

Contract

between

Northeast Institute of Geography and  
Agricultural Ecology,  
Chinese Academy of Sciences

and

Research Institute for Humanity and Nature  
Inter-University Research Institute  
Corporation  
National Institutes for Humanities

on

The Joint Research on  
Biogeochemical Role of Sanjiang Plain  
for 2006

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between  
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Chinese Academy of Sciences  
and  
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Inter-University Research Institute Corporation  
National Institutes for Humanities  
on  
The Joint Research on  
Biogeochemical Role of Sanjiang Plain  
for 2006

The Amur-Okhotsk Project of The Research Institute for Humanity and Nature (RIHN) hereinafter to be called CUSTOMER in the person of Dr. Takayuki Shiraiwa, the leader of Amur-Okhotsk Project, on one side, and the Northeast Institute of Geography and Agricultural Ecology, Chinese Academy of Sciences (NEIGAE-CAS) hereinafter to be called EXECUTOR in the person of Professor Zhang Bai, Assistant Director of NEIGAE-CAS, on the other side, concluded the present contract for the following.

1. Subject of the Contract

1.1 The CUSTOMER is to be charged with and the EXECUTOR is to be taken the responsibility for the continuation of the research project entitled "The Joint Research on Biogeochemical Role of Sanjiang Plain for 2006".

1.2 The EXECUTOR is to be responsible for following works in 2006:

- to conduct, from May 2006 to March 2007, research on river water and ground water chemistry in and around Sanjiang plain including chemical analyses and field measurements (total iron, Fe(II), other forms of Fe, dissolved organic carbon, dissolved organic nitrogen, major ions (Cl, SO<sub>4</sub>, Na, K, Ca, Mg), HCO<sub>3</sub><sup>-</sup>, Mn(II), silicate, nitrate, nitrite, ammonium, phosphate, pH, EC).
- assistances to Japanese members for plot study at Sanjiang Experimental Station and field surveys.
- general management and co-ordination of works

1.3 The CUSTOMER is to be responsible for following works:

- to provide necessary tools, determine methods and make observations with Chinese colleagues for these collaborative research.

- to make specialized analyses in water and soil samples in various institutions in Japan.
- to provide the Japanese members with the transportations (including payment of customs taxes) between Japan and China.
- to provide shipping cost of necessary equipments and samples between Japan and China.
- to prepare the expenses for the EXECUTOR's works noted in item 1.2.

## 2. Technical conditions

- 2.1 The program of the work noted in items 1.2 and 1.3 is given in the schedule of the Study (Supplement 1).
- 2.2 The EXECUTOR can stop implementation of the work if negative result is expected or further its implementation is not expedient, and the EXECUTOR has to inform the CUSTOMER about this stop not later than during 14 days. Both sides should consider expedience of continuation of the work during a month.
- 2.3 The period of implementation is from 19 May 2006 till 15 March 2007.
- 2.4 The EXECUTOR and the CUSTOMER are to make copies of observation records and results obtained within the framework of the work program (Supplement 1) and are to provide them to each other.
- 2.5 The CUSTOMER and EXECUTOR have equal rights on the results of work and are to use them for the joint investigations within framework of the Implementation Arrangement between NEIGAE-CAS and RIHN.

## 3. Costs

- 3.1 The EXECUTOR is to provide Quotation to the CUSTOMER on expenses of EXECUTOR's works noted in the Item 1.2 prior to the conclusion of the Contract.
- 3.2 The CUSTOMER is to pay 2,000,000 Japanese Yen to the EXECUTOR for the work noted in item 1.2 in accordance with the calculations for individual stage of the works, given in Supplement 2.
- 3.3 Japanese members who will participate in the work noted in items 1.2 and 1.3 are to pay for the following expenses (these expenses are not involved in the amount above): air, train and ship fares between Japan and the research fields and personal fees such as accommodations.
- 3.4 Expenses of the surface transportation in the local research area are to be involved in the amount above and are to be paid by the EXECUTOR.
- 3.5 The payment is to be made as follows:
  - The first payment of 1,600,000 Japanese Yen being just after the conclusion of the Contract;

- The second (final) payment of 400,000 Japanese Yen being just after the receipt of Final Report.

3.6 All payments to the EXECUTOR are transferred through the bank on the account of the EXECUTOR (See item 6) according to Supplement 3.

4. Other conditions

4.1 The EXECUTOR is to submit Final Report including all results of works before March 15, 2007.

4.2 On termination of the work at March 15, 2007, the EXECUTOR is to submit the Document about the accomplishment of the work to the CUSTOMER in two copies. The Contract is considered to be over after final payment and signing of the Document is done by both sides.

4.3 The both sides bear responsibility for safety measures of their representatives, taking part in the field experimental works.

4.4 In case of destroying of habitable premises, devises and equipment due to natural disaster (fire, earthquake, lightning etc.) the schedule of the work and calculations are to be corrected taking into account an occurred damage.

4.5 The equipment, tools and other properties obtained for the implementation of the Contract are to be belonged to the side, which purchased them.

4.6 The CUSTOMER shall not be liable for any losses or damages occurring to the equipment belonging to NEIGAE-CAS or for any loss, cost, injury or damages to any third party during the research activity.

4.7 The EXECUTOR shall not be liable for any loss or damages occurring to the equipment belonging to the CUSTOMER during the research activity.

5. Effective period of the Contract

5.1 The Contract is to be effective after the signing by both sides, and is to terminate at the time of signing of the Document by both sides.

6. Legal Address and Signs of sides

CUSTOMER

Research Institute for Humanity and Nature (RIHN)

Inter-University Research Institute Corporation

National Institutes for the Humanities

457-4 Motoyama Kamigamo, Kita-ku, Kyoto 603-8047, JAPAN

Phone: +81-75-707-2320; Fax: +81-75-707-2507

EXECUTOR

Northeast Institute of Geography and Agriculture Ecology,  
Chinese Academy of Sciences  
3195 Weishan Road  
Changchun 130012, CHINA  
Tel: +86-431-5542222; Fax: +86-431-5542255

Bank requisites:

Bank: Xinmin Street Subbranch, Jilin Branch, Bank of China  
(NO.14 Xinmin Street, Changchun 130021, JiLin Prov., China)  
Accounts: 2208660270200013163  
Name: Zhang Bai

CUSTOMER

Prof. Yoneo Ishii  
Inter-University Research  
Institute Corporation, National  
Institute for Humanities  
(Tokyo, Japan)



EXECUTOR

Dr. Zhang, Bai  
Director  
Northeast Institute of Geography  
and Agricultural Ecology, CAS  
(Changchun, China)

张 柏

DD, MM, 17, 05, 2006

DD, MM, 10, 5, 2006

The Contract is made in two copies in English

Date and place:

Detailed contents of  
"Biogeochemical Role of Sanjiang Plain for 2006"

1. Research on river water and ground water chemistry in and around Sanjiang plain
  - 1) Rivers and ground waters: Sampling of river water and ground water is to be made at 20 or more locations which cover the whole area of Sanjiang plain, including main rivers and agricultural drainages. The frequency is to be four times a year (only some big rivers and wells in winter season). Care should be taken so as to collect samples adequately representative of respective river water flows. The ground water tables are to be also observed as far as possible. Ground water tables for the wells at Sanjiang Experimental Station are to be monitored using a water level logger provided by Japan side.
  - 2) Analyses and measurements: Items and their treatments should be as listed in Tab. 1.
  - 3) Aliquot of water samples are to be brought to Japan for their chemical analyses.
  
2. Technical assistance to Japanese members for plot study at Sanjiang Experimental Station and field surveys
  - 1) Technical assistance to Japanese members of the study of soil interstitial water and surficial discharge water at three plots at Sanjiang Experimental Station (natural wetland, upland field, and paddy field) and some field sites. The water level at some field sites is monitored using a water level logger provided by Japan side. Water sampling frequency is to be bimonthly in non-frozen period. Soils are to be also collected from respective plots.
  - 2) Water samples (soil interstitial water, ground water, surficial discharge) and soil samples in the plot study are to be brought to Japan for their chemical analyses.
  
3. General management and co-ordination of works

EXECUTOR is to be responsible for logistical support and assistance for the activities done by Japanese members.

#### 4. Data transformation:

EXECUTOR should send all data of chemical analyses and measurements in this research activities to CUSTOMER. These data should be shared among EXECUTOR, CUSTOMER and associated researcher in China and Japan. All authorities of these data should be preserved against third parties.

Table 1. Measurement items and their treatments

No.	Items	treatment	storage	dctmn
1	pH	-	-	
2	EC	-	-	
3	Fe(II)	no filtration, in situ colorization	(Field analysis)	
4	Mn(II)	no filtration, in situ colorization	(Field analysis)	
5	Total Fe (Fe(III)+Fe(II))	filtration, then acid addition	(ambient temperature)	
6	Acid soluble Fe	acid addition, no filtration	(ambient temperature)	
7	Major Ions (Cl, SO <sub>4</sub> , Na, K, Ca, Mg)	filtration	(ambient temperature)	
8	Silicate	filtration	(ambient temperature)	
9	Nitrate	filtration	(Frozen)	
10	Nitrite	filtration	(Frozen)	
11	Ammonia	filtration	(Frozen)	
12	Phosphate	filtration	(Frozen)	
13	Dissolved Organic Carbon (DOC)	filtration	(Frozen)	
14	Dissolved Organic Nitrogen (DON)	filtration	(Frozen)	
15	HCO <sub>3</sub> <sup>-</sup>	no filtration	(ambient temperature)	
16	Fluorescence spectra	filtration	(Frozen)	JPN
17	Size exclusion chromatogram	filtration	(Frozen)	JPN
18	Stable Isotope Ratio of Fe in water	filtration	(ambient temperature)	JPN
19	Stable Isotope Ratio of Water (Oxygen, Hydrogen)	no filtration	(ambient temperature)	JPN

Calculation of "The Joint Research on Biogeochemical Role of  
Sanjiang Plain for 2006"

Category		Unit Price	Cost in Japanese Yen
Salary		¥ 2,000/person/day x 60 days x 2 persons	¥ 240,000
Materials		¥ 67,000 for pH meter and ¥67,000 for sample bottles (70 bottles)	¥ 134,000
Analyses		¥15,000/sample x 70 samples	¥ 1,050,000
Field trip	Rent for transportation (jeep)	¥ 20,800/日 x 20 日	¥ 416,000
	Wage for sampling	¥ 2,000/人/日 x 20 日 x 4 人	¥ 160,000
Total			¥ 2,000,000

The above cost is paid in Japanese Yen.

EXECUTOR

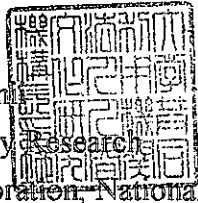
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CUSTOMER

Prof. Yoneo Ishii  
Inter-University Research  
Institute Corporation, National  
Institute for Humanities  
(Tokyo, Japan)



DD. MM. 17 . 05 , 2006

The Contract is made in two copies in English

Date and place:

EXECUTOR

Dr. Zhang, Bai  
Director  
Northeast Institute of Geography  
and Agricultural Ecology, CAS  
(Changchun, China)

张 白

DD. MM. 10 , 5 2006