
- Pollutant removal (Kg/year*ha)

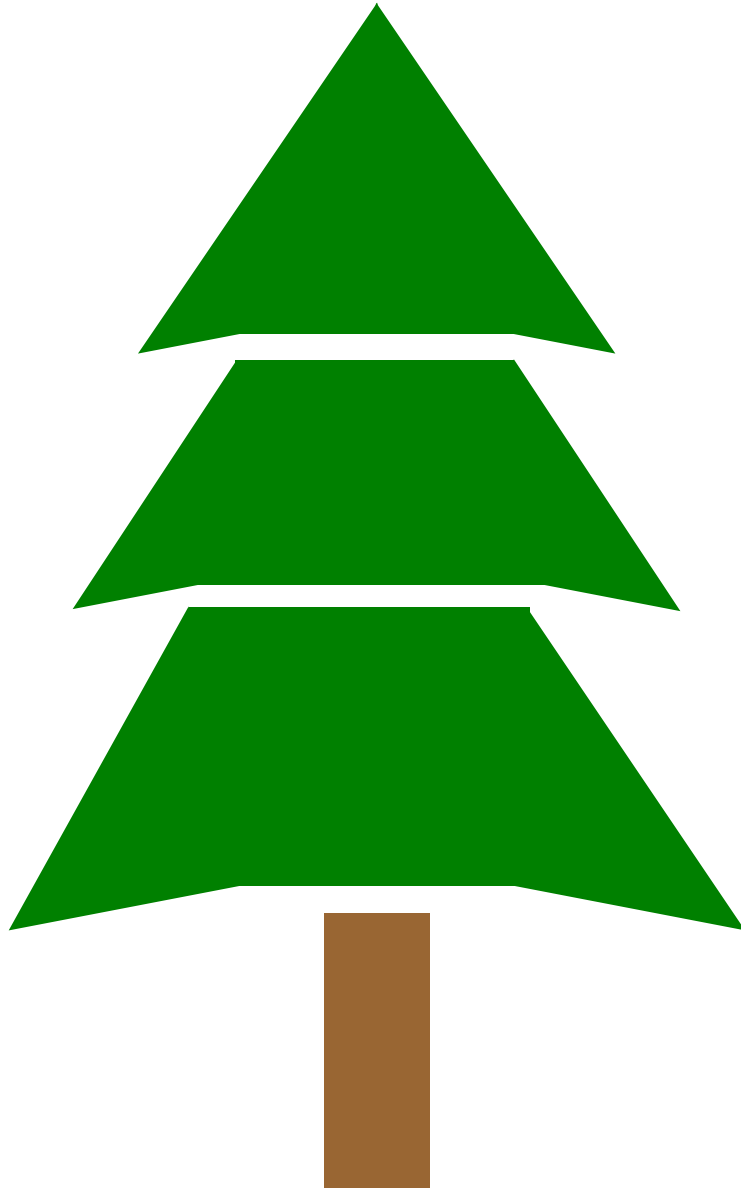


Social variables (STEW-MAP)

- Number of organizations
- Number of connections among organizations
- Number of activities of each organization

- ✓ Neighborhoods in **Green**: High values in both social and ecological variables
- ✓ Neighborhoods in **Orange**: High values in social variables, Low values in ecological variables
- ✓ Neighborhoods in **Blue**: Low values in social variables, High values in ecological variables
- ✓ Neighborhoods in **Red**: Low values in both social variables and ecological variables

Turning i-Tree Into Action



Potential applications of i-Tree

- Outreach/Education
- Knowing your tree resource
- Support Strategic Management

Key considerations

- What outcomes would you like to see?
- What audience are you trying to reach?
- There are many different ways to use i-Tree
- Combine tools and try multiple approaches
- Use data to tell a story
- There are lots of examples and resources



Urban Tree Inventory of Dhaka



February 12, 2025

ABOUT DHAKA, BANGLADESH

The Daily Star

SUNDAY, October 16, 2022 | Journalism Without Fear or Favour

News Opinion Coronavirus Sports Business Entertainment Life & Living Youth

Air pollution

Dhaka world's most polluted city again



UNB, Dhaka
Wed Sep 28, 2022 12:11 PM Last update on: Wed Sep 28, 2022 12:11 PM



conditioners and a lack of greenery is making Dhaka hotterMehedi Hasan/Dhaka Tribune

The New York Times Style Magazine

The Bangladeshi Traffic Jam That Never Ends

Give this article

By Jody Rosen
Sept. 23, 2016

Of all the dysfunctions that plague the world's megacities, none may be more pernicious than bad (really, really bad) traffic. Sitting still in Dhaka, where bad design



In Pictures

Gallery | Climate Crisis

Photos: Bangladesh's vil

millions with sai

Dhaka ranks world's sixth most populous city

Population has increased by 3.39% since last year



Dhaka, Tuesday
18 October 2022



Home Economy Banking & Insurance Corporates Tech Bangladesh World Spor

Home » Photo Feature

In Pictures: Krishnachura flower fair

BI Report | BusinessInsider

Published: 20:47, 21 April 2021 Update: 21:37, 21 April 2021



The Daily Star

TUESDAY, October 18, 2022 | Journalism Without Fear or Favour

News Opinion Coronavirus Sports Business Entertainment Life & Living Youth

Back Page

Dhaka vs Dhaka: The food derby



MH Haider

Fri Jun 17, 2016 12:00 AM Last update on: Fri Jun 17, 2016 02:11 AM



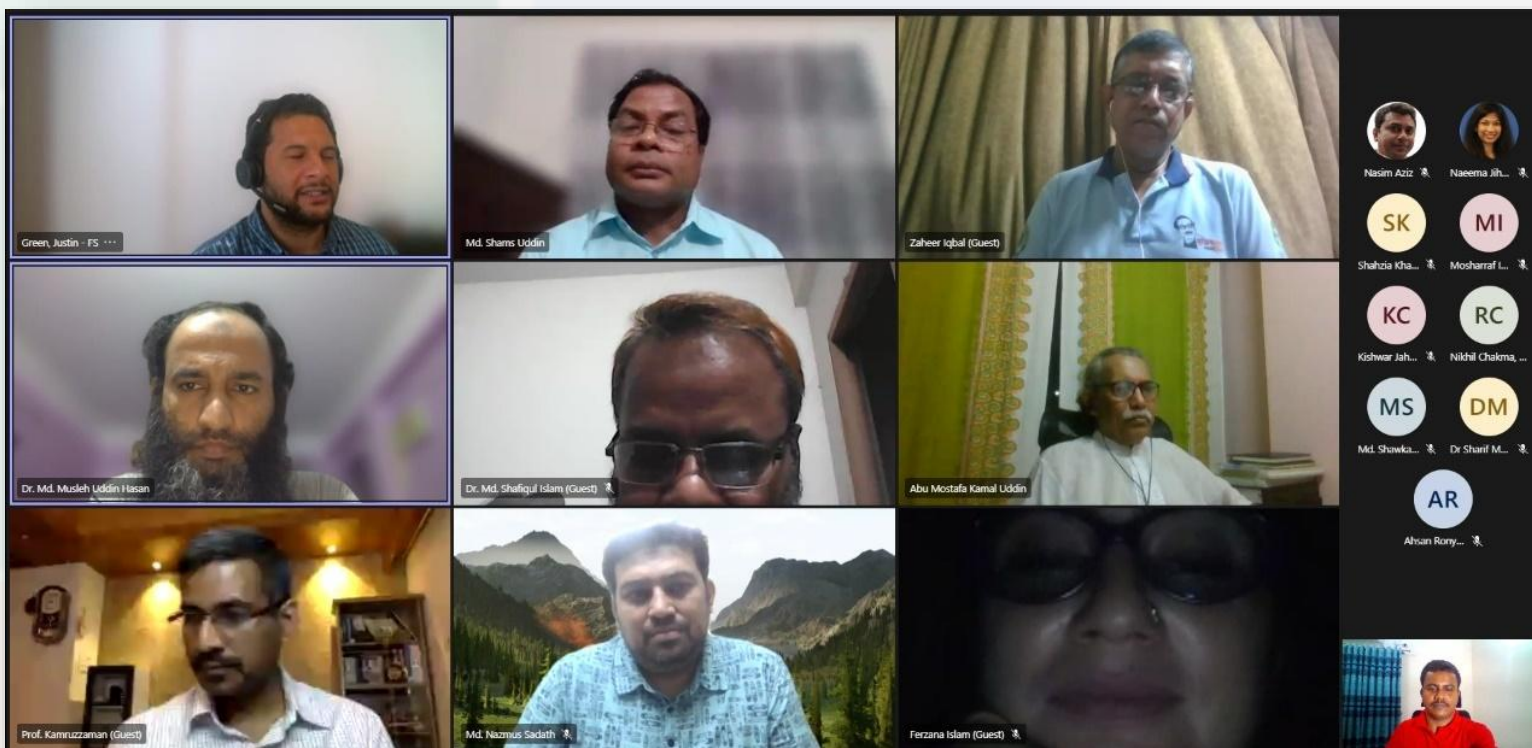
Pohela Boishakh celebrated around country

Tribune Report

Published at 02:35 pm April 15th, 2015

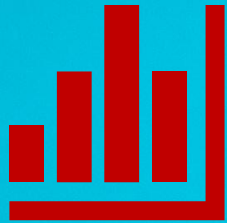


Kick-off

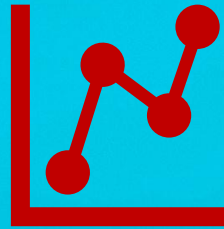


- Multi-stakeholder meeting
- Representatives from 14 different organizations
- Forest Department, Universities, City Corporations, Inventory Experts, Civil Society

Why urban tree inventory in Dhaka?



Establish the
baseline of urban
trees of Dhaka



Evaluate
selected urban
tree benefits



Create
awareness on
conservation



Preparations

Ia. ZONING: Satellite imagery analysis

Zone	DNCC		DSCC	
	Area (sq.km)	Plots*	Area (sq.km)	Plots
Trees	16	35	12	47
Built up with scatter trees	114	241	13	51
Others	52	110	70	272
Total	183	386	95	370

*Circular plot radius- 11.35m

Ib. SAMPLING: Stratified random

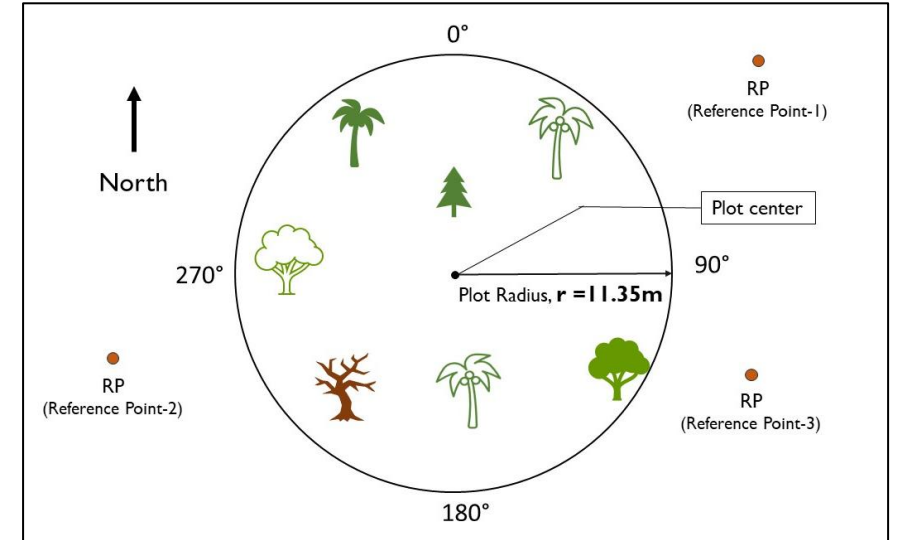
Confidence interval- 95%

Margin of error- 05%

2. TRAINING MANUAL

3. Standard Operating Procedure (SOP)

4. Pollution (2012-2020) and rainfall (2015-2020) data harmonization



Capacity Building

Training- Day 1: theory; Day 2: demonstration, Day 3-4: practice and evaluation

Skills developed



**Laser Range
finder**
(Height, Crown
width)



GPS
(Location)



**Suunto
Clinometer**
(Bearing, direction)



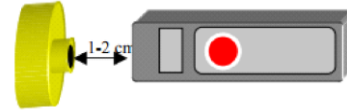
Dia Tape
(DBH)



**GRS
Densitometer**
(Crown missing)



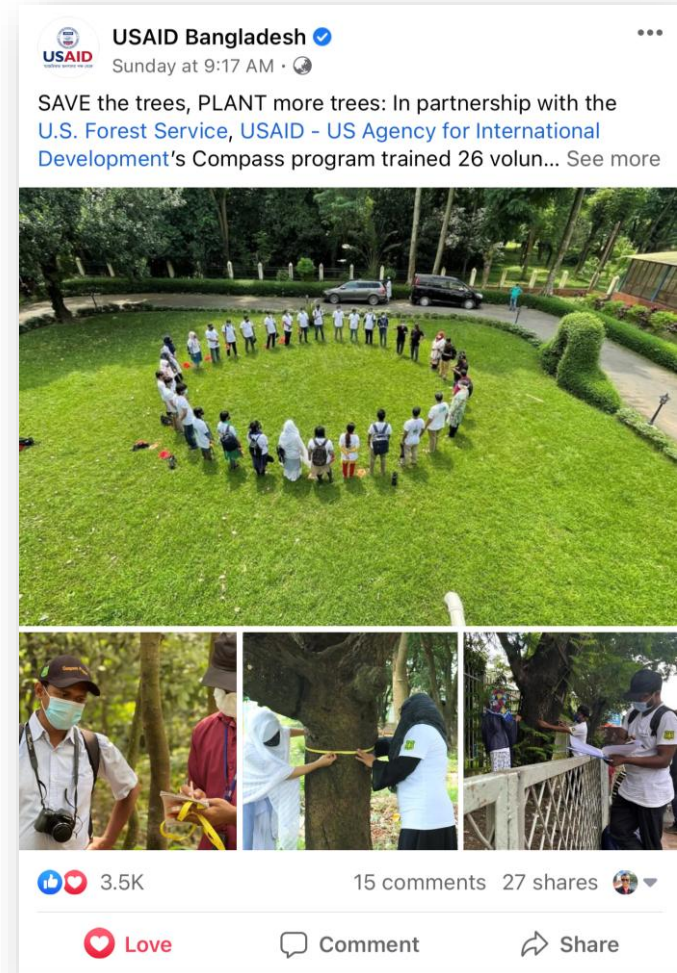
**Measuring
Tap**
(Distance)



DME
(Plot radius)



Tab
(Data input)



Fieldwork and Teamwork

24 enumerators from 5 Universities with background of Forestry, Botany, and Environmental Science

Group 1

Group 2

Group 3

Group 4

Taxonomist 1

Group 5

Group 6

Group 7

Group 8

Taxonomist 2

Enumerator management

Green Savers

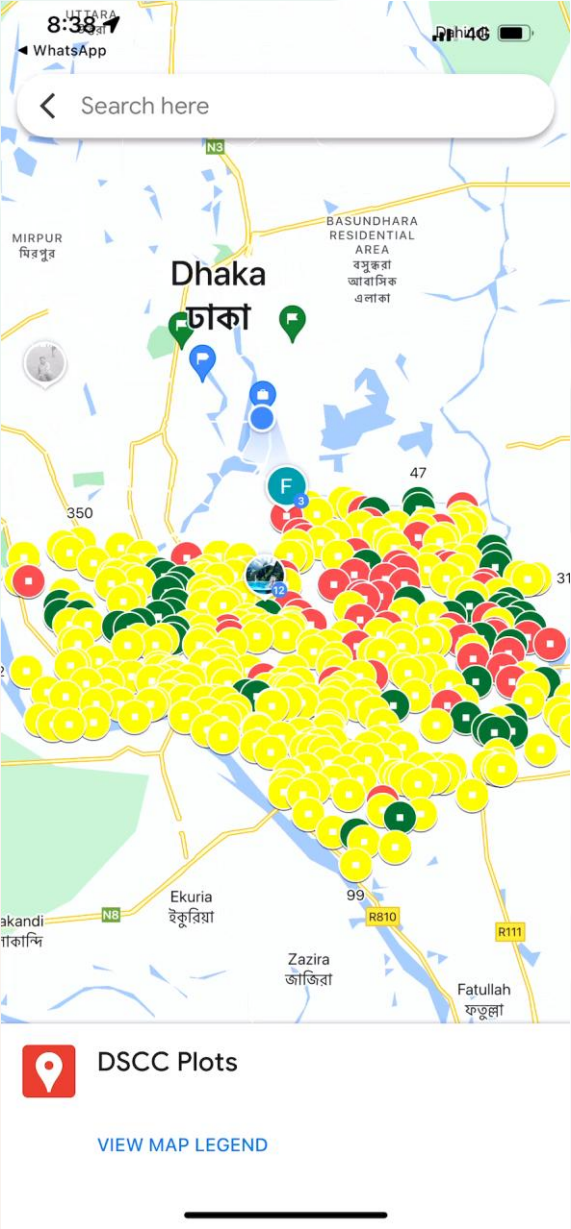
RIMS, BFD

Compass, USFS



- ❖ DNCC data collected in 2021 & analyzed in 2022
- ❖ DSCC data collected in 2022 & analyzed in 2023

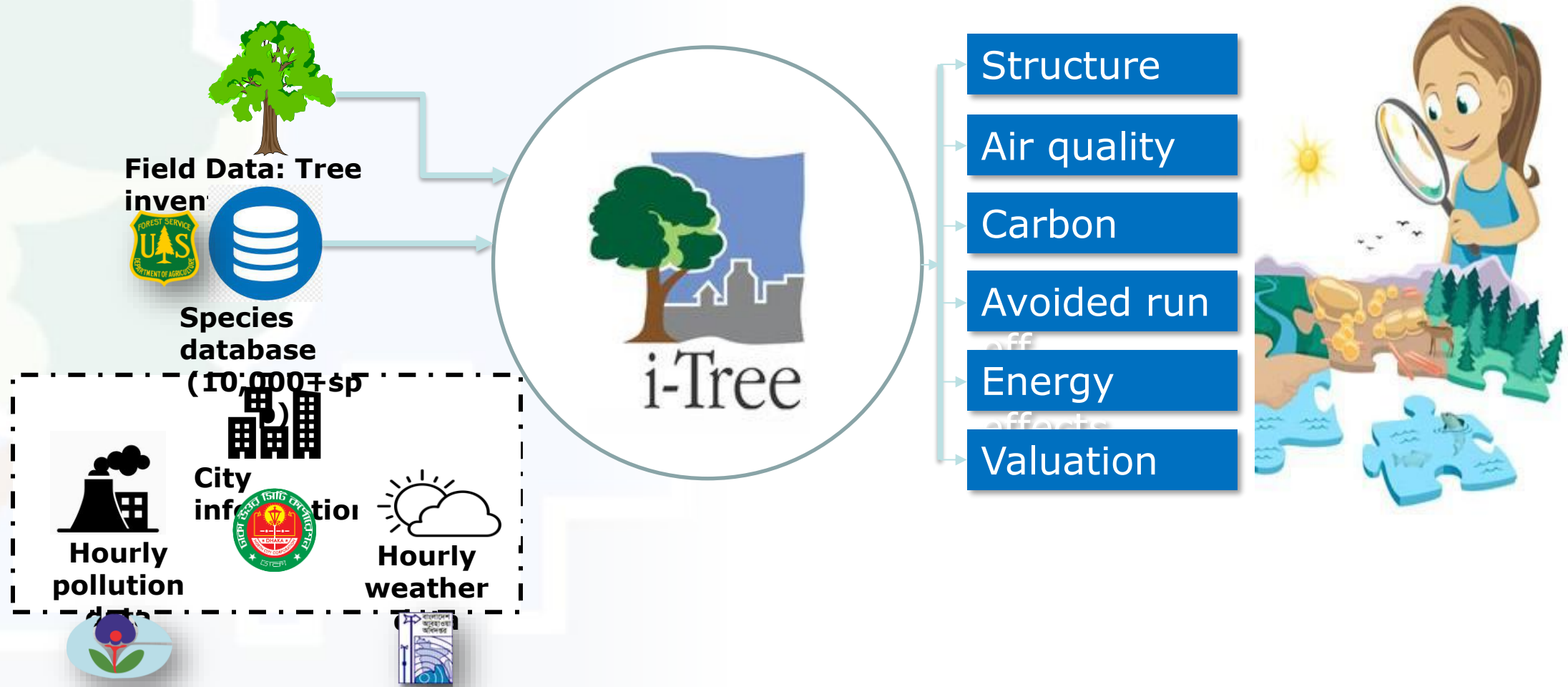
Real Time Monitoring and Navigation



Analysis



i-Tree process



DNCC

DSCC



Tree Cover

10.5 %

10.8 %



Carbon Storage

98.74 Thousand Metric Tons
(Tk 16.8 Crore)

103.1 Thousand Metric Ton
(Tk 17.1 Crore)



Pollution Removal

319.3 Metric Tons/year
(Tk 26.2 Crore/year)

219.2 Metric Tons/year
(Tk 17.5 Crore/year)



Carbon Sequestration

11.12 Thousand Metric Tons
(Tk 1.89 Crore/year)

10.8 Thousand Metric Tons
(Tk 1.79 Crore/year)



Oxygen Production

26.42 Thousand Metric
Tons/ year

27.13 Thousand Metric
Tons/ year



Avoided Runoff

603.9 Thousand Cubic
Meter/year
(Tk 15.4 Crore/year)

378.4 Thousand Cubic
Meter/year
(Tk 9.38 Crore/year)



Summary: i-Tree in Bangladesh

Completed

Inventory- 2

Census-1

Trained- 250+

Species to database- 36

QA/QC R scripts -1

Organizations worked- 10+

Organizations consulted - 20+

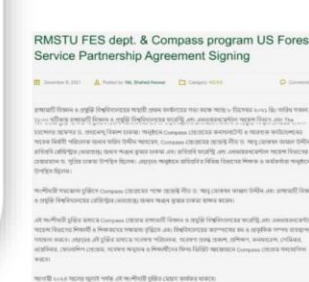
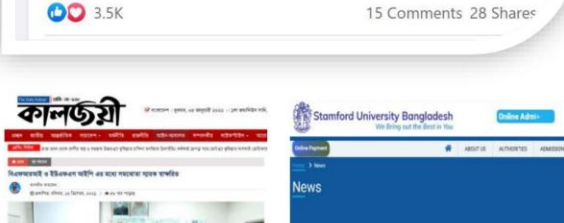
Achievements

- Talk of the Town- (800+ registered for a training)
- Urban Forestry Center- (BFD announced it)
- Awareness and engagement- (More organizations working)
- Institutionalization- (Taught in graduate level at IFESCU)

Stories through photos



নর্থ সাউথ ইউনিভার্সিটির সাথে অংশীদারিত্বের মাধ্যমে ইউএসএআইডি বাংলাদেশ আমাদের এই গ্রহের সুরক্ষায় জলবায়ু পরিবর্তন বিষয়ে পদক্ষেপ নেয়ার আহ্বান জানাতে পেরে গর্বিত! টেকসই উন্নয়ন কর্মসূচিকে শক্তিশালী করার লক্ষ্যে ইউএসএআইডি'র কমিউনিটি পার্টনারশিপস কার্যক্রমের সাথে অংশীদারিত্বের ভিত্তিতে সম্প্রতি নর্থ সাউথ ইউনিভার্সিটি তাদের ক্যাম্পাসে সেমিনার, ইন্টারেক্টিভ গেমস ও প্রদর্শনীর আয়োজন করেছে যেখানে শিক্ষার্থী ও শিক্ষকদেরকে বায়ু ও মাটি দূষণের হুমকি, প্রাকৃতিক সম্পদের ক্ষতি এবং জলবায়ু... See more







THANK YOU

i-Tree International Academy

Tree inventory with i-Tree Eco in Colima City, Mexico



Fabiola Lopez 2022

Introduction

- Colima municipality is located in western Mexico
- Objective: Conduct a tree inventory and develop a management plan for urban trees in Colima
- i-Tree Eco Workshop for participants involved in the project (**IPCO, FONNOR A.C.** students, municipality workers and volunteers)



Methodology – Urban Green Spaces (UGS)

Big and Medium UGS

(> 1 ha)

21 Parks - 74.95 ha (1.78%)

- Stratified Sampling by Zone
- Random Plot selection in UGS (n=141 plots)
- Sampling Project in i-Tree Eco
- Analysis of results: Structure, Benefits and economic value

Small UGS

(< 1 ha)

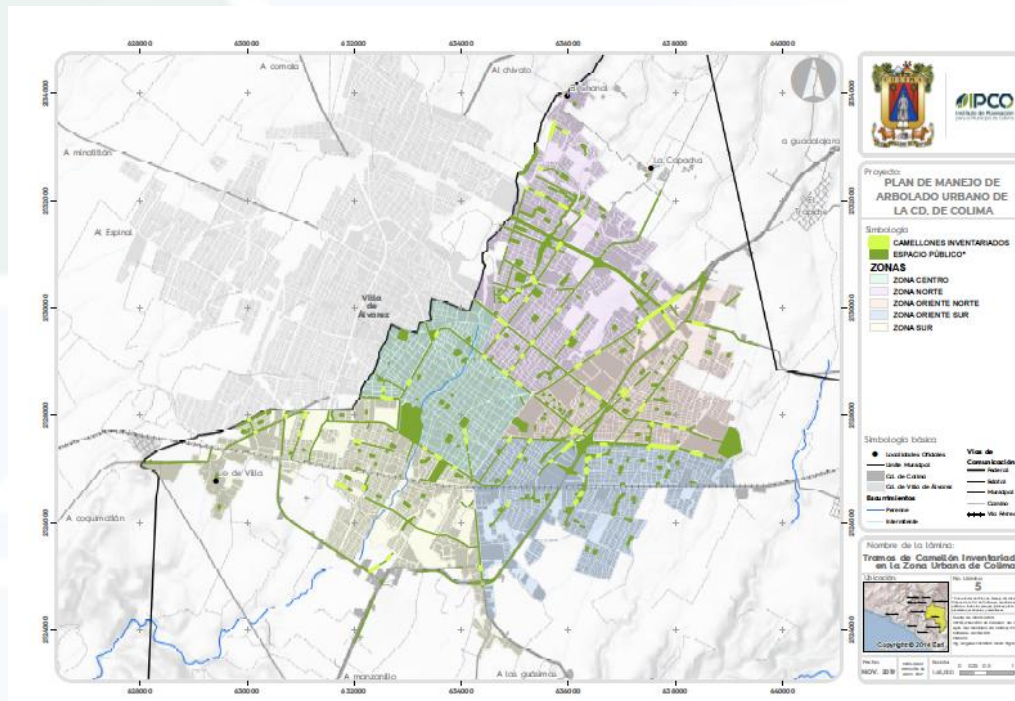
174 Spaces - 54.66 ha (1.3%)

- Cluster Sampling
- UGS Random Selection (n=61 spaces)
- Complete Inventory (Stratified) in i-Tree Eco
- Estimation for population out of i-Tree Eco



Methodology - Median Strips

Street tree Simple Random Sampling – Block Segment Lengths Known (Nowak *et al.*, 2015)



Variables

Trees

- Specie
- DBH
- Total height
- Crown base height
- Crown width
- Crown light exposure
- Percent crown missing
- Crown dieback
- Land use
- Task of maintenance

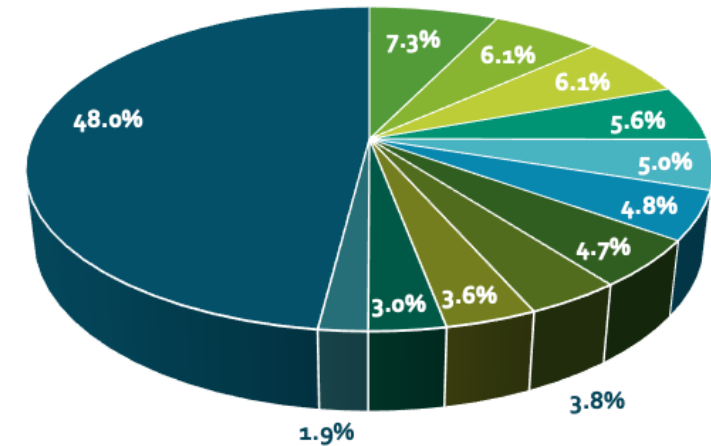
Plot

- Land use
- GPS coordinates
- Percent measured
- Tree cover
- Ground cover
- Reference objects



Results – Structure UGS

- Recorded **154 species** in Colima's UGSs
- No species was more than 10% of total trees.
- Total UGSs has **21,541 trees**
- Canopy cover (1,301,570 m²) represents **3.09%** of total city area (4,217 ha).



■ <i>Bucida buceras</i>	■ <i>Tabebuia rosea</i>	■ <i>Ehretia tinifolia</i>
■ <i>Citrus aurantium</i>	■ <i>Tabebuia donnell-smithii</i>	■ <i>Mangifera indica</i>
■ <i>Cocos nucifera</i>	■ <i>Azadirachta indica</i>	■ <i>Ficus benjamina</i>
■ <i>Dyopsis lutescens</i>	■ <i>Dead</i>	■ <i>Other species</i>



Results – Benefits UGS



Carbon storage:
8,582.4 Mg

(\$331,423 USD)



Avoided run-off: 12,264.2
m³/yr (\$551,627.41)

(\$25,074 USD)



Carbon
sequestration: 422.7
Mg/yr

(\$16,338 USD)

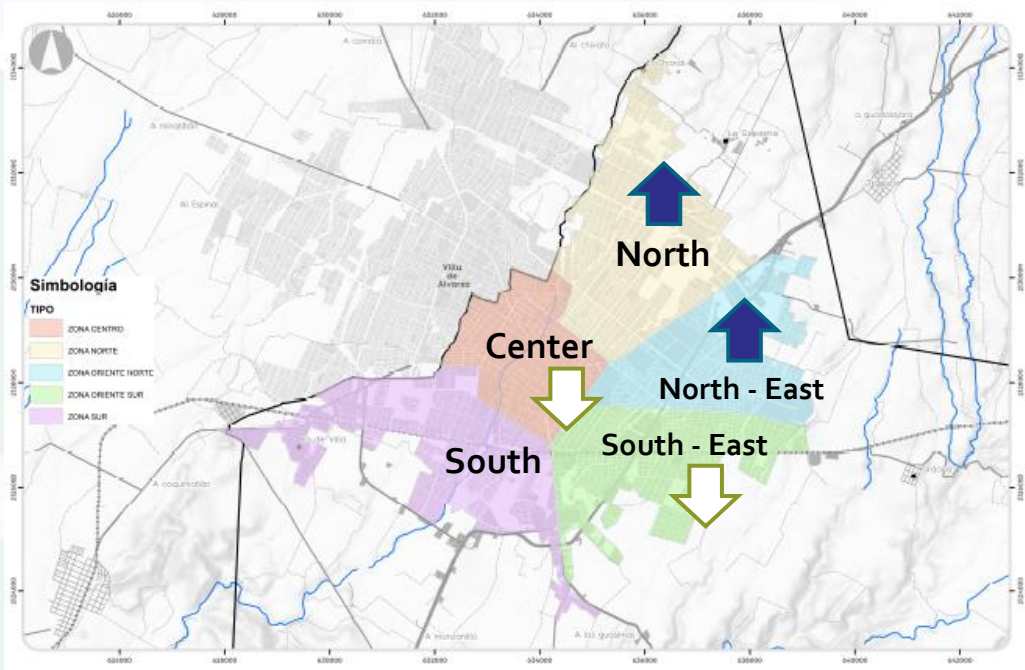




Pollution removal:
6,204.5 Kg/yr

(\$136,963 USD)

Colima Urban Forest Management Plan

- Benefits generation by zone
- Identification of potencial tree species
- Plant and maintenance strategies



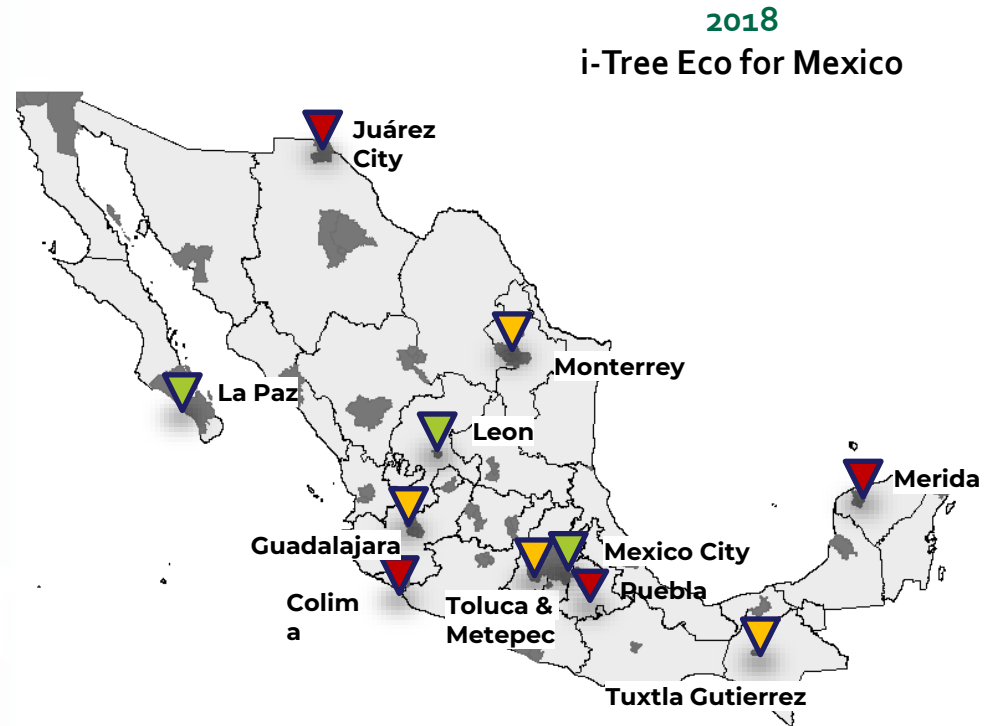
RIV		
6.62 %	15.03 %	8.11 %



<http://ipco.gob.mx/ipco/proyectos/proyectos/ambiental/PM AU.pdf>

Who is using i-Tree in Mexico?

- Municipalities & consultants are using Eco to create tree maintenance or management plans or plant strategies
- NGOs are using it to encourage community engagement and urban greening efforts
- Strength tree advocacy efforts



San Marcos Neighborhood – Merida City (in process)

1

1st Social Assessment

Survey to know the community perception about trees

2

Tree Inventory with i-Tree Eco – Tree trial

Measurement of different tree species to estimate benefits and economic value
Create a tree trial to show the importance of trees.

3

Community Engagement Activities

Youth education (Children and university students)
Involve in tree plantings.

4

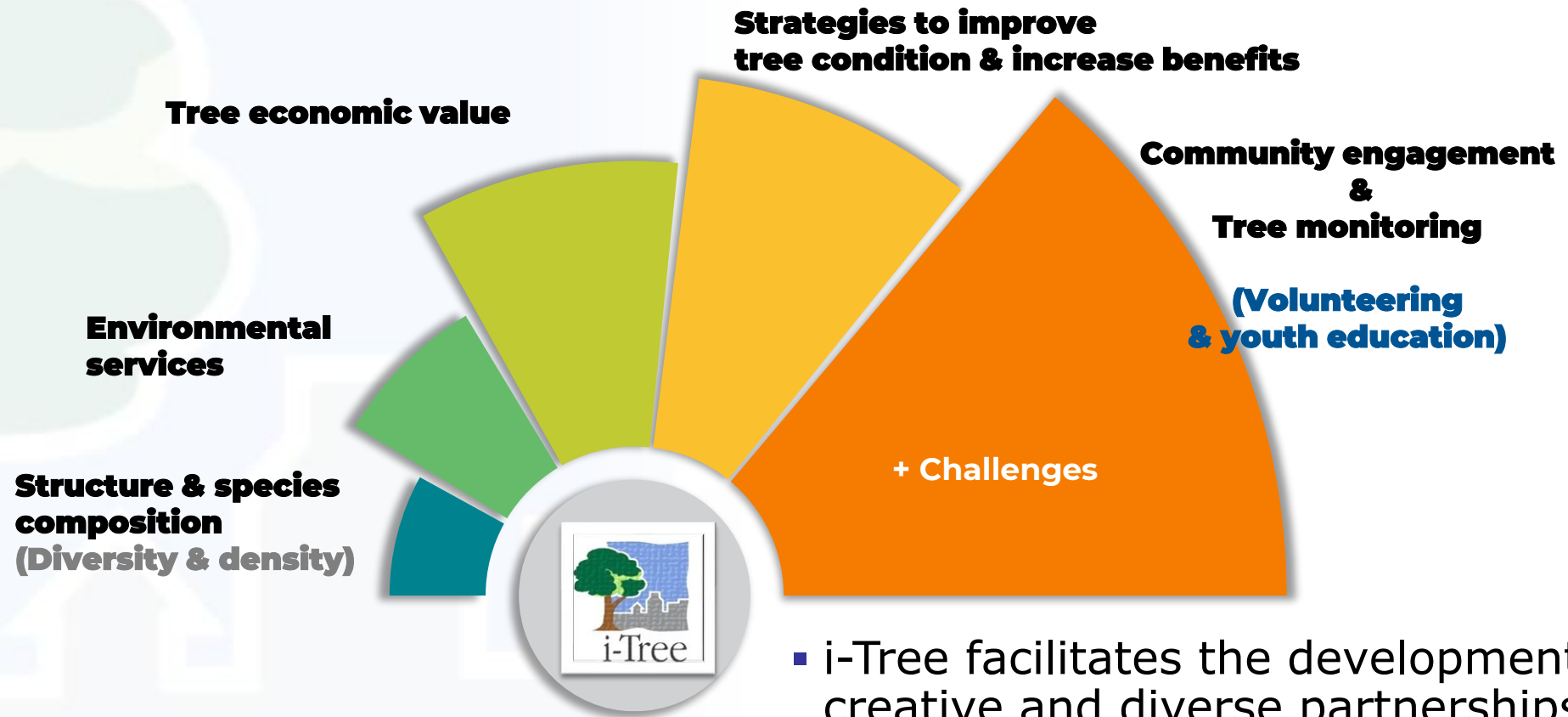
2nd Social Assessment

Survey to know if community have a better perception about trees after the activities



Conclusions

An i-Tree project shows you:



- Communities know what they need!
- i-Tree facilitates the development of creative and diverse partnerships

The background features a stylized illustration on the left side. It includes a large tree with a thick brown trunk and a full, rounded green canopy. Behind the tree, a white outline of a city skyline is visible against a light blue background. The skyline consists of several geometric shapes representing buildings of varying heights. The right half of the image is a solid, light yellow background.

Interdisciplinary uses of i-Tree

University of Dundee Botanic Garden Tree Asset Valuation

- Dundee, Scotland



University of Dundee Botanic Garden Tree Asset Valuation Report

An i-Tree Eco and CAVAT assessment



[University of Dundee Botanic Garden Tree Asset Valuation - Treeconomics](#)

Headline Figure

Structure and Composition	
Number of Trees	1,378
Number of Species	243
Most Common Tree Species	<i>Pinus sylvestris</i> , <i>Betula pendula</i> , <i>Eucalyptus gunnii</i>
Replacement Cost (CTLA)	£1.48 million
Amenity Valuation (CAVAT)	£38.1 million

Combined Botanic Garden & Campus Ecosystem Services		
Annual Carbon Storage	633 tonnes	£624,000
Annual Carbon Sequestration	15.7 tonnes	£15,400
Annual Pollution Removal	60.3 kg	£4,400
Annual Avoided Runoff	1,600 m³	£2,600
Total Annual Benefits	£22,400	

University of Dundee Botanic Garden Tree Asset Valuation

A university asset where Nature-based Solutions (NbS), Conservation of Biodiversity and Human Wellbeing are being explored using STEAM (STEM together with Art), gaining the evidence base for external interventions within the "Living Lab".

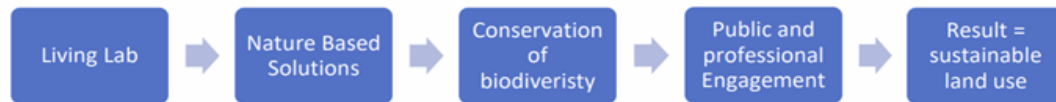
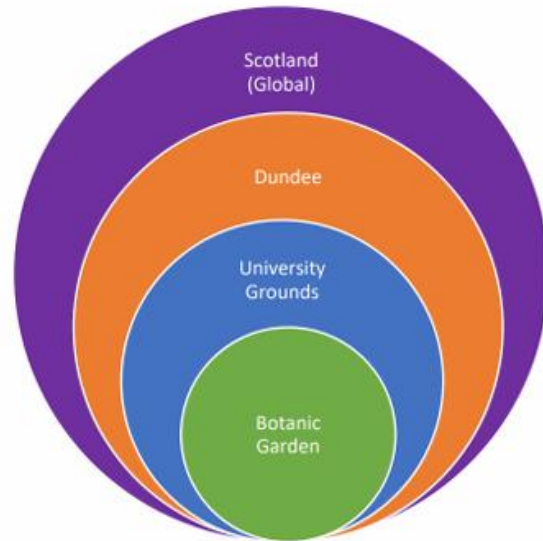




Figure 4: The five interconnected Botanic Garden and Grounds workstreams that are described in the strategic plan (Frediani, 2021).



Figure 5: The importance of diversifying green spaces in the city is a new area of focus recently introduced by the gardens, engaging primary school children to codeign a Wee Forest and outdoor learning space in the Maryfield ward.

Aula Verde Aniene – Rome, Italy



[about](#) [statement](#) [portfolio](#) [studio works](#) [news](#) [contact](#)  

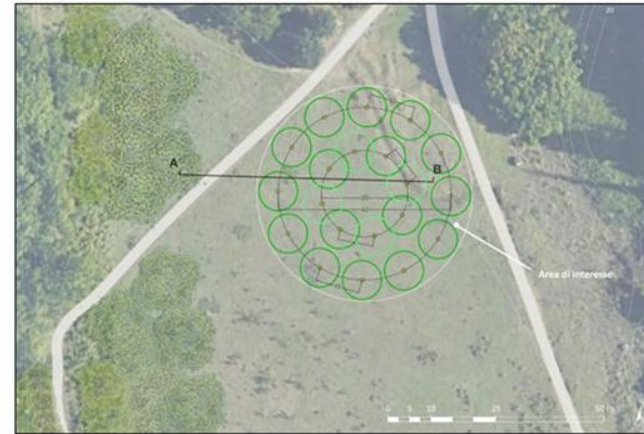


Figure 3. The first picture is a satellite image from Google Earth software showing the location of Aula Verde and nearby citizens' utilities. The second and third images show the project of Aula Verde Aniene and have been extracted from the rendering of the Aula Verde project design prepared by the architect in charge of the regulatory procedure for Aula Verde implementation.



<https://www.andreco.org/portfolio/aula-verde-aniene-river/>

Aula Verde Aniene – Rome, Italy

www.nature.com/scientificreports

scientific reports

OPEN

Aula Verde (tree room) as a link between art and science to raise public awareness of nature-based solutions

A. Conte^{1,2}, R. Pace^{3,4}, Q. Li^{5,6}, S. Carloni⁷, A. Boetzkas⁸ & L. Passatore⁷✉

Nature-based solutions inherently require a multifaceted perspective that encompasses diverse fields. The aim of this project is to develop more effective nature-based solutions, climate action and environmental awareness by breaking down boundaries between disciplines and fostering a co-creative process. Concepts of ecology and urban forestry were combined with the research on political ecology, environmental humanities, land art, regenerative art, performing art, participatory art, and more-than-human art. This process resulted in the creation of Aula Verde Aniene. It is located in an urban park in Rome and consists of a stand of trees arranged in circles with a specific design to give the perception of being in an outdoor vegetated room. The project activities involved community participation through art performances and citizen science initiatives. Regulating and cultural ecosystem services of Aula Verde were assessed using i-Tree Eco software and citizens' surveys. Beyond numerical descriptions of ecosystem services, the manuscript introduces shinrin-yoku as a practice to raise awareness of nature. The distinctive approach here described contributed to convey a sense of belonging to the ecosystem to citizens. The project framework and study findings have been developed to formulate policy recommendations and disseminate a format that can be adapted to diverse locations.

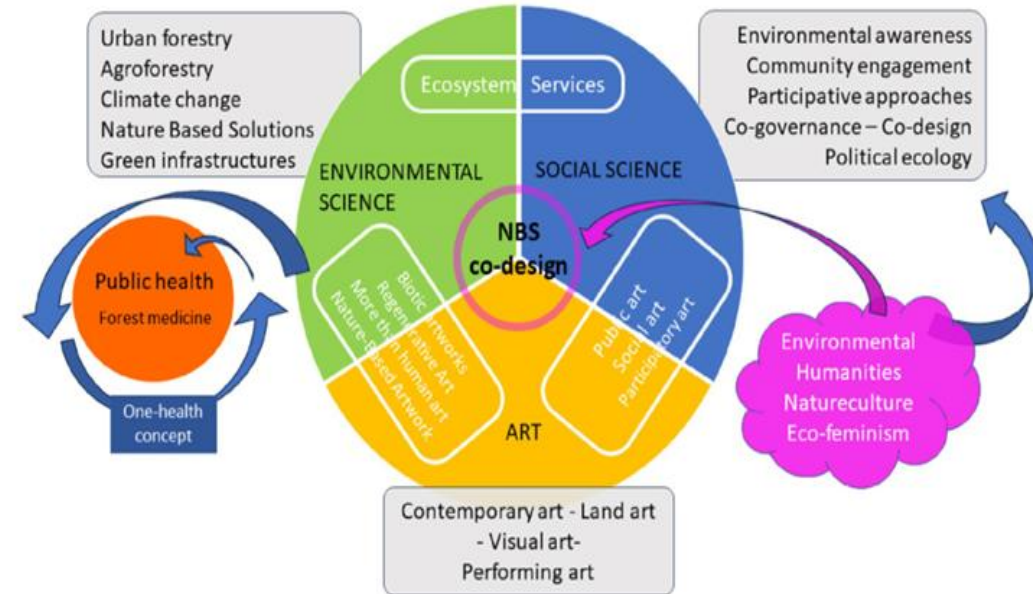


Figure 1. Theoretical framework of the manuscript. The diagram shows the collaboration between different disciplines and the key concepts related to the work. It describes an innovative version of NBS—co design process that take in consideration: art practices, social sciences, political ecology, one health theories and environmental science.

Aula Verde Aniene at

<https://www.nature.com/articles/s41598-024-51611-9>

Beyond the written report

Infographics, story maps, tree tags, and other unique communication examples

Tree tags

- Clear and concise tree tag from a volunteer urban tree steward in Lancaster PA
 - [Tag image for printing](#) - add your own logos and tree details
 - [Instructions for using MyTree to fill in your tag](#)
- Editable [tree tag pdf](#) from our collaborators at [UNRI](#).


Infographics

- Summarizing benefits provided by plantings supported by [PECO Energy Company](#).
- [Liege Infographic](#) for the City of Liege in Belgium shared by Wissal Selmi.
- Casey Trees [Carbon Benefits](#) summary brochure.
- One page summary of tree planting for the [School of the Art Institute of Chicago](#).
- Summaries of community forest benefits in the Netherlands shared by BTL consulting. [Stadspolder](#) and [Den Haag](#).
- Selected examples from students at the University of Texas Rio Grande Valley created as part of their Community Forestry 3301 course with Bill Green - [Bookmark style](#), [Health focus](#), [i-Tree Landscape Comparisons](#), [i-Tree Landscape Summary](#) and [i-Tree Canopy Summary](#).



Story maps and webpages




<https://www.itreetools.org/support/resources-overview/beyond-written-report>


 i-Tree Tools


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 **Nadine Moreby** • 2nd [+ Follow](#)
Part of the Treeconomics team, working to highlight the ecosystem service...
2mo • 



Want to know how i-Tree can help you advocate for increased investment in the green spaces you manage? 🌳 The [University of Dundee](#) has done exactly this, by using [#itree](#) to highlight the ecosystem services the trees on its campus were ...more

 **University of Dundee Botanic Garden Tree Asset Valuation - Treeconomics**
treeconomics.co.uk

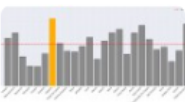
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Developer with i-Tree Tools Consortium
1w • Edited • 

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Our international team used i-Tree Tools to quantify the climate benefits provided by urban trees in 25 cities across Brazil's Atlantic Forest. ...more

 **With Great Ecosystem Services Comes Great Responsibility: Benefits Provided by Urban Vegetation in...**
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