Managing Urban Landscapes for Climate Action

A Strategy Development Guide for Communities & Local Governments to Manage Urban Landscapes & Organic Resources to Achieve Climate Action and Community Resilience Objectives









How to Navigate this Strategy Development Guide

This strategy development guide is broken down into four sections - an **Introduction**, and **Steps 1-3 of Phase I**. In each of the steps, you will find **guidance**, **templates**, and **examples**.



Download Templates Before Proceeding

This opportunity discovery process relies on the use of tools and tables that you may want to fill in or reference as you go along.

All templates referenced in this guide exist on a <u>Spreadsheet</u> for you to access and save. There will also be links to the templates throughout this document.



To work in **Google Drive** (recommended):

Click File -> Make a Copy

To work in Excel:

Click File -> Download -> Microsoft Excel (.xlsx)

NOTE:

The <u>Introduction</u> to this guide presents a framework (right) for thinking about ecosystems-based climate action. If you have not reviewed the introduction, we suggest that you take a moment to familiarize yourself with the framework as it will make it easier to follow the pages and instructions that follow.



Step 2: Opportunity Identification with Internal Stakeholders



Opportunity Identification with Stakeholders **OPPORTUNITY IDENTIFICATION** Now that you have completed your data gathering process in Step 1, Step 2 is about using that information to identify potential opportunities for managing urban landscapes and organic resources for climate action. The following slides will describe how to achieve this through the creation of a draft opportunity matrix and an opportunity ranking exercise to be completed with internal stakeholders.

ROLES IDENTIFICATION The stakeholder engagement process will be an important part not only for identifying opportunities but also for enabling members of various departments to reflect on their roles in this type of work.



Step 2: Opportunity Identification with Internal Stakeholders



Engage Internal Stakeholders Using Opportunity Matrix and Ranking Templates Step 2a: OPPORTUNITY MATRIX FORMATION First, take some time to identify initial opportunities in mitigation, adaptation & resilience, and equity across urban landscapes and resource management systems in a Draft Opportunity Matrix. This rough draft will serve as an engagement tool with internal stakeholders and later to identify assessment scenarios.

Step 2b: ASSESS POTENTIAL IMPACT Next, conduct an **initial relationship building/information gathering process** with members of relevant departments. Use the **Draft Opportunity Matrix** to spark conversation and ideas.

Then, use the **ranking templates** to receive more granular feedback on how various departments are thinking about and acting on various facets of this work.

Step 2: Two Steps to Opportunity Identification

	MITIGATION	ADAPTATION & RESILIENCE	EQUITY
	Opportunities		
in Forests	Unter foresta are an important natural climate solution due to the ability to more those solution forms in the model of the solution of the solution is workly climate the solution of the solution of the solution is solution Opportunities to annelly their relie in the CI(y) militation priorities include: 1) Joint private the solution of the solution of the solution of the 2) Joint private the solution of the solution of the solution of the solution 2) Joint private the solution of the 2) Joint private the solution of the	Unan foreign play an important clie is here immagement, flood and ereasion prevention, and a scalar spin client Sopportunities and analytic the adjustation and readiness and senses in the CPV scalar scalar spin client scalar spin client playing gene microarchical provides to the spin client client scalar scalar spin playing scalar scalar provides to the spin client scalar scalar spin client reading potential of different species and areas.	Unan better have the potential to give important role in providing more equal; and an experimental experimental experimental and militized an
sics Management	Organics management can enhance taution sequentization on one in the organic standard organics management can enhance taution sequentization one one inter- tion of the organic standard standard standard standard standard standard backcare this water is detected from tautifity and instead utilized is agricultural standards. 1) Collect thomas from communities and dispose of it at a compositing site in 1) Collect thomas from communities and dispose of its and compositing site in 1) Collect thomas from termining. Intrividual tautification communities and dispose of at compositing site. 2) Collect and to the thomas from termining throughout tautification manufactures and the compositing site.	By adding compared throughout it you wand lated this will improve said headth frameworks commonly under perform, parking and perform 21 Divert organize weath from commercial and missionfeat late to compositing states, many performance in the second state of the second state of the second microbias.	Organic management plants can produce economic benefits through jub opportunit is and communities in a submittee of the submittee of the submittee of the submittee of the 11 Marine of a disease particles and plants with opposite materials will provide just of the submittee of the submittee of the submittee of the submittee of the that will yield food that can help alwates food scarcity and contribute to food second
& Grassland (Turf)	Thus use of carbon fertilizers can reall in an instructed carbon dreades are associated and any advancement of the second second realizers and any point for this generations gas entitistics and any advancement of the second	By profilerating more groups and tracing current groups in rifes and parts there is an opportunity for increased water reterions & powertations, improved soit health, and were antient emprovations. This can also also also also groups and econolise the heat allow of the providing a space to compare and econolise 1.9 Yranities and when a groups instructure, and the chemical performance water which is sepacifially verticate to design priore regions. Reveals the short which is sepacifially verticate to design priore regions. The performance heat to be address the second performance and the track of the second performance and the performance and t	Increasing parks in BIPOC and valverable communities adds equity for communities company, new reading, and equiv clasmer at:
ultural Systems	Notif gradies can improve and microbies which improves optimizing nutrients in the additional nutriensing cardinal exception tables. This is the improves the soft health and add in microbies optimizing antibies outlinear to optimize the soft health and additional tables of the soft optimized and antibies of the additional tables of the soft optimized and antibies of the additional tables of the soft optimized and antibies of the additional tables of the soft optimized and antibies of the additional tables of the soft optimized and antibies of the additional tables of the soft optimized and antibies of the additional tables of the soft optimized and the additional tables, sognations more additional tables of the soft optimized and the additional formations.	Hathyroid with decreased, or even no added, nitrogen use and pesticiden results in Induced Tooling offices, increased blockware, donnaue in pesticide neurof and endoced Tooling effects. 1) Agricultural solid block have proper orgo natation reduce sol ensoln and sequester 2) Solid har have healthy synthetic microles have a stronger root system which can have reduce Tooling.	Addressing source of flood access, flood intercently, and what how detects is a large component of what any accession. Another assess the weakpan opportunity communities can play in interancting with, utilizing, and inanging these complement accessions of all gains. I how the second opposite the second opposite and the second opposite opposite the second opposite accession and accession and accession and accession and accession and accession and accession
nways & Riparian Areas	While greatings and ristarian areas is whan environments have not traditionally been managed for dimate mitigation, there might be important opportunities to explore, such as: 1) Investigate apportunities related to wellands and carbon sequentation 2) Saturd the carbon mitigation impact of alternative tansportation enabled by the use of amenance functionic werking at midd.	Greenways and ripstria mean show the potential to contrinue to the City's diaptation and mitigation goals via the improved water quality, habitat restoration, and flooglain restoration that these systems can provide. Dyportunities to build on these impacts include: 1) Assessments of creak and river drainage 2) Assessments on continue to create well connected, of most notes for alternative transcritions and and-creates.	Generatory provide recreation and routes for alternative transportation methods, such as walking and biling. Addressing equity considerations in the management as explansion of generatory might likeade. 1) Assessing the exployed of access to these generatory to determine if and where ao chould be increased 2) forcidation emotionment neononucities in the management of these areas.

Step 2a: Opportunity Matrix Formation: Once you complete a Draft Opportunity Matrix (see next page), you have a tool to engage representatives of key departments to solicit their ideas and spark innovative thinking. The following slides include guidance and templates to use in your own meetings.

Goal: During one or multiple meetings, stakeholders can work to build on the ideas in the Draft document, come up with additional areas of opportunity, and find intersections across departments. The result will be a comprehensive and detailed list of potential areas of analysis and action.

CLIMATE ACTION OBJECTIVE	BENEFIT	URBAN FORESTRY	ORGANICS MANAGEMENT	PARKS & GRASSLAND (TURF)	AGRICULTURAL SYSTEMS	GREENWAYS & RIPARIAN AREAS	AQUATIC SYSTEMS "BLUE CARBON"
	Carbon Sequestration						
wingation	Emissions Reduction						
	Heat Management						
	Reduced Flood Risk						
Adaptation & Resilience	Reduced Fire Risk						
	Improved Air & Water Quality						
	Increased Biodiversity						
Equity	Equity Based Economic Opportunities Equitable Distribution of Ecosystem Services	•	•	•	•	•	•

Step 2b: **Assess Potential Impact:** Once familiarized with the framework and opportunity areas, participants will be primed to participate in a ranking exercise to identify potential priorities across various management areas. The following slides include guidance on this ranking process, definitions, and templates to use in your own meetings.

Goal: During one or multiple meetings, stakeholders can assess priorities across urban landscape management systems. The result will be a summary of potential priorities. The prioritization can be used to identify preliminary areas of analysis for the opportunity assessment.

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Step 2a: Opportunity Matrix: Identifying Intersections

The Opportunity Matrix is based on the framework presented in the <u>Introduction</u> section of this guide. This framework integrates the **six urban landscape/organic resource management systems** (Urban Forests, Organics Management, Parks & Grassland, Agricultural Systems, Greenways & Riparian Systems, and Aquatics Systems "Blue Carbon") and the **three climate action objectives** (Mitigation, Adaptation & Resilience, and Equity). The matrix is a place to **identify and document intersections of opportunity** between urban landscape management and climate action objectives.



URBAN LANDSCAPE / RESOURCE MANAGEMENT SYSTEM	OPPORTUNITIES				
	Mitigation	Adaptation & Resilience	Equity		
Urban Forests					
Organics Management					
Parks & Grassland (Turf)					
Agricultural Systems					
Greenways & Riparian Areas					
Aquatic Systems "Blue Carbon"		CE	NTER FOR		
		R	EGENERATIV		
		S	olutions 🢳		

Step 2a: Develop a Draft Opportunity Matrix

Based on your review of the city's plans and your own knowledge, you may wish to **develop a draft opportunity matrix that highlights illustrative examples of the types of actions that departments and work areas within your city could take to manage ecosystems for climate action.** This matrix will become a living document you can use to spark conversation with internal stakeholders as they make sense of their role in this work during stakeholder engagement sessions or other points of interaction. Additionally, the document can be updated to reflect concrete action areas identified throughout the course of this assessment.

It is important to engage individuals early in the creation of an opportunity matrix. This ensures that those involved feel empowered to be a part of the process of co-creation and not simply handed a document created without their input.

You may choose to provide a short description of the intersection between two areas (e.g., between urban trees and equity), as well as an example or two of specific actions that a city could take.

	MIDSATION	ADAPTATION & RESILIENCE	EQUITY .		
	Opportunities				
	Urban forests are an important natural climate solution due to their ability to remove carbon disade from the atmosphere as well as store much of this carbon in woody high-light bibons that can hold redo this carbon for long periods of them. Opportunities to amplify their role in the City's mitigation priorities include:	Urban forests play an important role in heat management, flood and ension provention, and air quality control. Oppertunities to amplify the adaptation and resilience benefits of trees in the City include:	Urban forests have the potential to play an important tale in providing more equi- outcomes for the CRY's residents. These cas provide improved air quality and with the impacts of the Urban Heat Island Effect, both importance equipy goals. Opportunities to amplify the equity benefits of urban forests in the CHy include:		
Urban Forests	 Pinching more treas and again-flag forested area. Pinching and the selection of th	2 (doing parts) at and a scale group group at a tree parts) and the parts of a number 2) (Male improvements to the two-work) callables to reflect adaptation and mailience potential of different species and areas.	 Workfore development efforts in foreary can help advance the C/P is apply 21 birthly help advantages and the real painting and maintenance based are a metrics across the city. The presence of bress is neighborhoods where realisters appendent high energy cash barder from cooling or who may have henders a AC can help mitigate climate inequilitis. Ulevels, some communities are approprinted affect and the second or city of the prelament. 		
	Organics management can enhance carbon sequestivation once the organic materials are fully composted and placed onto local forms, parlens, parks etc. This can also reduce carbon and methane emissions, which are green house passes, in land%lis	By utilizing compost throughout city owned land this will improve soil health throughout community's unlan gardens, parks, etc.	Organic management plants can previde economic benefits through job opportun in local communities		
	because this waste is diverted from landfills and instead utilized in agricultural practices.	1) Divert organic waste from commercial and residential use to compositing sites, reducing waste in landfills 2) Replacing chemical fortilizers with organic materials will result in healthier soil	 Maintence of urban gardens and parks with enganic materials will provide jobs the local communities and therefor improve its economic conditions The use of organic waste as firstilizer in urban gardens can provide healthier so 		
	 Callet feedwate from communities and dispose of it at a composing site in order to diver wate from landfills Collect your waite and minimings throughout local communities and dispose of at composing sites 	nicrobes	that will yield food that can help alexiate food scarcity and contribute to food seco		
Organics Management	a) conect and treat twestack manure at composting stars in order to utilias in tarring				
	The use of carbon feetiliters can result in an increased carbon developm across vision parks and gestacheds. This is use in part by ranken feetilises and people runt management which include greenbase gate ensisten such as nitrosa calcida (NyO). This generalization gas envision on an deplete the eases layer which can in turn increase the amount of diargenous UVB radiation.	By proliferating more grasses and swaring current grasses in cities and parks there is an opportunity for increased water retention & perstation, increased soil health, and four analisest temperatures. This can also also also values and comments in mitigating the heat bland effects an well as anyofficial association commender and recent	Increasing parks in RPOC and volverable communities adds equity for communit community, recruits, and unlaw denser als.		
Parks & Grassland (Turf)	 Utilite blockup, as a fertiliters with economic the need for water and other fertilitiers 2) Replace traditional fertiliters with composit which increases soil microbes and water and mutilent teamsion in the soil 3) Reducing the use of chemical fertilizers and replacing with organic fertilizers, reduces particles number and ground water constraination 	 Treating torf with organic materials, rather than shemical fertilizers, requires less water which is especially pertient to drought person regions. Ter freework with organic materials establish quicker, have a stronger root system than traditionally transfed thereing is of grant and improved tait decarp. 	1) Provinty to parks, an any green space, in an urban setting can result in improv- mental health, physical well being and social interactions 2)Parks in vulnerable communities aid in closing health obparties which are pert in at citic commutes and help of via aclower health origing parks.		
	No till proctices can improve soil microbes which improves cycling nutrients in the soil and increasing carlson sequestration. This in turn improves the suils health and aids in reducing pathogen outbreaks.	Healty soll with decreased, or even no added, nitrogen use and pesiciples results in reduced flooding effects, increased biodiversy, decrease in pesticide runel and	Addressing issues of food access, food insecurity, and urban food deserts is a key component of urban agriculture. Another accest is the unique opportunity communities can play in interacting with, utilizing, and managing these eccosyste directly, providing, temenolous educational and cultural benefits for community.		
	 Replace traditional chemical fertilizers with organic waste increases sail microbes and water and nutrient retention in the soil. If bitution error organ environmentation and the soil. 	reduced flooding effects 11 Reduction and environmentation and environmentation	memobes of all ages. 11 Monthle coll is anticultural colliner monids bisher can sold which can be		
Agricultural Systems	arbon sequentiation 3) No till farming practices reduces ecolors, increases soil microbes, sequenters more carbon than traditional soils treated with chemical fertilizers	2) Solis that have healthy symbiotic microbes have a stronger root system which can help reduce flooding	alleviate food powerty 2) increasing cop yields increases income which in tarm can increase farmer's eq through debt and controlling expenses		
	While greenways and riparian areas in urban environments have not traditionally been managed for climate mitigation, there might be important opportunities to explore, such as:	Greenways and riparian areas have the potential to continue to the On/'s adaptation and mitigation goals via the improved water quality, habitat restantion, and floodplain restantion that these systems can provide. Opportunities to build on these impacts include:	Greenways provide recreation and routes for alternative transportation method such as waiking and biting. Addressing equity constensions in the management expansion of greenways might blocade.		
	1) investigate opportanties related to vestigate and carbon sequestration 2) Assess the carbon sequestration potential of the vegetation in these areas 3) Study the carbon migrated attenuative transportation enabled by the	1) Restantion of creek and river drainage 2) Assesting where to continue to create well-connected, off raad routes for	1) Assessing the equity of access to these greenways to determine if and where a should be increased		
Greenways & Riparian Areas	use of greenways (displacing vehicular miles)	alternative transportation and pedestrians	2) Considering employment opportunities in the management of these areas		

A template for this draft Opportunity Matrix can be found <u>here</u>.

For example, the intersection of "Urban Forests" and "Mitigation" could be described as follows:

Urban forests are an important natural climate solution due to their ability to remove carbon dioxide from the atmosphere as well as store much of this carbon in woody high-lignin biomass that can hold onto this carbon for long periods of time. Opportunities to amplify their role in the City's mitigation priorities include:

- 1) Planting more trees and expanding forested areas
- 2) Minimizing carbon release from dead trees by repurposing wood in stable forms
- 3) Prolonging the life of forests by species selection, species diversity, and management





Step 2a: Opportunity Matrix Template

This table can be used to highlight specific opportunities identified through research and stakeholder engagement. This Opportunity Matrix is ideally created in a more spacious format, such as the spreadsheet template provided <u>here</u>.

URBAN LANDSCAPE / RESOURCE MANAGEMENT SYSTEM	OPPORTUNITIES						
	Mitigation	Adaptation & Resilience	Equity				
Urban Forests							
Organics Management							
Parks & Grassland (Turf)							
Agricultural Systems							
Greenways & Riparian Areas							
Aquatic Systems "Blue Carbon"							

EXAMPLE: Step 2a

Opportunity Matrix

	MITIGATION	ADAPTATION & RESILIENCE	EQUITY
	Opportunities		
Urban Forests	Urban forests are an important natural climate solution due to their ability to remove carbon dioxide from the atmosphere as well as store much of this carbon in woody high-lignin biomass that can hold onto this carbon for long periods of time. Opportunities to amplify their role in the City's mitigation priorities include: 1) Planting more trees and expanding forested areas 2) Minimizing carbon release from dead trees by repurposing wood in stable forms 3) Prolonging the life of forests by species selection, species diversity, and management	Urban forests play an important role in heat management, flood and erosion prevention, and air quality control. Opportunities to amplify the adaptation and resilience benefits of trees in the City include: 1) Apply green infrastructure principles to tree planter designs to minimize stormwater runoff 2) Make improvements to tree inventory database to reflect adapatation and resilience potential of different species and areas	Urban forests have the potential to play an important role in providing more equitable outcomes for the City's residents. Trees can provide improved air quality and mitigate the impacts of the Urban Heat Island Effect, both important equity goals. Opportunities to amplify the equity benefits of urban forests in the City include: 1) Workforce development efforts in forestry can help advance the City's equity goals. 2) Identify high priority areas for new tree planting and maintenance based on equity metrics across the city. The presence of trees in neighborhoods whose residents experience high energy cost burden from cooling or who may have limited access to A/C cartelp mitigate climate inequities. Likewise, some communities are discussed on the prior industrial air pollutants.
Organics Management	Organics management can enhance carbon sequestration once the organic materials are fully composted and placed onto local farms, gardens, parks etc. This can also reduce carbon and methane emissions, which are green house gasses, in landfills because this waste is diverted from landfills and instead utilized in agricultural practices. 1) Collect foodwaste from communities and dispose of it at a composting site in order to diver waste from landfills 2) Collect yard waste and trimmings throughout local communities and dispose of at composting sites 3) Collect and treat livestock manure at composting sites in order to utilize in farming	By utilizing compost throughout city owned land this will improve soil health throughout community's urban gardens, parks, etc. 1) Divert organic waste from commercial and residential use to computing sites, reducing waste in landfills 2) Replacing chemical fertilizers with organic materials will result in number soil microbes	sanic management plants can provide economic benefits through job opportunties local communities in the provide of urban gardens and parks with organic materials will provide jobs in al communities and therefor improve its economic conditions 2) as set of organic waste as fertilizer in urban gardens can provide healthier soils that which must can help aleviate food scarcity and contribute to food security
Parks & Grassland (Turf)	The use of carbon fertilizers can result in an increased carbon drawdown across urban parks and grasslands. This is due in part by carbon fertilizies and proper turf management which reduce greenhouse gass emission such as nitrous oxicde (N ₂ O). This greenhouse gas emission can deplete the ozone layer which can in turn increase the amount of dangerous UVB radiation 1) Utilize biochar, as a fertilizer as it reduces the need for water and other fertilizier 2) Replace traditional fertilizers with compost which increases soil microbes and water and nutrient retention in the soil 3) Reducing the use of chemical fertilizers and replacing with organic reduces pesticide runoff and ground water contaminat No-till practices can improve soil microbes which proves	By proliferation of the set of th	Increasing parks in BIPOC and vulnerable communities adds equity for communities to congregate, recreate, and enjoy cleaner air. 1) Proximty to parks, or any green space, in an urban setting can result in improved mental health, physical well being and social interactions 2)Parks in vulnerable communities aid in closing health disparties which are pertenent in at-risk communities and help city's achieve health-euqity goals Addressing issues of food access, food insecurity, and urban food deserts is a key component of urban agriculture. Another aspect is the unique opportunity
Agricultural Systems	aids in reducing pathogen outbreaks 1) Replace traditional chemical fertilizel, or remaaste increasion in the s and water and nutrient retention in the s 2) Planting cover crops provides nutrients in soil, reduces soil and increases carbon sequestration 3) No till farming practices reduces erosion, in carbon than traditional soils treated with chemicaters	Ity soil with decreased, or even no added, nitrogen use and pesticides results in voluced flooding effects, increased biodiversy, decrease in pesticide runof and reduced flooding effects 1) Agricultural soils that have proper crop rotation reduce soil erosion and sequester more carbon 2) Soils that have healthy symbiotic microbes have a stronger root system which can help reduce flooding	communities can play in interacting with, utilizing, and managing these ecosystems directly, providing tremendous educational and cultural benefits for community memebers of all ages. 1) Healthy soil in agricultural settings provide higher crop yields which can help alleviate food poverty 2) Increasing crop yields increases income which in turn can increase farmer's equity through debt and controlling expenses
	While greenways and riparian areas in urban environments have not traditionally been managed for climate mitigation, there might be important opportunities to explore, such as:	Greenways and riparian areas have the potential to contrinute to the City's adaptation and mitigation goals via the improved water quality, habitat restoration, and floodplain restoration that these systems can provide. Opportunities to build on these impacts include:	Greenways provide recreation and routes for alternative transportation methods, such as walking and biking. Addressing equity consderations in the management and expansion of greenways might inlcude:
Greenways & Riparian Areas	 Assess the carbon sequestration potential of the vegetation in these areas Study the carbon mitigation impact of alternative transportation enabled by the use of greenways (displacing vehicular miles) 	 Restoration of creek and river drainage Assesing where to continue to create well-connected, off road routes for alternative transportation and pedestrians 	 Assessing the equity of access to these greenways to determine if and where access should be increased Considering employment opportunities in the management of these areas

*Note: The example does not have Aquatic Systems "Blue Carbon" category

Step 2b: Intersection Identification & Ranking Engagement Process

In this next part, you will engage internal stakeholders in a **participatory process to assess intersections between the city's priorities and benefits of managing urban landscapes** for climate action to create mitigation, adaptation, and equity benefits. The templates provided consider ten ecosystem service benefits outlined in the <u>Introduction</u>:



Your city may choose to modify this list to fit unique needs and priorities as well as language stakeholders are familiar with.

The goal is to prompt representatives from various departments to **consider how their work intersects with climate action and urban landscape management.** The templates include tables for them to describe the opportunities they see as well as a space to rank them as "high," "medium," or "neutral/uncertain" opportunity areas based on criteria outlined below.





Step 2b: Ranking Opportunities Disclaimer



The ranking of opportunities is intended to help inform your city's decision as an **INITIAL ASSESSMENT IDENTIFICATION EXERCISE** and is **NOT** meant as a final decision making process.



Step 2b: Ranking Definitions

Ranking these factors by their level of opportunity in your city depends on various considerations. Potential ranking definitions:

RANKING	DESCRIPTION					
	High benefit level within the community					
	High benefit to cost ratio					
High Opportunity Area	Actively involved within climate, resilience, hazard, or equity planning goals and objectives					
Ī	Easily implemented and quick time to value					
۲ ۱ ۱	Addresses equity issues in the most vulnerable communities					
	Some benefits to the community					
	May be pricier to implement but still provide good value from the project					
Medium Opportunity	Provides value but may not entirely align with planning goals and objectives					
	May take additional time to implement and derive value					
ء ا ا	Addresses community issues but may not be the most equitable for vulnerable communities in implementation					
	Marginal, low, or no benefits given to the community through project implementation					
	Too high of a cost to provide benefits					
Neutral / Uncertain	Not applicable to the planning goals and objectives at this time					
	Project does not relate to benefits provided					
	May not address equity within community					





Step 2b: Opportunities Ranking

Participants can provide a **brief description of the intersections** between these benefits and existing priorities within the city and/or their department, as well as their **rationale for ranking** it the way they have. Alternatively, the organizer can pre-fill these with generic descriptions to save time and spark discussion. You can choose to fill out **ONE RANKING SHEET PER MANAGEMENT SYSTEM**.

High Opportunity Area

Medium Opportunity Area





Step 2b: Opportunities Ranking Template



Medium Opportunity Area

A template for all urban landscape and resource management areas can be found <u>here</u>.

*Copy and paste ranking circles

Neutral / Uncertain Opportunity Area

U	RBAN LANDSCAPE /	RESOURCE	E MANAGEMENT SYSTEM (Eg. URBAN FORESTRY)
CLIMATE ACTION OBJECTIVE	BENEFIT	RANKING	DESCRIPTION
Mitigation	Carbon Sequestration	\bigcirc	
witigation	Emissions Reduction	\bigcirc	
	Heat Management	\bigcirc	
	Reduced Drought Risk	\bigcirc	
Adaptation &	Reduced Flood Risk	\bigcirc	
Resilience	Reduced Fire Risk	\bigcirc	
	Improved Air & Water Quality	\bigcirc	
	Increased Biodiversity	\bigcirc	
	Equity Based Economic	\bigcirc	
Equity	Opportunities		CENIEB_FOR
	Equitable Distribution	\bigcap	REGENERATIVE
	of Ecosystem Services	\bigcirc	Solutions 7



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Step 2b: Ranking Summary

After participants have assigned rankings to various urban landscape management opportunities in the city, you can **summarize those rankings**. The purpose of putting it all together is to **begin to identify patterns and ask questions**: *Where are there clusters of high opportunity areas? How might these opportunities build on each other?* In the next step (Step 3), you will be guided through the process of taking these patterns and areas of opportunity to the next level of inquiry. A template is provided <u>here</u>.

CLIMATE ACTION OBJECTIVE	BENEFIT	URBAN FORESTRY	ORGANICS MANAGEMENT	PARKS & GRASSLAND (TURF)	AGRICULTURAL SYSTEMS	GREENWAYS & RIPARIAN AREAS	AQUATIC SYSTEMS "BLUE CARBON"
Mitigation	Carbon Sequestration	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Emissions Reduction	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Heat Management	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Reduced Drought Risk	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Reduced Flood Risk	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Reduced Fire Risk	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Improved Air & Water Quality	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Increased Biodiversity	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Equity	Equity Based Economic Opportunities	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Equitable Distribution of Ecosystem Services	\bigcirc	\bigcirc	\bigcirc	\bigcirc		

Step 2: Engaging Stakeholders to Create an Opportunity Matrix and Rank Management Systems

Meeting Planning and Facilitation Guidance

The Opportunity Matrix and Ranking exercises described in previous slides can be combined into a single stakeholder engagement session with proper preparation and facilitation.



Duration: ~ 2.5 hours
 Participants: Internal stakeholders identified in <u>Step 1c</u>
 Format: Ideally conducted in person, but virtual options can be carefully selected to facilitate fruitful discussion and collaboration

You may wish to use the following documents as a reference to plan and facilitate your own stakeholder engagement meeting:

- <u>Sample Agenda</u>
- <u>Sample Facilitation Plan</u> (includes sample guidance questions)



EXAMPLE: Step 2b Urban Forestry Opportunities Ranking

High Opportunity Area

Medium Opportunity Area

Neutral / Uncertain Opportunity Area

URBAN FORESTRY					
CLIMATE ACTION OBJECTIVE	BENEFIT	RANKING	DESCRIPTION		
Mitigation	Carbon Sequestration		Trees draw carbon from the atmosphere via photosynthesis that turns carbon into biomass where it is stored. Trees store and sequester carbon, saving cities large amounts of money each year.		
	Emissions Reduction		Reduced energy use due to shading, reduced ambient air temperature, and reduced wind velocities. In some locations, these avoided emissions can even exceed the direct carbon sequestration benefits of the trees themselves.		
	Heat Management		Trees cool urban areas via shade and transpiration, countering the urban heat island effect.		
	Reduced Drought Risk		Trees capture and store water, increasing soil moisture and saving more water than they consume.		
Adaptation &	Reduced Flood Risk		Starting with their canopies and extending down into the soil around them, the presence of trees helps to slow the flow of precipitation, allowing for increased infiltration and lessening impacts of heavy water flow downstream.		
Resilience	Reduced Fire Risk		Proper management of urban forestry in the wilderness urban interface can reduce fire hazard and impacts.		
	Improved Air & Water Quality		Urban trees can provide significant air purification benefits by reducing air pollution, resulting in measurable public health outcomes. Urban trees also protect streams by reducing runoff.		
	Increased Biodiversity		Urban trees can provide valuable habitat and pollinator resources to animals and insects where they otherwise would not exist in an urban setting.		
Equity	Equity Based Economic Opportunities		Urban forestry programs can create opportunities for economic development in the local community via forestry workforce development, local tree purchasing agreements, energy savings, and increased property values among others.		
	Equitable Distribution of Ecosystem Services		In addition to buffering environmental stressors, urban forests provide public health benefits and multiple ecosystem services.		

REGENERATIVE

EXAMPLE: Step 2b

Opportunities Ranking Summary

High Opportunity Area

Medium Opportunity Area

Neutral / Uncertain Opportunity Area

CLIMATE ACTION OBJECTIVE	BENEFIT	URBAN FORESTRY	ORGANICS MANAGEMENT	PARKS & GRASSLAND (TURF)	AGRICULTURAL SYSTEMS	GREENWAYS & RIPARIAN AREAS	AQUATIC SYSTEMS "BLUE CARBON"
Mitigation	Carbon Sequestration					\bigcirc	
	Emissions Reduction	\bigcirc		\bigcirc	\bigcirc		\bigcirc
	Heat Management		\bigcirc	\bigcirc			
	Reduced Drought Risk	\bigcirc				\bigcirc	
Adaptation &	Reduced Flood Risk						
Resilience	Reduced Fire Risk					\bigcirc	
	Improved Air & Water Quality		\bigcirc				
	Increased Biodiversity		\bigcirc				
Equity	Equity Based Economic Opportunities					\bigcirc	
	Equitable Distribution of Ecosystem Services						
						S	OLUTIONS 7