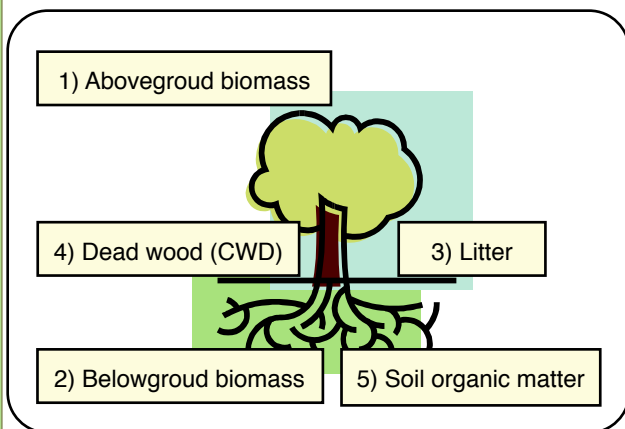




Evaluation of 5 carbon pools in forest ecosystems

This network project facilitates the collection of new data relation to carbon dynamics from research plots. We will estimate carbon pools more precisely and update information across East Asia forest ecosystems. In this project, we apply 5 carbon pools (aboveground biomass; belowground biomass; litter; dead wood; and soil organic carbon) which was defined by IPCC GPG-LULUCF. Censusing of carbon pools with broad range of forest type would give us new insights into forest carbon dynamics. Our research team will analyze spatial and temporal variations in carbon pools under different climates and site conditions. Our work will contribute to better prediction of future forest carbon dynamics.



For More Information

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ADVANCEMENT OF EAST ASIA FOREST DYNAMICS PLOTS NETWORK

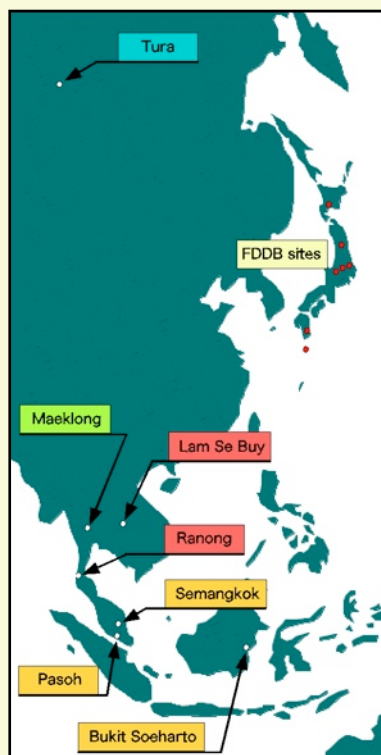
-Monitoring forest carbon cycling for
the development of climate change adaptation-

EA-FDPN



Our project entitled “Advancement of East Asia Forest Dynamics Plots Network -Monitoring forest carbon cycling for the development of climate change adaptation-” is financially supported by the Global Environmental Research Account for National Institute, Ministry of the Environment Japan (MOEJ). Duration of the project is five years (FY2009-FY2013).

Plots in the network



Research partners	Plot name	Forest type	Country
V.N. Sukachev Institute of Forest, Russian Academy of Sciences	Tura	Boreal forest	Russia
Kasetsart University Department of National Park, Wildlife and Plant Conservation	Mae Klong	Tropical dry forest	Thailand
Forest Research Institute Malaysia (FRIM)	Pasoh	Tropical rain forest	Malaysia
Forest Research Institute Malaysia (FRIM)	Semangkok	Tropical rain forest	Malaysia
Mulawarman University	Bukit Soeharto	Tropical rain forest	Indonesia
Chulalongkorn University	Lam Se Buy	Tropical swamp forest	Thailand
Chulalongkorn University Kasetsart University	Ranong	Tropical swamp forest	Thailand

Background of the network

Recent evidence of global warming has raised awareness of the importance of mitigation practices to reduce or avoid the threats of climate change. Curbing deforestation is a highly cost-effective way of reducing greenhouse gas emissions (Stern 2007, IPCC 2007). However, our knowledge of forest carbon dynamics and the impact of climate change is still insufficient.

Long-term monitoring of forest dynamics can help us to estimate changes in forest carbon stocks more accurately. Networking of monitoring plots provides opportunities for global comparisons and the synthesis of research that could not be accomplished with individual plots (Losos and Leigh 2004). In 2009, Japan's Forestry and Forest Products Research Institute (FFPRI) established a new network of forest dynamics plots, the East Asia Forest Dynamics Plots Network (EA-FDPN), with funding from the Japanese Ministry of the Environment.

Aim of the project

The aims of this network project are:

- to develop a sustainable, long-term forest monitoring network in East Asia
- to compile current and recent data on forest structure, biomass, and dynamics of local climatic and soil conditions
- to explore how changes in climate may affect forest biomass and productivity on the broad scale of East Asia.

Milestones & expected results

This network project will provide :

- annual NPP and carbon stock data from a broad range of East Asian forest sites

- knowledge of how climate and soil moisture status control carbon cycling
- information on the long-term behavior of forest productivity and carbon fixation
- improved knowledge of the implications of carbon sinks for climate change mitigation and adaptation policies in East Asia

Expected outcomes

This network project will provide :

- vital insights into the mechanisms underlying the current responses of ecosystems to climate and the possible future of East Asia under global change scenarios
- scientifically robust data to support sophisticated analysis of global climate change

