



Photo by: Abhijit Kar Gupta

How Cities and Communities Can Inventory GHG Impacts of Forests and Trees



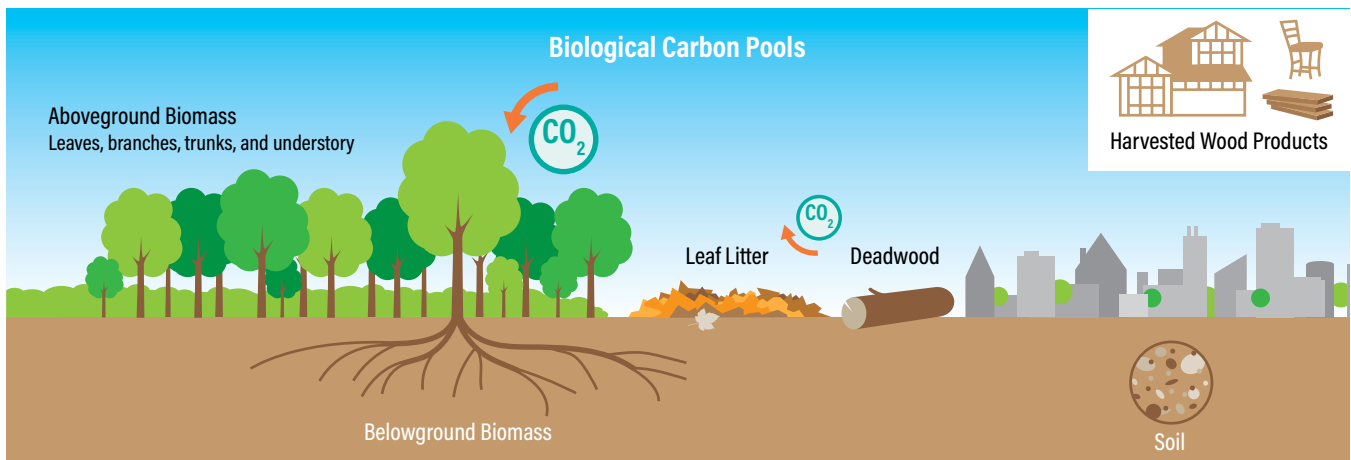
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Cities and other communities around the world are developing climate action plans to mitigate climate change. But many do not consider the role their forests and trees play in greenhouse gas (GHG) emissions and removals (sequestration) due to a lack of detailed guidance on how to include them in GHG inventories. Forests and trees are unique because, while they emit GHGs when they are cleared or degraded, they also remove carbon dioxide from the atmosphere as they grow. This makes them a potentially powerful nature-based solution for achieving communities' climate change mitigation goals.



To assist communities with taking advantage of the climate benefits of their forests and trees, the Greenhouse Gas Protocol recently released new supplemental guidance for the Global Protocol for Community-Scale Greenhouse Gas Inventories¹ (GPC) that communities can follow to incorporate GHG emissions and removals by forests and trees into their inventories alongside other sectors, such as transportation and energy. This GPC supplement helps communities understand the relative magnitude of forests and trees' contributions to the overall GHG inventory as well as trends in emissions and removals over time. In turn, this information can help guide decision making about how best to use the full mitigation potential of forests and trees in climate action planning.

Read the guidance at www.wri.org/research/global-protocol-community-scale-greenhouse-gas-inventories-guidance-forests-trees

WHY INVENTORY GHG IMPACTS FROM FORESTS AND TREES?

By estimating GHG emissions and removals by forests and trees and including them in GHG inventories, communities can:

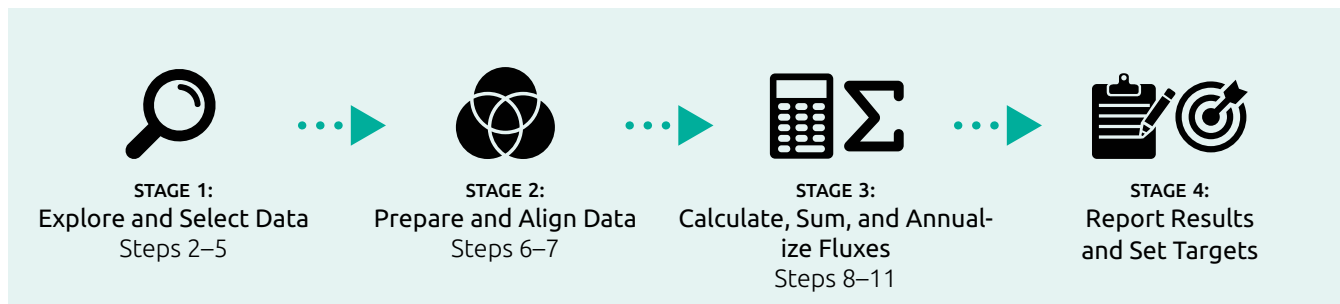
- Conduct more complete and comprehensive GHG inventories, and understand how forests and trees can contribute to ambitious and transparent climate change mitigation goals.
- Understand the relative contribution of forests and trees to a community's overall GHG profile.
- Develop climate mitigation actions that reduce emissions and increase removals.
- Identify opportunities to revise existing mitigation targets or set new ones.
- Demonstrate to stakeholders another way that forests and trees provide value to the community beyond air and water quality, health, and recreational benefits.
- Set policies about land that consider the climate value of nature.

HOW CAN COMMUNITIES USE THE GPC SUPPLEMENT?

The supplement provides detailed guidance for communities incorporating GHG impacts from forests and trees into their inventories for the first time. It explains:

- What kinds of data are needed to estimate these emissions and removals.
- What general data sources are available and how to assemble them.
- Key equations for calculating emissions and removals.
- How to report inventory results alongside other sectors' emissions.
- How to use the results of the inventory to set climate mitigation action goals.

It also includes sample calculations and a full worked example spreadsheet to help communities understand how the calculations fit together.



WHAT DOES THE SUPPLEMENT COVER?

- **Included in the supplement**
 - Forests and trees on non-forest land (part of the Agriculture, Forestry and Other Land Uses [AFOLU] sector)
 - Biomass in trees outside forests, such as street trees and wind breaks
 - Estimating emissions and removals within community boundaries (Scope 1 emissions and removals)
 - Estimating historical emissions and removals
 - Outputs that can be used to inform and track climate-friendly policies
- **NOT included in the supplement**
 - Land-use changes that do not involve forests, such as grasslands converted to settlements
 - Soil carbon outside forests, such as changes due to agricultural management practices
 - Estimating emissions from sourcing areas or supply chains for resources consumed by communities (Scope 3 emissions)
 - Predicting the impacts of future mitigation actions
 - Calculating carbon credits

HOW HAVE COMMUNITIES USED THE SUPPLEMENT SO FAR?

Cities and communities of various sizes and land use profiles around the world tested this supplement at various stages of its development. Many communities have now completed baseline inventories for forests and trees and have used the results to inform their climate action plans, while others are working on follow-up inventories that can be used to track changes in forest and tree-related GHG emissions and removals over time. Communities have also used their inventory results to identify issues with inequitable access to green space and strengthened their case for protecting existing forests and trees.

WHAT'S NEXT?

WRI and partners - including [ICLEI](#) and [C40 Cities](#) - are committed to supporting cities and other communities around the world to design multi-pronged strategies to tackle climate change, including nature-based solutions. We are exploring the development of a training series for technical staff of community governments to help them understand how to apply the supplement in local contexts and facilitate a better understanding of GHGs and local action options related to forests and trees.

Your feedback is critical to the future development of this work. If you are interested in scaling up the role forests and trees can play in local climate action, we want to hear from you. Please contact us with any inquiries, suggestions, or opportunities for engagement.

ENDNOTES

1 The GPC is the world-leading standard for communities to inventory GHG emissions from various sectors, and forms part of the GHG Protocol

CONTACT INFORMATION

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ADDITIONAL RESOURCES

[5 Reasons Cities Should Include Trees in Climate Action](#)

[Cities Should Account for Trees in their Greenhouse Gas Inventories. New Guidance Shows How](#)

[Downloadable worked example spreadsheet](#)

[Webinar on GPC supplement \(English, Spanish, and Portuguese\)](#)