



HOKKAIDO UNIVERSITY

Title	Introduction to Global COE Program "Establishment of Center for Integrated Field Environmental Science (IFES)" by Graduate School of Environmental Science with Dev. Env. Res., GS Agriculture in Hokkaido Univ. and National Inst. of Env. Studies (NIES) in FY 2009-2013
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Description	Opening address
Relation	International Symposium on "The Impact of Climate Change on Region Specific Systems". 6 November 2009. Sapporo, Japan.
Issue Date	2009-11-06
Doc URL	https://hdl.handle.net/2115/39878
Type	conference presentation
File Information	01_Yamanaka.pdf



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by Graduate School of Environmental Science
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Yasuhiro Yamanaka
the Leader of IFES-GCOE



*International Symposium on “Impact of Climate Change on Region Specific Systems”
on November 6th, 2009*

IFES-GCOE has 4 objectives

Building "100-year observation network"

Long-term field observations is crucial for finding out what environmental changes are actually occurring. We aim to build "100-year observation network" through interchange among students and researchers over a number of generations in Siberia, Mongolia, Indonesia which are areas vulnerable to the impacts of global environmental changes.

Fostering young researchers playing international activities

Through positive participating international research projects such as core projects in IGBP, we are fostering researchers who can be active internationally.

Developing an integrated regional model

As ultimate goal, we will develop an integrated model coupling with climate, ecosystem, hydrology, biogeochemical cycles, land use, etc in four regions above, in collaboration with the National Institute for Environmental Studies (NIES).

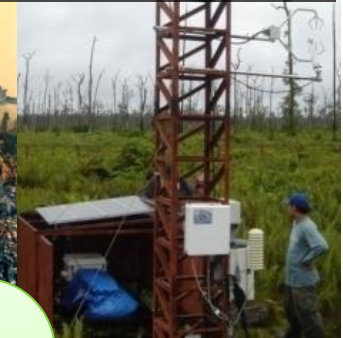
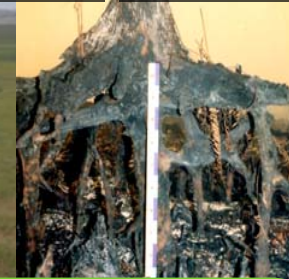
Providing students with practical education and research

In collaboration with policymaking agencies, research institutes, private enterprises, national and local governments, environmental organizations, etc., we conduct practical education and research, and provide students and young researchers with opportunities for active participation.

Siberia: permafrost melting etc.

Mongolia: grassland drying etc.

Indonesia: peat fire etc.



Liaison Offices

Hokkaido Univ.

Cooperation Exchange of researchers and students

After obtaining Ph.D at HU, they will be researcher, coordinator of international projects, or supporter as administrator as next generation

International Student Support System:
Oversea admission system, scholarship, supporter etc.

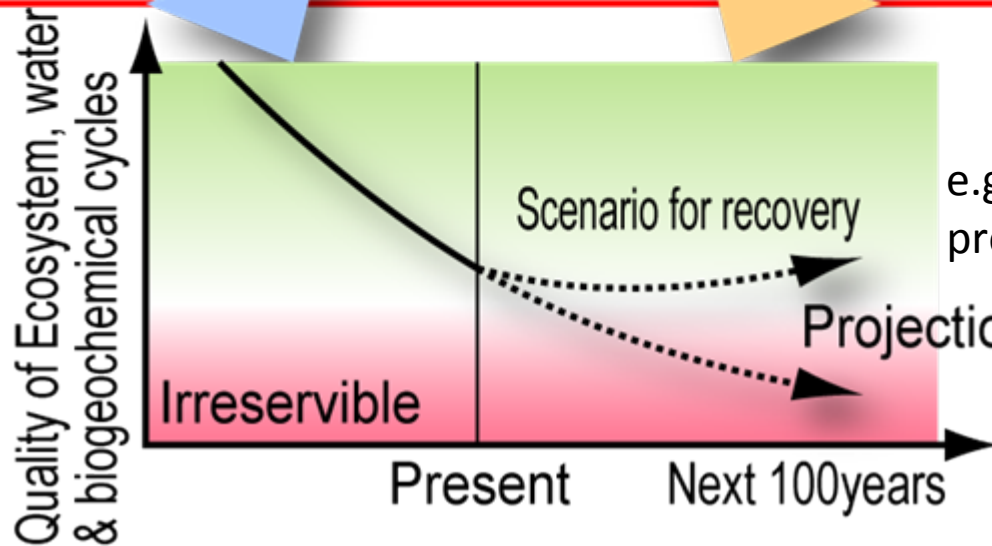
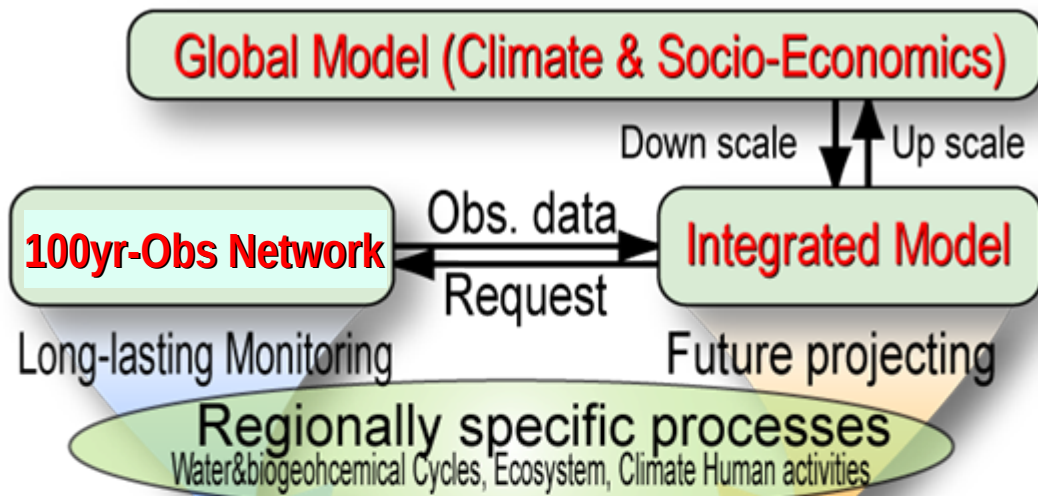
Equal partnership

- Century long-lasting observation network for ecosystem & biogeochemical cycles
- Proposing adaptive strategy for Earth System

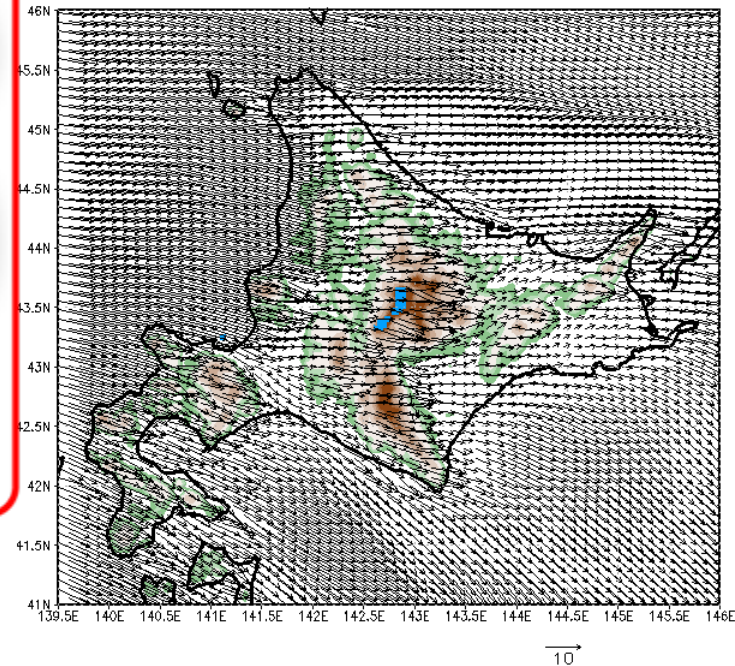


Global climate model & Socio-Economics model
hind- now- & forecast

Integrated Field Science



2009:11:3:0UTC



e.g., Hokkaido climate model (4km grid)
preliminarily developed by Dr. Tomonori Sato

Future: ecosystem, water cycle...

This international Symposium on “Impact of Climate Change on Region Specific Systems”

A clearer picture has emerged of the prospective impact of global warming, such as climate change and influence on global ecosystems, as the IPCC Fourth Assessment Report describes it. On the other hand, regions have region-specific systems in water cycle and ecosystems, and the impact of global climate change on these elements combined with local human activity are not necessarily apparent.

This symposium **aims to discuss the sustainability of such region-specific systems in global climate and ecosystem changes** from local perspectives with the attending overseas and domestic experts, and to put together recommendations for related research and implementation.

International Symposium on “Impact of Climate Change on Region Specific Systems”

I am happy that we will obtain fruitful results from this symposium (as the first meeting):

- ✓ Identifying **specific science topics linking between global and local aspects**
- ✓ Sharing **common background between observationalist and modeller**
- ✓ Integrating **academic inter-disciplines as new field**
- ✓ Starting **international collaborations among people in four regions.**

Let us start our symposium!!

Two aspects of our IFES-GCOE program

Human Resource Development

We promote internationally leading researchers by proposing projects and by developing integrated models. For young student and researchers in the world as well as in Hokkaido University, we provide training and brain-steaming programs in the practical science as the academic inter-disciplines. Through activities above, we foster leading people who can be active in administrative agencies, research institutes, private enterprises, environmental organizations as well as universities .

Research Activities

Environmental issues have global and regional aspects. The former is such as global warming and the latter has various region-specific problem. It is necessary to link perspectives on both global and regional level, especially to understand the above problems. We will therefore conduct observations in Hokkaido as well as in Siberia, Mongolia, and Indonesia, three regions which are vulnerable to global warming and other anthropogenic impacts, and will monitor region-specific environmental changes. We will also develop an integrated regional model that explain changes in the natural environment, by which we will conduct future prediction including a social perspective.

Three Promotion Offices + one Task Force

Overseas Research & Student Exchange Promotion Office (ORSE)

Summer schools in Siberia (2009), Mongolia (2010), Indonesia (2011)

International Network & Training Office (INeT)

IGBP SC meeting in Otaru (2009), Summer schools in Hokkaido (2009-13)

Regional Education and Outreach Promotion Office (REO)

Events linking between Hokkaido University and outsides

Integrated Modeling Task Force (IMTF)

This symposium (2009), Summer schools (2010, 2012)

