

### **1) title: Feedbacks in Boreal and Arctic Climate Systems in Siberia**

#### **2) short outline:**

Observations of the carbon cycle are now becoming available for boreal and arctic sites in Siberia. There are indications that Siberian ecosystems play an important role in the global carbon balance. The changes in climate are expected to be largest in the northern parts of the globe. This makes the carbon balance of these regions vulnerable. Feedbacks between the carbon cycle and energy and water cycles may cause non-linear responses as well as acceleration or deceleration of the initial response. This proposal aims to use the collected observations of the carbon cycle in a dynamic vegetation model, coupled to a regional atmospheric model to study which feedbacks are expected to be dominant. The objective is to constrain the stability of carbon pools in Siberia in a changing climate.

#### **3) initial coordinator and proposing group:**

##### **Initial coordinator:**

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##### **Proposing group:**

Han Dolman	VU, Amsterdam, the Netherlands
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#### **4) CVs of initial coordinator and proposing group**

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#### **5) sites that initially would be involved**

in general all available Russian and Siberian sites would be involved, i.e. including these sites:

Cherskii tundra-floodplain  
Yakutsk Larch forest  
Yakutsk Pine forest (Japanese site)  
Chokurdakh tundra  
Zotino Pine forest  
Zotino bog  
Hakasia steppe sites  
Tver wet Spruce forest  
Tver dry Spruce forest

#### **6) rules applied for co-authorship**

Persons that have contributed data and/or have given intellectual input to the paper will be contacted to invite them for co-authorship. All data contributors will be invited to give intellectual input.