



NATURAL CAPITAL:

The Foundation of Community
Development and Introducing
the **CD+SI Toolkit™**

Kevan W. Lamm, Ph.D.,

Abigail Borron, Ph.D., and

Keith Atkins, Ph.D.

Department of Agricultural Leadership,
Education and Communication



UNIVERSITY OF GEORGIA
EXTENSION

Georgia communities have a wealth of natural resources that provide economic and community development opportunities throughout the state. These include material assets such as agricultural resources as well as scenic beauty, recreational opportunities, and other intangible advantages resulting from natural features. Land suited to agricultural production is one of the most tangible and recognizable resources in many parts of the state. According to the 2017 Census of Agriculture, Georgia ranked 15th in total market value of agricultural products sold in the United States. The state ranked first in poultry, peanut, and pecan production, and it was the third largest producer of peaches in the nation. In addition, sales of Georgia cotton ranked second among the 17 states where cotton is produced. Forest resources and related industries such as lumber and paper production also are a large contributor to Georgia's economy. The state had over 24 million acres of forest land in 2018, which supported nearly 150,000 jobs and generated \$977 million in state tax revenue. Because these resources create some level of personal and community value, they are described as natural capital.



Natural capital also includes benefits associated with natural amenities such as mountains, beaches, rivers, lakes, and other recreational assets. Not only do these resources represent intangible quality-of-life benefits to local residents (while also growing communities by attracting new residents), but also they contribute to state and local economies by drawing visitors to communities throughout Georgia. According to the Georgia Department of Economic Development, the tourism industry in 2018 supported 478,000 jobs and had a total economic

impact of \$66.3 billion. In addition, Georgia tourism generated an estimated \$3.4 billion in state and local tax revenues. These figures illustrate why natural resources that attract visitors are vitally important to local economic and community development in many parts of Georgia.



Defining Natural Capital

Natural capital refers to a community's environmental resources, such as air, water, land, forests, vegetation, minerals, fossil fuels, local animal populations, and all other natural resources. These resources can be considered capital assets because of the potential goods and services derived from them, such as food, drinking water, timber, and natural beauty. Natural capital is also the foundation on which all other capital is based, as it supplies the basic materials for nurturing life, building infrastructure, and influencing local culture.

Like other forms of capital, natural capital can be considered a part of the overall wealth of a community due to the material and intangible benefits it provides. The value of these benefits is often determined by market forces, which establish the price of commodities and other physical forms of natural capital. The value of other benefits, however, can be difficult to assess. For example, communities benefit from the recreational opportunities provided by local assets such as parks, but enjoyment of these resources ultimately determines their value among the residents who utilize them.

Using the CD+SI Toolkit™ to Measure Community Perceptions of Natural Capital

When individuals are provided with an opportunity to share their views on community resources, they are actively participating in a decision-making process that will shape community development efforts. As a result, individuals become more engaged with their communities as they share their impressions of how local resources could benefit all community members. They also are more likely to support programs and policies related to their specific observations. This is particularly true for residents hoping to influence how their communities utilize local natural resources, as these resources often are closely identified with the communities and residents that depend on them. Community perceptions of natural capital, especially as they relate to community development, can indicate local knowledge and appreciation of available natural resources. These perceptions also reflect residents' views on how these resources should be used and preserved.



The Community Diagnostics + Social Impact (CD+SI) Toolkit™ is intended to provide communities with a quantitative measure of residents' perceptions of local natural resources. Specifically, the CD+SI Toolkit™ focuses on perceptions of whether a community (1) possesses any natural resources, (2) uses their natural resources for community development and job creation, (3) has amenities such as parks that are open to the public, and (4) works to preserve their natural resources. By evaluating residents' perception of each of these factors, local leaders and other community members may be able to better assess the level of perceived natural capital in the community. In addition, individuals may be able to better determine if their community is taking advantage of its natural capital to implement relevant community development and job creation programs based on the availability of specific resources. Community perceptions of natural



capital and its uses can be used to customize programs so that they reflect local natural resources. Communities rich in agricultural resources, for example, might adapt jobs programs to create and attract jobs related to farming and related industries. Those endowed with scenic beauty or recreational opportunities might implement community development programs focused on expanding tourism.

As a foundation for other capitals within a community, natural capital is critically important. Recognizing and looking for opportunities to utilize natural capitals within a community may provide important insights and areas for additional investigation.

References

- Barbier, E. B. (2019). The concept of natural capital. *Oxford Review of Economic Policy*, 35(1), 14–36. <https://doi.org/10.1093/oxrep/gry028>
- Brooks, J. S., Waylen, K. A., & Mulder, M. B. (2012). How national context, project design, and local community characteristics influence success in community-based conservation projects. *Proceedings of the National Academy of Sciences*, 109(52), 21265–21270. <https://doi.org/10.1073/pnas.1207141110>
- Costanza, R., d'Arge, R., De Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R. V., & Paruelo, J. (1997). The value of the world's ecosystem services and natural capital. *Nature*, 387(6630), 253–260. <https://doi.org/10.1038/387253a0>
- Costanza, R., & Daly, H. E. (1992). Natural capital and sustainable development. *Conservation Biology*, 6(1), 37–46. <https://doi.org/10.1046/j.1523-1739.1992.610037.x>
- Crowe, J. A. (2008). Economic development in the nonmetropolitan West: The influence of built, natural, and social capital. *Community Development*, 39(4), 51–70. <https://doi.org/10.1080/15575330809489658>
- Enterprise Innovation Institute, Georgia Institute of Technology. (2019). *2018 economic benefits of the forest industry in Georgia*. Georgia Forestry Commission. <https://gatrees.org/wp-content/uploads/2020/01/Economic-Benefits-of-the-Forestry-Industry-in-Georgia-2018-.pdf>
- Folke, C., Hammer, M., Costanza, R., & Jansson, A. (1994). Investing in natural capital—Why, what, and how? In A. Jansson, M. Hammer, C. Folke, & R. Costanza (Eds.), *Investing in natural capital: The ecological economics approach to sustainability*. Island Press.
- Gasteyer, S., & Araj, T. (2009). Empowering Palestinian community water management capacity: Understanding the intersection of community cultural, political, social, and natural capitals. *Community Development*, 40(2), 199–219. <https://doi.org/10.1080/15575330903012288>
- Georgia Department of Economic Development. (2018). *2018 Georgia tourism by the numbers* [Brochure]. <https://industry.exploregeorgia.org/sites/default/files/2020-01/2018%20Georgia%20Tourism%20Impact%20Card.pdf>
- Georgia Forestry Commission. (2018). *Georgia forest facts* [Fact sheet]. <https://gatrees.org/wp-content/uploads/2020/01/2018-GFC-Forest-Fact-Sheet.pdf>
- Harrington, C., Curtis, A., & Black, R. (2008). Locating communities in natural resource management. *Journal of Environmental Policy & Planning*, 10(2), 199–215. <https://doi.org/10.1080/15239080801928469>
- Irvin, R. A., & Stansbury, J. (2004). Citizen participation in decision making: Is it worth the effort? *Public Administration Review*, 64(1), 55–65. <https://doi.org/10.1111/j.1540-6210.2004.00346.x>
- Moore, J. (2019, October 17). *Georgia: A peach of an agricultural state*. U.S. Department of Agriculture. <https://www.usda.gov/media/blog/2019/10/17/georgia-peach-agricultural-state>
- National Agricultural Statistics Service. (2019). *2017 Census of Agriculture* (Publication No. AC-17-A-51). U.S. Department of Agriculture. https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_1_US/usv1.pdf
- Swanson, L. E. (2001). Rural policy and direct local participation: Democracy, inclusiveness, collective agency, and locality-based policy. *Rural Sociology*, 66(1), 1–21. <https://doi.org/10.1111/j.1549-0831.2001.tb00052.x>

extension.uga.edu