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# Using Natural Capital Accounting (NCA) and the Investment Prioritization Tool (IPT) for designing landscape programs in Ethiopia

[Seminar recording](#)

The Government of Ethiopia (GoE) has set ambitious goals to protect and increase productivity of renewable natural capital. Natural capital accounts for about 40% of Ethiopia's total wealth, with cropland and pastureland comprising over two-thirds of this wealth. Ecosystems play a critical role in supporting Ethiopia's economic development and its resilience to climate change. However, climate change, high population growth, and land use pressures are further driving deforestation, degradation of soils, and loss of critical biodiversity. Areas with the greatest degradation require intensive and costly investments to reverse these trends, and often ecosystems are so degraded that the flow of ecosystem services can be nearly impossible to recover. Despite this, land restoration programs are often targeted to these sites, which can increase costs and decrease the landscape-level benefits of such programs. Improved targeting of sustainable landscape management (SLM) is therefore integral to Ethiopia's development objectives to support performance-based financing.

To address this need, the World Bank and GoE have partnered to develop data and measurement systems, investment planning tools, and financing mechanisms to improve the preparation of forest, landscape, and watershed

management programs. These efforts are taking place under the Natural Capital Accounting (NCA) Initiative, which seeks to institutionalize and mainstream NCA in decision making to support development, policy, and investment planning. Key activities under initiative include the preparation of land, ecosystem extent and ecosystem services accounts, and the development of an Investment Prioritization Tool (IPT) that combines data on land cover and condition with state-of-the-art ecosystem service modeling approaches to inform the selection future SLM interventions in the recently updated Ethiopia Strategic Investment Framework (ESIF) and the Climate Action through Landscape Management (CALM) World Bank Project. The NCA Initiative supports has informed other policies and strategic documents including the Payment for Ecosystem services (PES) Proclamation, and Ethiopia's Country Climate and Development Report (CCDR).

The NCA initiative has supported the establishment of the Technical Working Group (TWG) and a Steering Committee on NCA, chaired by the Ministry of Planning and Development (MoPD). In coordination with the NCA TWG, a preliminary land cover classification for the year 2013 and 2022 was developed, including thirteen major land cover classes, which would be for the preparation of land accounts. Similarly, under the IPT workstream, a TWG has been established chaired by the Ministry of Agriculture (MoA).

This session discussed the context for these interventions, progress to date and next steps for mainstreaming NCA and its applications in Ethiopia.

**Related:**

- [Using Natural Capital Accounting \(NCA\) and the Investment Prioritization Tool \(IPT\) for designing landscape programs in Ethiopia](#)

- [Investment Prioritization Tools \(IPT\) for Sustainable Land Management \(SLM\) in Ethiopia](#)

**Speakers:**



*Nigel Ross Hughes, Senior Natural Resources Management Specialist., World Bank*



*Dawit Woubishet Mulatu, Natural Resources and Environmental Economist, World Bank Group*

**Dawit Woubishet Mulatu** is a Natural Resources and Environmental Economist with experience working on climate, environment, natural resources, and development issues. His work is related to valuation of ecosystem services, Payment for Ecosystem Services (PES), water resource management, Forest & Landscape Restoration (FLR), and financial assessment of intervention to restore degraded areas. He closely works with the Government of Ethiopia (GoE) on Advisory and Analytical Services related to Resilient and Green Development, Nationally Determined Contribution (NDC) and Natural Capital Accounting (NCA).

He holds a PhD in Economics (Resource and Environmental Economics) from University of Twente, the Netherlands, and Master of Science and a bachelor's degree in economics from Addis Ababa University, Ethiopia.



*Jorge Leon Sarmiento, Ecosystem Services Assessments Specialist, World Bank Group*

**Jorge Leon Sarmiento** is a specialist in Ecosystem Services Assessments for the World Bank in a partnership between this organization and the Natural Capital Project at Stanford University (World Bank BELA Initiative). In this role, he collaborates in the formulation of national portfolios to increase the supply of ecosystem services in African and Asian countries such as Burundi, Zambia, Malawi, Afghanistan and Uzbekistan (The world bank biodiversity, ecosystems, and landscape assessment (bela) initiative case study series).

As part of the Latin American Water Funds Partnership of The Nature Conservancy, from 2015 to 2020 it supported the creation of these technical and financial investment mechanisms in watersheds supplying megacities such as Mexico City, Lima and Sao Paulo.

(<https://www.fondosdeagua.org/en/results-and-publications/results/>)

He has extensive experience in geoprocessing and modeling, especially in the area of modeling hydrological ecosystem services, with software packages such as InVEST and SWAT+

He was a member of the work team that developed the RIOS software (<https://naturalcapitalproject.stanford.edu/software/rios>), used extensively to design SBN investment portfolios for supply basins in Brazil, Peru, Colombia, Panama, San Salvador, Mexico, Jamaica, Malawi, Pakistan, Uzbekistan and Ethiopia.

His Ph.D dissertation and University of Sao Paulo was focused in the applications of Artificial Intelligence in Water Security Monitoring and Forecasting using Remote Sensing.