

A3 Foresight Program

CarboEastAsia International Workshop 2008

Feb. 19 – 21, 2008, Seoul, Korea

1. Background and Objectives

CarboEastAsia is a research cluster pursuing capacity building among ChinaFLUX, JapanFlux and KoFlux to cope with climate change protocols by synthesizing measurement, theory and modeling in quantifying and understanding of carbon fluxes and storages in East Asia.

The major objectives of CarboEastAsia are to:

- 1) Identify important natural and anthropogenic mechanisms that drive carbon cycling in various terrestrial ecosystems;
- 2) Quantify the distribution and strength of carbon sink/source, and their spatial and temporal variability (dynamic) and uncertainty (prediction);
- 3) Examine functional type of vegetation and its spatial distribution pattern in relation to ecosystem carbon cycle;
- 4) Develop a new generation of carbon cycle models suitable to the east Asia;
- 5) Evaluate influences of land use and climate changes on terrestrial carbon cycle;
- 6) Establish reliable and consistent datasets for estimating regional carbon fluxes and storages in East Asia through data assimilation;
- 7) Provide scientific insights into carbon sequestration potentials of the terrestrial ecosystems and political suggestions on reduction options in carbon emissions;
- 8) Quantify the role of terrestrial ecosystems in East Asia to global carbon cycle.

2. Major Goals

- Partnership between Ecology & CarboEastAsia A3 Foresight programs
- Research proposals: Presentation, Evaluation, and Discussion
- Working Group Activities
- Future activities: Field studies, Conference (“Synthesis & Assessment”)

3. Date and Venue

Date:

Feb. 19 ~ 21, 2008

Venue:

Feb. 19 – Korea University

Feb. 20 – Sangnam Institute of Management, Yonsei University

Feb. 21 – Field Excursion, Gwangneung Flux Site

4. Accommodation, Transportation & Financial Support

Accommodation:

All international participants will stay in Koreana hotel (www.koreanahotel.co.kr/English/index.htm) near the center of Seoul (City Hall). The area near the hotel is rich in tourist attractions with easy access to public transportations. The fare has been arranged for this workshop and includes breakfast and free internet service.

Transportation:

All domestic transportation for the participants will be provided by the workshop organizer (KoFlux) including travel from/to the airport (Incheon and Gimpo), to venues and field excursions. Please expect to meet representatives of the workshop organizer with a sign “CarboEastAsia” near the exit gate of the airport who will assist your travel to the hotel. In addition, detailed access information of the hotel from both airports is prepared and available from the CarboEastAsia web page.

Financial Support:

The workshop organizer will provide all necessary financial support for international and domestic participants throughout the workshop period. This includes accommodation, meals, domestic transportation, banquet, field excursion, etc. Upon arrival to the hotel (or venue), the participants will receive their allowance after accounting for the (expected) expenses related to meals and transportation service that will be fully arranged/managed by the workshop organizer. Regarding the distribution of allowances, a separate information sheet will be provided.

5. Host, Sponsors & Secretariats

Host:

KoFlux

Dept. of Atmospheric Sciences/Global Environment Lab., Yonsei University

Industry-Academy Cooperation Foundation, Yonsei University

Sponsors:

National Natural Science Foundation of China (NSFC)

Japan Society for the Promotion of Science (JSPS)

Korea Science and Engineering Foundation (KOSEF)

AsiaFlux

Secretariats:

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6. Programs

Feb. 19: Ecology A3 Workshop

Workshop (08:00 ~ 19:00) – See attachment 1 for details.

Reception (19:00 ~ 20:30)

Feb. 20: CarboEastAsia Workshop

Workshop (08:30 ~ 19:00) – See attachment 2 & 3 for details

Banquet (19:00 ~ 21:00)

Feb. 21: Field Excursion (Gwangneung)

*Although no program is scheduled on 18 and 22 Feb., representatives of the workshop organizer will assist the participants for check-in/-out, travel, meals and other inquiries.

Attachment 1.

A3 Foresight Program 2008 Seoul Workshop

Upscaling from plot based carbon data to regional scale: current status and perspectives (19 Feb., 2008)

08:30-09:00	Registration
09:00-09:20	Opening ceremony - Dean of College of Life Sciences, Korea Univ. - President of Korea Forest Society
09:20-10:00	Guest lecture I: Dr. Neal Scott (Queens Univ.) - Ecophysiological aspect
10:00-10:40	Guest lecture II: Dr. Christopher Daly (Oregon State Univ.) - Geospatial and climatological aspect
10:40-11:00	Break
11:00-13:00	Oral session I
13:00-14:00	Lunch
14:00-16:00	Oral session II
16:00-16:15	Break
16:15-18:15	Oral session III
18:15-18:45	Discussion
18:45-19:00	Closing and announcements by 3 PIs
19:00-20:30	Reception: Korea University

Attachment 2.

CarboEastAsia Workshop Schedule (20 Feb., 2008)

08:30 - 08:55	Registration & Admission
08:55 - 09:00	Announcement
09:00 - 09:30	Welcome address & Introduction
09:30 - 10:40	Proposal Session I (10 min. per presentation)
10:40 - 11:00	<i>Coffee Break</i>
11:00 - 12:30	Proposal Session II (10 min. per presentation)
12:30 - 13:40	<i>Lunch</i>
13:40 - 15:40	Proposal Session III (10 min. per presentation)
15:40 - 16:00	<i>Coffee Break</i>
16:00 - 17:30	Working Group Discussion: Assessment & Adjustment
17:30 - 18:00	Summary and Synthesis
18:00 - 19:00	Announcement & Break
19:00 - 21:00	<i>Banquet</i>

Attachment 3.

Titles of CarboEastAsia Proposals

Authors	Title
Kazuhito Ichii, Tomomichi Kato, Akihiko Ito, Takahiro Sasai	Multi-model analysis of terrestrial water/carbon cycles in East Asia
Nobuko Saigusa	Response of terrestrial carbon budget at various forest ecosystems in the East Asia to significant meteorological anomalies in 2002 and 2003
Ryuichi Hirata, Akira Miyata and Masayoshi Mano	Key-factor analysis and detection of temporal and spatial variation in carbon balance in East Asia
Kentaro Takagi, Takashi Hirano	Carbon dioxide exchange of Larch forests distributing over northeast Eurasian continent
Koji Tamai	Effect estimation of deep forest disturbance on forest floor CO ₂ efflux in a temperate forest
Takashi Machimura	Regional land surface carbon balance mapping over East Asia using top-down modeling and flux tower observation
Takeshi Ohta	Temporal and spatial distributions of regulating and driving factors on evapotranspiration from various forest ecosystems
Joon Kim, Jinkyu Hong	Validation of Carbon Module in Earth System Model based on AsiaFlux database
Jaeseok Lee, Joon Kim	Inter-comparison of Soil CO ₂ Chamber System implemented in AsiaFlux Network
Young-Hee Lee, Joon Kim	The model comparison for water stress effect on stomata in semi-arid region
Hyojung Kwon, Jinkyu Hong, Joon Kim	An approach of carbon flux measurements during rainy period: an indirect measurement of carbon flux using an aerodynamic-variance method
Sang-Ki Moon, Joon Kim	A Comparative Study of Flux Sites using their Scales of Heterogeneity from High Resolution Satellite Images in East Asia

Authors	Title
Minseok Kang, Hyojung Kwon, Joon Kim	Application of improved WPL correction to CO ₂ fluxes by open-path analyzer
Sujin Kim, Joon Kim	A comparative study of organic carbon discharge from watersheds under different climatic zone
Dongho Lee, Joon Kim	Deriving Water Use Efficiency (WUE) based on long-term CO ₂ and H ₂ O flux data measured from representative tower flux sites in East Asia with diverse climatic and land cover characteristics
Shenggong Li, et al.	Seasonal and interannual variability of carbon fluxes in steppe ecosystem in central Mongolia
Leiming Zhang, John Tehunen, Guirui Yu, Xiaomin Sun	Responses of carbon exchange of forest ecosystem to Asian Monsoon Climate during summer period
Yuling Fu, Guirui Yu, Shenggong Li, et al.	Carbon exchange and dynamics in temperate steppe and alpine meadow grassland ecosystems in east Asia
Huimin Wang, et al.	Carbon budget and its driving forces of evergreen ecosystems in the East Asia
Junhui Zhang, Shijie Han, et al.,	Response of forest ecosystems in East Asia to changing Precipitation regimes by several key CO ₂ /H ₂ O fluxes derived parameters
Huajun Fang, Guirui Yu, et al.	The effects of atmospheric nitrogen deposition on key processes of forest soil carbon cycles: a terrestrial transect study
Xuefa Wen, Xiaomin Sun, Guirui Yu, Huimin Wang	Seasonal drought effects on ecosystem carbon exchange of a subtropical planted forest of southeastern China
Fengxue Gu, Guirui Yu, et al.,	Responses of carbon and water exchange to high temperature and water deficit in a subtropical coniferous plantation: comparison between model simulation and eddy flux measurements
Weimin Ju, Shaoqiang Wang, et al.,	Model intercomparison of CO ₂ and energy fluxes in East Asia ecosystems
Weimin Ju, Shaoqiang Wang, et al.,	Spatial and temporal patterns of carbon budget in East Asia: A synthesis analysis from six ecosystem process models

Authors	Title
Weimin Ju, Shaoqiang Wang, et al.,	Inversely modeling the impact of drought on regional carbon fluxes using a dynamic rooting algorithm
Na Zhang, et al.	Upscaling of carbon and water fluxes based on spatial pattern characteristics
Bo Tao, Fengxue Gu, Guirui Yu, Ming Xu, Huimin Yan, Kerang Li, Jinjun Ji	Quantifying the impacts of climate change and land use/cover change on carbon dynamics in East Asia region