WHERE ARE ALL THE TREES?

An analysis of tree canopy cover in urban Australia
The Green Building Council of Australia welcomes this report as an important step in expanding our understanding of how urban greening strategies can help with climate change adaptation, reduce the urban heat island effect, improve biodiversity and storm water management, and provide healthier spaces for active living.

As high-density local governments adopt strategies that minimise the heat island effect, green infrastructure—such as green walls, roofs and vertical gardens—will play an ever-increasing role. Our Green Star rating tools recognise and reward buildings and communities that provide more efficient, healthy, productive and resilient places for people, and this report demonstrates the importance of embedding best practice principles at the heart of what we do.

AILA fully supports the 202020 Vision in achieving 20% more urban green space across Australia. This report prepared by ISF provides a valuable first step in the process of qualifying the existing extent of urban green cover.

Providing a rapid, low cost land cover estimate will allow dialogue and collaboration to occur between both neighbouring LGAs and LGAs nationwide. This provides a valuable common starting point for more detailed planning and decision-making in growing the green life support for our cities.

Cross sector collaboration will be key to the success of the 202020 Vision.

This report represents Australia’s first comprehensive assessment of urban forest canopy cover. Understanding canopy cover level at a local government scale is critical for effective urban forest management. The canopy mapping undertaken for this report provides an essential indicator with which to benchmark the urban forest, set future targets and measure change.

The ability to benchmark in this manner will allow us to evaluate the urban greening strategies of the assessed LGAs over time. For example, the report shows that Melbourne has one of the highest proportions of hard surfaces in comparison to other LGAs. The City is addressing this reality through the Open Space Strategy which aims to increase green space by 7.6%.

A review of the data presented confirms trends that many of us have observed anecdotally, which is that by and large, the wealthier suburbs have more trees than their lower socio-economic equivalents, and that we are going to have to work very hard to find room for urban greening opportunities in the higher density inner city suburbs where urban heat island effects are most pronounced.

The metrics described in this report represent a great starting point. The really exciting work is still to come. The report outlines a three-staged approach for maximising research opportunities, with the aim of providing the most relevant information to decision makers on how best to allocate resources for urban greening programs for greatest effect. Let’s hope the good work continues.
It is inspiring to see a non-government organisation taking up such an important initiative. I am delighted to see a common sense approach to gathering this data, based not just on economy, but as this report rightly points out, the need to collate data swiftly across the country given the pace of development and change in land uses.

While some local government authorities may have gathered and documented data on vegetation cover and/or public open space in their Council area, the patchiness of that data across the nation and the complexities of differing definitions preclude ready comparative analysis at a national scale and lend further credibility to a swift, coarse-grained desktop methodology like this.

So this simpler approach is sensible and, while it will be important that the data is interpreted with care by those to whom it is targeted, it’s a great initiative and a good way of quickly drawing attention to some of the raw evidence and in reinforcing the laudable message behind the 202020 Vision.

Debate over urbanisation, density and the diminishing possibilities for contact with nature in cities has spurred interest in the potential impacts of the natural environment on health. Field experiments and epidemiological studies, including those which we have conducted in NSW,\(^1\)\(^2\)\(^3\)\(^4\)\(^5\) have tended to report health benefits linked with increasing proximity to green spaces. As such, there is increasing belief that green spaces do more than ‘pretty up’ neighbourhoods; they may also be important resources for supporting health. A vital piece of information in order for the 2020 Vision to implement and evaluate its success is to know how much green space is already available, what epidemiologists typically refer to as a ‘baseline’. The work by Jacobs and his colleagues is a positive step in that direction, making use of satellite imagery to map tree canopy across Australia’s urban areas. It is important to note that while the LGA is a useful unit for reporting purposes, replicating this work for smaller geographical boundaries is an area for future improvement. The necessity of taking into account small-scale distributions is apparent from another recent study of Australia’s five largest cities,\(^6\) in which we showed that lower income neighbourhoods tended to have less green space. Affirmative action is, therefore, important to ensure all Australians have access to this important public health resource regardless of their socioeconomic circumstances.

The 2020 Vision is a collaborative plan to increase the amount of green space in our urban areas by 20% by 2020. To achieve this we are bringing industry, government and individuals together and providing them with the tools, resources and networks necessary to meeting our shared goal.

The 2020 Vision was started in 2013 by Nursery & Garden Industry Australia and Horticulture Australia Ltd and has since grown to include 153 partners and 28 strategic experts. Even the United Nations Global Compact Cities Programme has come on board as a partner.

Everyone is welcome to get involved. Find out more at 202020vision.com.au or contact us via hello@202020vision.com.au

WHAT IS THE 202020 VISION?

WHAT IS THIS REPORT ALL ABOUT?

This report summarises the findings contained in Benchmarking Australia’s Urban Tree Canopy, a study we conducted in partnership with the Institute for Sustainable Futures (ISF) at the University of Technology, Sydney (UTS).

Inside you will find information on the importance of getting more trees and plants into our cities and urban areas, where we are at the moment in terms of tree canopy—a key indicator of green space—and what you can do to help increase it.

THE REPORT UNDER DISCUSSION

Unless otherwise stated, all figures cited in this paper may be found in the original ISF report available for download at 202020vision.com.au/research

153 partners

28 strategic experts

Institute for Sustainable Futures

Benchmarking Australia’s Urban Tree Canopy: An i-Tree Assessment, Final Report

2014
THE REPORT AT A GLANCE

3 researchers from the Institute for Sustainable Futures, University of Technology, Sydney

1 piece of sophisticated software developed by the US Department of Agriculture Forest Service

62,185 km² measured

0.8% of Australia’s land mass

68% of the population live within the 139 assessed LGAs

139 local government areas assessed

TOTAL LGAs ASSESSED

02 NT
29 WA
19 SA
34 VIC
05 TAS

8% hard surface

8% highest recorded tree canopy cover

3% lowest recorded tree canopy cover

47% grass-bare ground

39% tree canopy cover

6% shrub

LGAs PER STATE

01 ACT
05 TAS
10 QLD
19 SA
29 WA
79% 139

NATIONAL URBAN AVERAGE

NSW 01
QLD 10
ACT 01
SA 19
WA 29
NT 02

68% of the population live within the 139 assessed LGAs

6,218,500 km² measured

0.8% of Australia’s land mass
TREES AND PLANTS MAKE A GOOD CITY GREAT

They keep our urban areas cool and make us healthier, happier, safer and more productive. They improve the air we breathe, reduce stress, help to minimise the incidence of extreme weather and mitigate the impacts of climate change. They can even boost the economy. These are just some of the reasons why green space is so important.
BUT HOW DO YOU INCREASE THE AMOUNT OF GREEN SPACE IN URBAN AREAS IF YOU CAN’T MEASURE IT?

That’s why we conducted this study. Nobody really knew how much tree canopy cover – a key indicator of green space – there was in our urban areas so we set out to measure it. Now that we have a benchmark to measure by, we can set about helping increase the amount of green space in our urban areas.
That’s a good question. And it’s one that people seem to answer in lots of different ways. For us, it comes down to three things: trees, plants and benefits. When we talk about ‘green space’ we’re talking about an urban area that features trees and plants and delivers real benefits to the people that use it.

Basically, we are interested in increasing the amount of green space in our urban areas in a way that delivers some kind of utility to people and communities. And why wouldn’t we be? Trees and plants have been shown to make us healthier, happier and more productive, reduce flooding, clean the air and cool our cities.

**EXAMPLES OF GREEN SPACE**

- **PUBLIC OPEN SPACE & PARKLAND**
- **GREEN WALL**
- **GREEN ROOF**
- **INDOOR**
- **GREEN LINKS & CORRIDOR**
- **WETLANDS & DRAINAGE**
- **PRECINCT & MASTERPLAN**
- **COMMERCIAL DEVELOPMENT**
- **COMMUNITY GARDEN & POCKET PARK**
- **RESIDENTIAL DEVELOPMENT**
Measuring green space isn’t easy. It can be expensive and often requires a specialist skill set. i-Tree helps overcome these issues. i-Tree is free, easy-to-use software that allows users to rapidly measure the tree canopy in a given area. Deeper analysis in i-Tree can also provide a range of data that shows the carbon sequestration of trees, rainwater catchment and cost to replace. Visit itreetools.org for more information.

Using i-Tree Canopy, the ISF at UTS analysed 1.39 Local Government Areas (LGAs) lying within the most densely populated areas of Australia. The selected areas are home to 68% of the Australian population.

The study was based on a 1000-point random sample method, which was used to classify landscape features in the LGAs. Areas were generally located in and around greater capital city regions, but some additional areas were added as high-density urban areas also exist outside of capital regions.

Dr Jacobs and Mr Mikhailovich conducted a brief scoping study on i-Tree Canopy which determined that logging 1000 points gave estimates that stabilised between 600-1000 points.

It is worth noting that in the cases of Queensland and the ACT analysis was completed at the statistical subdivision (SSD) level.

WHAT TYPES OF SURFACE AREAS WERE MEASURED?

**GRASS-BARE GROUND**
Cleared road sides, industrial estates, lawns, pasture, sites cleared for development and sporting grounds.

**HARD SURFACES**
Asphalt, buildings, car parks, footpaths, sandy beaches, train lines, rocky coastlines and water.

**TREES**
Anything that looks like a tree from above; distinguished from shrubs by the shadows cast.

**SHRUB**
Landscaped vegetation as well as bushland shrubs, crops and grape vines.

METHODOLOGY

The authors

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Candice Delaney
BA, BSc (Hons 1)

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Nicholas Mikhailovich
BDes (Industrial), MEnv

WE BELIEVE THAT I-TREE CANOPY IS A LOW COST, RAPID METHOD TO PROVIDE AN ESTIMATE OF TREE COVER AS A BASE-LINE FOR THE 202020 VISION PROJECT AND TO CATALYSE SOCIAL CHANGE IN AUSTRALIA’S URBAN AREAS.

- Institute for Sustainable Futures, UTS

WANT ALL THE DETAILS?
ACCESS THE FULL REPORT ONLINE AT 202020VISION.COM.AU/RESEARCH

Simon Wood Photography
KEY NATIONAL FINDINGS FROM BENCHMARKING AUSTRALIA’S URBAN TREE CANOPY

Our report both confirmed that Australia boasts areas of impressive tree canopy cover and revealed exciting opportunities for achieving our shared goal of increasing green space in urban Australia.

Hobart is the highest ranking capital city in terms of the proportion of tree canopy to other kinds of ground cover. Hobart boasts 59% tree canopy cover. By comparison, Adelaide has the lowest proportion of tree canopy among Australia’s capitals with 27%.

When we broadened the parameters to include a selection of regional cities, Cairns (QLD) was found to have the highest percentage of tree canopy followed by Launceston (TAS) and Townsville (QLD).

LGAs with sizeable grass-bare ground and hard surface areas may have a unique opportunity to increase their respective tree canopy rates. Meanwhile, areas boasting high ratios of grass-bare ground to tree canopy—Wyndham (VIC), Wanneroo (WA), Gawler (SA) and Camden (NSW)—could benefit from looking to their urban greening strategies, and knowledge of the local geography, and increase their green space by planting on vacant land.

In areas with high hard surface to tree canopy ratios—Maribyrnong (VIC), Fremantle (WA), Holdfast Bay (SA) and Rockdale (NSW)—tree canopy rates could be increased through urban regeneration projects.

“AS HIGH-DENSITY LOCAL GOVERNMENTS ADOPT STRATEGIES THAT MINIMISE THE HEAT ISLAND EFFECT, GREEN INFRASTRUCTURE—SUCH AS GREEN WALLS, ROOFS AND VERTICAL GARDENS—WILL PLAY AN EVER-INCREASING ROLE.”

Romilly Madew
Green Building Council of Australia
Our capital cities at a glance

Tree canopy: how our cities* compare

1. Hobart 59%
2. Brisbane 49%
3. Darwin 28%
4. Perth 26%
5. Adelaide 20%
6. Sydney 15%
7. Melbourne 13%

Are we comparing apples with apples?

Yes, and no.

The data in the table is based on the whole of each local government area, however different governments set their boundaries differently. Brisbane, for example, boasts an LGA of over 3,000 km², far larger than the CBD, whereas Sydney and Melbourne LGAs stop closer to the CBD boundaries. If a similar area in Brisbane were measured the result would be 16.3%. As such, this is designed less as a leaderboard and more as a benchmark for future progress.

Variations may also be attributed to other factors—population and climate, to cite a few—and should not be seen as a comment on any particular council’s attitudes towards green space projects.

However, these figures will serve as a useful reference point for evaluating the amount of green space as we march toward the year 2020.

* Due to the fact that there is only one LGA within the greater ACT, we do not have a figure for Canberra alone hence it does not feature here.

Impressive tree canopy cover

Most urban LGAs will struggle to achieve tree canopy rates like those found in this selection due to their urban density, among other factors.

1. Cairns Regional Council (QLD)
2. City of Launceston (TAS)
3. Townsville City Council (QLD)
4. Shire of Kalamunda (WA)

Opportunities due to grass-bare ground

Golf courses and sports grounds are not plantable, but there is nothing to stop you planting between fairways, or around an oval.

1. City of Wyndham (VIC)
2. City of Wanneroo (WA)
3. Town of Gawler (SA)
4. Camden Council (NSW)

Hard surface heavy

Lots of concrete demands creative approaches to urban greening. Think roof and wall gardens for a start.

1. City of Maribyrnong (VIC)
2. City of Fremantle (WA)
3. City of Holdfast Bay (SA)
4. City of Rockdale (NSW)
AUSTRALIAN CAPITAL TERRITORY

THE ACT LEADS THE NATION IN METROPOLITAN TREE CANOPY RATES

At 56% coverage, the Australian Capital Territory has the highest proportion of urban tree canopy in the country. Yet the ACT also boasts sizeable tracts of grass-bare ground that could potentially accommodate new plantings.

Of these areas, Weston Creek-Stromlo has the greatest proportion of grass-bare ground (73%) as well as the lowest percentage of tree canopy in the territory (10%).

In terms of hard surface land, Woden Valley in the Territory’s south recorded 31%, while the remaining seven of the eight statistical subdivisions (SSDs) analysed featured proportions of less than 20%.

THE ACT IS A LAND OF OPPOSITES WITH TREE CANOPY RATES RANGING FROM A LOW OF 10% TO A HIGH OF 76%.

TOP STATISTICAL SUBDIVISIONS BY TREE CANOPY IN AUSTRALIAN CAPITAL TERRITORY

1. Australian Capital Territory - Bal
2. North Canberra
3. Woden Valley

76% 50% 28%

AFFIRMATIVE ACTION IS IMPORTANT TO ENSURING ALL AUSTRALIANS HAVE ACCESS TO THIS IMPORTANT PUBLIC HEALTH RESOURCE REGARDLESS OF THEIR SOCIOECONOMIC CIRCUMSTANCES.

Dr Thomas Astell-Burt & Dr Xiaoqi Feng
-University of Western Sydney
NEW SOUTH WALES

THE LAND OF OPPORTUNITY

Challenges and opportunities abound in NSW when it comes to increasing green space in urban areas by 20%.

The City of Sydney, for example, is characterised by the highest proportion of hard surface (69%) of all NSW LGAs and low levels of grass-bare ground (13%). Therefore, incorporating green space within the existing built environment will be key to contributing to an increase in canopy cover. However, it should be noted that the City is making good progress and evidence for Sydney’s commitment to urban greening may be found in the Green Roofs and Walls Program.

Conversely, Western Sydney was found to have the highest proportion of potentially plantable spaces with Blacktown, Camden, Fairfield, Liverpool and Penrith all boasting significant areas of grass-bare ground that could potentially be planted.

There is also an opportunity to manage urban heat in Sydney by increasing the tree canopy along a low-coverage corridor stretching from the city’s eastern suburbs to Parramatta. The corridor is home to established, high-density LGAs of varying socio-economic groups and improving green spaces along it will require a coordinated approach.

Currently, tree canopy across NSW ranges from a high of 59% at Pittwater to 12% in Botany. Improving on these figures by 2020 will require the respective LGAs to continue to progress their urban greening strategies.

INCREASING THE AMOUNT OF GREEN SPACE IN THE CITY CAN MITIGATE THE HEAT ISLAND EFFECT IN SYDNEY.

THE TOP LGAs BY TREE CANOPY IN NEW SOUTH WALES

1. Pittwater Council (59%)
2. Hornsby Shire (59%)
3. Warringah Council (58%)

“CROSS SECTOR COLLABORATION WILL BE KEY TO THE SUCCESS OF THE 202020 VISION.”

Vanessa Trowell
- Australian Institute of Landscape Architects
NORTHERN TERRITORY

THE TOP END OFFERS SIGNIFICANT GREENING OPPORTUNITIES

The two LGAs assessed in the Northern Territory—the Cities of Darwin and Palmerston—together account for just 45% of the Top End’s population.

However, the comparatively low-density composition of the two cities does not correspond with considerable tree canopy. Tree canopy in Darwin and Palmerston is in the 20-30% range.

BUT A FAVOURABLE MIX OF GRASS-BARE AND HARD SURFACE GROUND SUGGESTS THAT THERE IS AMPLE OPPORTUNITY FOR URBAN GREENING PROJECTS IN THE TERRITORY.

THE CITY OF DARWIN & CITY OF PALMERSTON ACCOUNT FOR 45% OF NT POPULATION*
QUEENSLAND

IMPRESSION TREE CANOPY UP NORTH

Queensland has some of the highest proportions of tree canopy in the country. Cairns tops the list of LGAs with the greatest tree canopy (79%) with Townsville also featuring among the front-runners.

But there is always room for improvement. Toowoomba features particularly high concentrations of grass-bare ground (71%) covering a total of 9,235 km².

As with the other states surveyed, Queensland’s urban areas are home to the majority of the state’s population (74%) and the opportunities for urban greening in the built up areas are, naturally, limited.

Beyond the urban centre, however, density levels decrease and the availability of potentially plantable land increases.

THE TOP LGAs BY TREE CANOPY IN QUEENSLAND

<table>
<thead>
<tr>
<th>Rank</th>
<th>LGA</th>
<th>Tree Canopy %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cairns Regional City</td>
<td>79%</td>
</tr>
<tr>
<td>2</td>
<td>Sunshine Coast</td>
<td>57%</td>
</tr>
<tr>
<td>3</td>
<td>Redland City</td>
<td>57%</td>
</tr>
</tbody>
</table>

I-TREE CANOPY IS AN EASY TO USE, COST EFFECTIVE AND, MOST IMPORTANTLY, SCIENCE BASED TOOL WITH WHICH TO UNDERTAKE THIS IMPORTANT ASSESSMENT OF AUSTRALIA’S GREEN SPACE.

Dr Anthony Kachenko
- Nursery & Garden Industry Australia
This map shows canopy cover for selected SDDs in the greater Brisbane area and beyond.
South Australia’s metropolitan areas are marked by relatively low levels of tree canopy when compared to other Australian capitals. Of the assessed LGAs, tree canopy ranges from 44% in the Adelaide Hills to 12% in Port Adelaide Enfield.

However, South Australia does share one thing in common with the rest of the country. The vast majority of South Australia’s population live in urban areas. The 19 LGAs assessed in South Australia are home to almost three quarters of the state’s population (73%).

None of the LGAs surveyed have tree canopy of less than 10%, however 11 of the 19 fall within the 10-20% range. And it is important to note that the two LGAs with the highest proportions of tree canopy—Adelaide Hills (44%) and Mitcham (42%)—feature conservation areas within their boundaries.

Holdfast, Norwood, Payneham, Prospect and St Peters all feature hard surface proportions in excess of 60%, which—to employ the report’s terminology—is to say they feature significant areas that are currently non-plantable.

There are, however, a number of areas that are potentially plantable. Gawler, Onkaparinga and Playford, all have grass-bare ground rates of over 50%.

**IT IS INSPIRING TO SEE A NON-GOVERNMENT ORGANISATION TAKING UP SUCH AN IMPORTANT INITIATIVE.**

Crosbie Lorimer
- Clouston

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**THE TOP LGAs BY TREE CANOPY IN SOUTH AUSTRALIA**

1. Adelaide Hills Council  
   - 44%

2. City of Mitcham  
   - 42%

3. City of Burnside  
   - 30%
TASMANIA

TASMANIA’S ATYPICAL POPULATION SPREAD IMPACTS FINDINGS

With the possible exception of the Northern Territory, the urban spread in Tasmania is somewhat different to that encountered across the rest of the country, with the five urban LGAs surveyed housing a comparatively low percentage of the state’s population (48%). However, unlike the Top End LGAs—and indeed, most of the country—the LGAs assessed in Tasmania boast comparatively high proportions of tree canopy. Tree canopy percentages range from 66% in Kingborough to 31% in Clarence. And of the five LGAs we looked at, four can claim tree canopy rates of more than 40%.

There are also sizeable areas of the state that could benefit from potential planting increases. Of those, the City of Clarence comprises 50% of potentially plantable land. And with hard surface land comprising only 19% of Hobart’s total, the Tasmanian capital ranks as one of the nation’s greener urban areas.

THE TOP LGAs BY TREE CANOPY IN TASMANIA


"A VITAL PIECE OF INFORMATION IN ORDER FOR THE 202020 VISION TO IMPLEMENT AND EVALUATE ITS SUCCESS IS TO KNOW HOW MUCH GREEN SPACE IS ALREADY AVAILABLE – WHAT EPIDEMIOLOGISTS TYPICALLY REFER TO AS A ‘BASELINE’.

Dr Thomas Astell-Burt 
& Dr Xiaoqi Feng
-University of Western Sydney
Almost three quarters of Victorians live in 34 LGAs across the greater Melbourne region. Of those LGAs, 19 of them—situated mainly in the inner city and western regions of the greater metropolitan area—feature tree canopy rates of less than 20%.

Given the population concentrations found in many Victorian LGAs, the challenge faced by partners of the 202020 Vision will be incorporating green space in what are typically high-to-medium density urban environments.

Within the City of Melbourne alone tree canopy was calculated at 13%. The City of Melbourne has provided information that shows that the private realm accounts for approximately 31% of municipal canopy cover with the public realm accounting for the remaining 69%. This highlights the importance of protecting tree canopy in public spaces and suggests an opportunity to increase greening in private spaces, possibly through the planting of wall and roof gardens.

The vast majority of tree canopy in Melbourne is found on public land.

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The Open Space Strategy aims to increase green space by 7.6%.

Yvonne Lynch
- Urban Landscapes, City of Melbourne

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The top LGAs by tree canopy in Victoria:

1. Shire of Yarra Ranges - 77%
2. Shire of Nillumbik - 49%
3. City of Manningham - 40%
Our i-Tree Canopy analysis of Western Australia’s LGAs revealed areas of bountiful tree canopy and other areas, owing to geographical and topographical factors, that could benefit from further urban greening.

For example, Kalamunda features tree canopy rates of 63% but it is only one of the two assessed LGAs in WA—the other being the Shire of Mundaring (54%)—with tree canopy rates of over 50%. Meanwhile, the City of Belmont in the greater Perth region features a tree canopy of only 9%.

Of the urban LGAs, many feature sizeable hard surface areas with comparatively little in the way of grass-bare ground. Bayswater, Belmont, Canning, East Fremantle, Fremantle, Joondalup, Subiaco and Vincent all have hard surface proportions of over 50% with grass-bare ground averages of 20-25%. These environmental characteristics call for innovative approaches to urban greening.

“The Top LGAs by Tree Canopy in Western Australia

1. Shire of Kalamunda
2. Shire of Mundaring
3. City of Swan

63%
54%
34%
NOW YOU’VE SEEN THE FINDINGS, WHY NOT GET INVOLVED?

To determine the state of green space in Australia’s urban areas, we analysed the tree canopy in 139 local government areas (LGAs) across Australia using the open source i-Tree Canopy software. Now it’s over to you. Use i-Tree Canopy to measure the tree canopy in your area or compare your progress against the benchmarks established in this study.
When we partnered with the ISF at UTS, we wanted to find a tried and tested indicator of canopy cover that was easy to use and affordable. I-Tree fit the bill.

Whether you’re in government, industry, business, academia or the not-for-profit sector—or you’re simply interested in this topic—you can use I-Tree to understand where your canopy cover is at the moment and where the opportunities for urban greening lie.

**WHY DID WE USE I-TREE CANOPY?**

I-Tree is a sophisticated, peer-reviewed suite of web-based software from the United States Department of Agriculture Forest Service that provides users with an array of forestry analysis and assessment tools. I-Tree helps communities measure the tree canopy in a given area and identify opportunities for future greening projects.

**IS THIS THE ONLY WAY?**

In a word, no.

I-Tree represents just one way of assessing the state of green space in a given area. There are number of advantages associated with I-Tree but this is just the beginning of our march towards a greener Australia and we welcome other studies that shed further light on the greening needs of our urban areas.

For example, this report provides us with one very important piece of the puzzle but we also need to consider a number of other factors, such as geographical, biophysical and planning requirements. It is also important to note that while this report tells us where the trees are, it does not tell us about the quality of these spaces, or how useful they are to urban Australians.

There are a number of alternative measurement tools available but I-Tree is well suited to measuring tree canopy based on inexpensive images readily available through Google Earth*. I-Tree can also provide measurement estimates for air pollution reduction and capturing atmospheric carbon, thereby revealing the ‘value’ of trees in a given area. Urban forest managers can use it to set canopy goals and monitor canopy change over time.

* Google Earth imagery has significant date variation across Australia. It should be noted that the benchmarking was not carried out using imagery from the same year across all local government areas.
NOW IS THE PERFECT TIME TO GET INVOLVED.

WHAT CAN YOU DO?

Whether you are in the public or private sector, town planning, community engagement, healthcare or government there is a role for you to play in increasing the amount of green space in our urban areas.

You can start by looking at the data captured by i-Tree from your local area and consider what might be done to improve the state of canopy cover near you.

If you are an academic or a researcher in the field, there are a range of further recommendations for research that can be looked at, such as:

- Canopy analysis at the suburb level, not just LGA level
- Detailed analysis into land use and ownership to better understand who can implement further or improved greening
- Accessibility and human usage of current green spaces
- Correlations of tree canopy to socio-economic, health, crime and weather data

WHERE TO FROM HERE?

This report is just the beginning. Now that we have a tool that reliably measures tree canopy, we are going to continue to work with local, state and federal bodies, alongside our other partners, to see these canopies maintained, improved and increased.

In 2014, we will be touring Australia to meet with people just like you. We want to find out what the biggest challenges to urban greening are and work with you to find solutions to any obstacles you might be facing. We hope to see you on the road.

For more information please visit 202020vision.com.au