Principal Researcher	Masami Fukuda	Number ofResearchers	3
Research Institution · Department · Title	Professor, Institute of Low Temperature Science, HokkaidoUniversity	Location of Institution	Sapporo
Title ofProject	tudy on Interaction between GlobalWarming andPermafrostThawing		
Abstract of ResearchProject	According to futureglobalwarmingpredictioninIPCC2001report,borealforestplaysimportant role for absorption of Carbon Dioxide as to reduce global warming rate. There exits special co-existence relation between boreal forest(Taiga) and permafrost .Once boreal forest is under disturbance triggered by forest fire, then permafrost tends to thaw in large scale. During forest fire in Taiga, a large amounts of Caron Dioxide is emitted to the atmosphere. After fire occurrence, the function of boreal forest as absorption of Caron Dioxide is lost in large scale. Association with loss of vegetation cover due to forest fire, ground surface heat budget tends to change resulting heat up groundsurface and permafrostisforced to thaw. Uppermostpermafrost contains highly concentrated Methane and thawing upper permafrost emits Methane to the atmosphere. So called triple effects to global warming arise after forest fire in Taiga as to accelerate global warming rate. It is essentially important for us to estimate the quantitative influence triggered by forest fire in Taiga area. The long-term field observation in east Siberian Taiga is planned to conduct in this project. Recently burnt site will be selected for observation using conventional tower observing system. Highly reliable data might be available after on-the-spot measurements and these data are applicable for capable reduction method of greenhouse emission from permafrost in the accordance with Kyoto Protocol. Joint implementation between Japan and Russia for Kyoto Protocol will be established based on the resultofthisprojectinminimizingeffortofforestfireoccurrence.		
References	M.Fukuda,T.Machimura el al (2001) Carbon Budget Dynamics Change Induced by Artifical Disturbance in Siberian Taiga Region. American Geophysical Union 2001 Fall Meeting, EOSSupplement, F170 M.Fukuda and K.Kobayashi (2001) Resaerch Report on Permafrost Disturbance and Induced Emission of Greenhaouse Gases in 2000. Japan Science and Technology Corpration, pp274.		
Term of Project	Fiscal years 2002-2006. (5years)		

Budget Allocation (inthousandofyen)	FY2002	FY2003	FY2004	FY2005	FY2006	TOTAL
	13,800	9,200	8,800	8,800	3,400	44,000

Homepage Address	http://frost2.lowtem.hokudai.ac.jp