TEAM:

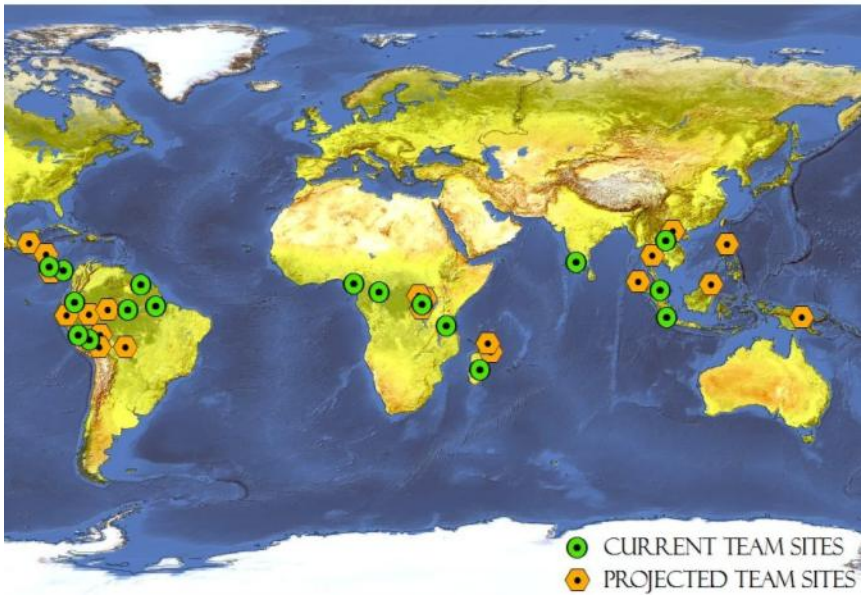
Monitoring in Tropical Forests

The Tropical Ecology, Assessment and Monitoring (TEAM) Network, originally created by Conservation International (CI), is now a partnership among CI, the Smithsonian Institution, and the Wildlife Conservation Society. TEAM's global network of scientists is collecting and distributing near-real-time data on trends in biodiversity, climate, land cover change and ecosystem services.

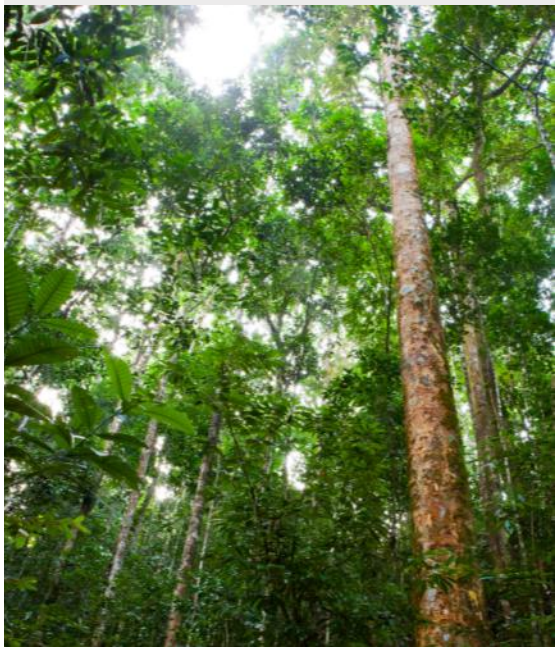
Conserving the biodiversity that underpins Earth's life support systems, stabilizing our climate and ensuring food security are perhaps the greatest challenges of our time. The Millennium Ecosystem Assessment found that human activities are degrading the natural systems we depend on faster now than at any time in human history. However, our knowledge base for understanding this change has not kept pace. To make smart development decisions we need to see the whole picture. Instead of assembling separate silos of data, we need to use systems-level data and systems-level understanding.

TEAM provides a unique, scalable, viable and adaptable model to meet this challenge. TEAM is now monitoring tropical forest landscapes in Africa, Asia, and Latin America, using high-resolution remote sensing combined with strategically placed ground measurements to collect data that TEAM makes publicly available in near-real-time.

Currently at 17 sites, the TEAM Network will continue to grow to more than 40 sites globally.



TEAM delivers multi-scale, real-time understanding of how key elements of Earth's operating system — climate, carbon stocks, biodiversity — are changing, and what this means for people.



Standardized Data Collection

Terrestrial Mammals and Birds: Most vulnerable to human impacts and play a role in maintaining various ecosystem functions.

- TEAM monitors terrestrial mammals and birds using 60 camera traps deployed at each site annually for one month.
- TEAM provides population-level information on over 300 species to the **International Union for the Conservation of Nature** Species Survival Commission.

Forest Carbon: Tropical forests play a crucial role in the global carbon cycle by storing and regulating carbon.

- TEAM monitors carbon in trees which accounts for 50% of total forest carbon.
- Scientists at the **NASA Jet Propulsion Laboratory** use TEAM data to calibrate remote sensing measurements of forest carbon at large spatial scales.

Climate: Climate stations tend to be located in cities or airports where climate conditions are different than in natural areas.

- TEAM has a network of **World Meteorological Organization (WMO)** compliant climate stations in natural areas where there are no other climate stations within hundreds of miles.
- Most TEAM climate stations are complementing **Global Climate Observing System (GCOS)** data by being in areas of low density GCOS climate stations and contributing to tropical forest climate data.

Tree and Liana Tropical Forest Diversity: Little is known about how tropical forests will respond to drivers such as climate and land use changes.

- TEAM monitors tree and liana diversity to assess the effects of these drivers on species diversity, functional diversity and other ecosystem processes.
- TEAM data are contributing to the **Global Index of Vegetation Plot Database** allowing global collaboration in vegetation research.

Human Disturbance: The effects of human activity on biodiversity can operate at different scales.

- TEAM delineates a zone of interaction where human activity might impact biodiversity measurements and monitors land cover change and human and natural disturbances using satellite imagery data.
- TEAM's methods have helped researchers evaluate the effects of landscape structure and fragmentation on mammal communities globally.

Cyberinfrastructure

The information technology (IT) and communication challenges to support a global multidisciplinary network are significant. As a result, TEAM has developed a suite of IT tools allowing management, storage and dissemination of the standardized data and synthesized data products. These tools enable TEAM to manage a wide variety of data types and formats. All TEAM data and products are free and available via www.teamnetwork.org.

OUR **VISION**
We imagine a healthy, prosperous world in which societies are forever committed to caring for and valuing nature, our global biodiversity, for the long-term benefit of people and all life on Earth.

OUR **MISSION**
Building upon a strong foundation of science, partnership and field demonstration, CI empowers societies to responsibly and sustainably care for nature, our global biodiversity, for the well-being of humanity.

CONSERVATION INTERNATIONAL

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