

# ECOSYSTEMS ACCOUNTING



Winrock is a leader in providing scientific and data-driven accounting of ecosystem services, facilitating environmental markets, and protecting and managing at-risk ecosystems.





Our innovative approach to **Ecosystems Accounting** brings data, policy and markets together. We interpret and translate science and apply analysis to increase the confidence of governments, markets and investors in the integrity of ecosystem benefits. Our work includes notable successes in water accounting, greenhouse gas monitoring, and biodiversity valuation and protection.

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## Methodology

**Ecosystems Accounting** involves the application of technology and science to the measurement, inventory and sustainable management of water, soil, biodiversity and carbon. Winrock increases awareness of the many services the natural environment provides, as well as the impact of changes in land use, population growth and climate on these services. Where the value of an ecosystem service can be quantified, we develop and support markets for it. We help commodity producers meet sustainability pledges. We also work with communities to manage resources collectively and more effectively.

Winrock was an innovator and continues to be a leader in evidence-based carbon and water accounting, relatively new fields that have rapidly shifted and matured. We use sophisticated data collection to map and analyze water availability,

sediment and nutrient loss, water pollution, forest degradation, and greenhouse gas emissions. Our data collection combines automated sensors and remote sensing with other available ground data. The information we provide recognizes actual and intrinsic values of natural resources and supports data-driven policy development, project design, training and decision-making.

Winrock has contributed to the integrity of various greenhouse gas emissions measuring systems. We've created replicable tools and best practice models. Our methodologies inform policymaking and increase confidence and support among stakeholders. Better evidence has helped increase ambition among our partners for action to mitigate and adapt to climate change.

Winrock's work in **Ecosystems Accounting** directly advances the United Nations' (UN) Sustainable Development Goals on climate action and the sustainable use of water resources and terrestrial ecosystems. Our programs and expertise help arrest natural resource degradation and enable land use management that lowers greenhouse gas emissions. Winrock's work also contributes to better livelihoods, improved health and well-being, and a reduction in conflict over limited natural resources.

Winrock brings credibility, realism and scientific validity to data about changes to, and benefits of, ecosystems. When meaningful data exists, it's possible to assign actual and perceived values and to better engage in discussions about land use and management with governments, civil society, private industry and communities.

#### WINROCK WORKS WITH:

- Governments – to inform policy and support international reporting and international payment for environmental performance schemes.
- The public and private sectors – to design systems, standards and methods for offsetting greenhouse gas emissions and mitigation banking schemes.
- Private industry – to support accounting for sustainability metrics and reporting to shareholders and outside stakeholders.

The ultimate purpose of **Ecosystems Accounting** is the creation of scalable systems that decrease greenhouse gas emissions, increase supplies of clean water, and promote sustainable access to food and energy.



## CASE STUDIES

### Watershed Ecosystems Service Tool

In Cambodia, Winrock developed the **Watershed Ecosystems Service Tool** (WESTool), which utilizes satellite data to analyze changes in water availability, sediment and nutrient loss, water pollution, and greenhouse gas emissions. The resulting insights help to determine the best policies and practices for agriculture and land management. The WESTool has been used to calculate ecosystem services for 80 percent of Cambodia's land area, where 8.7 million people live.

### American Carbon Registry

Winrock operates the **American Carbon Registry** (ACR) to help facilitate and manage markets for carbon offset trading. Winrock's leadership and reputation in greenhouse gas accounting has helped establish ACR as a leading provider of voluntary and compliance market services. Over the course of its two-plus decades of operation, ACR has issued more than 80 million offsets with a market value well over \$750 million.

### Grow Asia

**Grow Asia**, a partnership of commodity producers and governments, asked Winrock to produce a tool to calculate greenhouse gas emissions from agriculture. The tool allows producers in Asia to apply advanced calculation approaches to understand actual emissions and emission intensity from commodity production. The tool will be used by 261 partner organizations and will directly impact 471,000 smallholder farmers.

### Guyana National Forest Monitoring System

Winrock helped **Guyana** develop its National Forest Monitoring System. The system allows the national government to assess historical greenhouse gas emissions from its forests and to monitor ongoing emissions. Winrock provided essential support to Guyana's emergence as a global leader in Reducing Emissions from Deforestation and Forest Degradation (REDD+). Norway committed to pay Guyana U.S. \$5 per ton of emissions reduced, an arrangement that has helped the South American nation earn in excess of U.S. \$200 million for its conservation efforts.



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[winrock.org](http://winrock.org)



2101 Riverfront Drive | Little Rock, Arkansas 72202  
+1 501 280 3000 | [winrock.org](http://winrock.org)

2121 Crystal Drive, Suite 500 | Arlington, Virginia 22202  
+1 703 302 6500 | [winrock.org](http://winrock.org)