

A Network of Intensive Forest Monitoring Sites for the Americas

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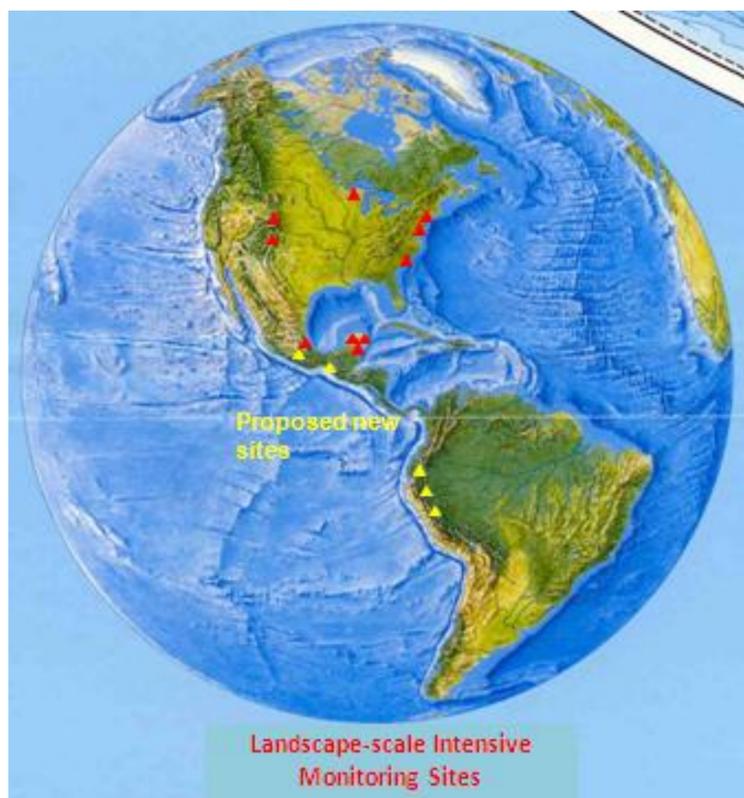
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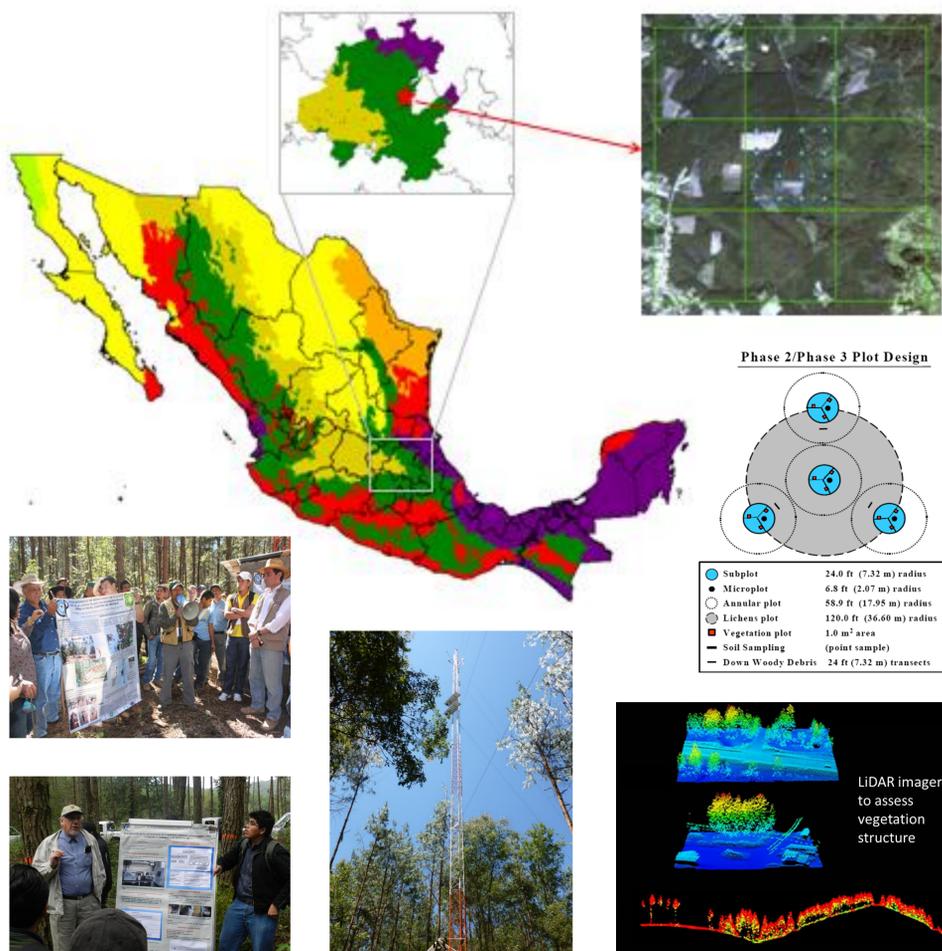
Objectives and main outputs from Intensive monitoring sites:

- 1. Emission factors** - these can be calculated for specific and important ecosystems, and for activities or disturbances, based on field observations.
- 2. Model parameters** - field data is used for the development of parameters needed by ecosystem models and remote sensing approaches.
- 3. Validation** - intensive sites are ideal for landscape-scale validation of estimates and maps produced by remote sensing and ecosystem models.
- 4. Demonstration** - intensive sites are places for the development or demonstration of methods, and supporting the needs of national inventories and community MRV.
- 5. Forest management** - intensive sites represent important types of landscapes, and associated studies can develop "best management practices" for wider applications.

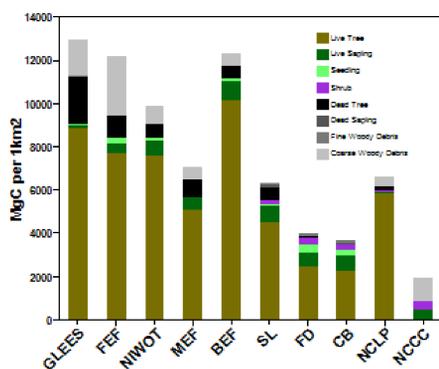
Example of Intensive Site in Mexico: "Atopixco" in State of Hidalgo



Site	Vegetation	Disturbances
Bartlett, New Hampshire	Northern hardwoods	Hurricanes, ice storms
Parker Tract, North Carolina	Loblolly pine plantation	Forest management
Silas Little, New Jersey	Pine, oak	Fire, insects
Marcell, Minnesota	Northern hardwoods	Fire, wind
Fraser, Colorado	Subalpine	Fire, insects
Glacier Lakes, Wyoming	Subalpine, wetlands	Fire, insects
Niwot Ridge, Colorado	Subalpine	Fire, insects, harvesting
Atopixco, Hidalgo	Pine	Forest management
Kaxil Kiuc, Yucatan	Semi-deciduous	LUC, fire, hurricanes
Calakmul, Campeche	Evergreen tropical	LUC, fire, hurricanes
U'yoolche, Quintana Roo	Evergreen tropical	LUC, fire, hurricanes

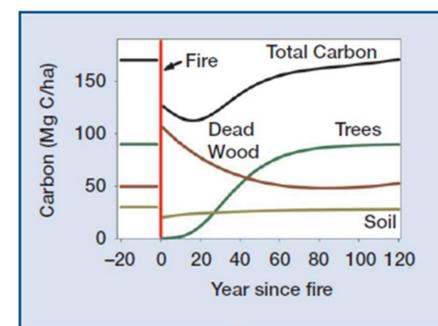


Carbon Density by Pool for Different Ecosystems of the United States



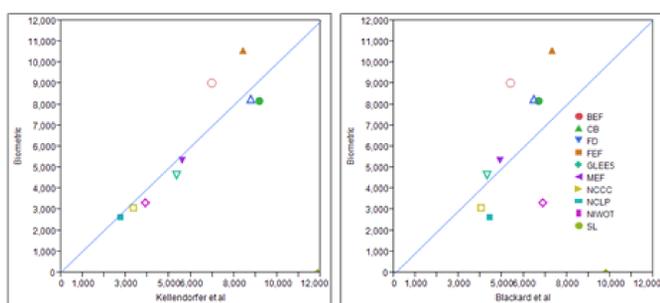
Selected Variables and Measurement Methods

Variable	Remote Sensing	Forest Inventory	Intensive Sites
Land cover	X	X	X
Leaf area	X	X	X
Disturbance	X	X	X
Stand structure	X	X	X
Live biomass		X	X
Species composition		X	X
Growth, removals, mortality		X	X
Litter fall			X
Soil CO ₂ flux			X
Runoff			X
Dissolved Organic C			X
Net Ecosystem Exchange of CO ₂			X



Emissions Factors

Comparison of Biomass Estimates from Intensive Sites with Estimates from Large-scale Remote Sensing Maps (MgC/km2)



Conclusions about intensive monitoring and demonstration sites:

- Support information requirements for implementing programs such as Reducing Emissions from Deforestation and Forest Degradation (REDD+).
- Enable communities to receive payments for ecosystem services such as reduced carbon emissions or improved forest management.
- Valuable for validating state and national estimates from satellite remote sensing and the national forest inventory.
- Provide parameters for forest models that support strategic management analysis, and support student training and graduate projects.
- Comparison among sites can ensure harmonization of approaches and data, and facilitate sharing of experiences and knowledge among countries.
- It is a significant challenge to establish and maintain each site over the long term, but this network can have a positive impact on the world's climate and help sustain healthy forests worldwide.