

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 Cycling of Iron in Sanjiang
Plain
for 2008

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 Cycling of Iron in Sanjiang Plain
for 2008

The Research Institute for Humanity and Nature (RIHN) hereinafter to be called CUSTOMER in the person of Prof. Akihiro Kinda, Director of the Inter-University Research Institute Corporation, National Institutes for Humanities 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, 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 Cycling of Iron in Sanjiang Plain for 2008".

1.2 The EXECUTOR is to be responsible for following works in 2008:

- to conduct, from June 2008 to March 2009, 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, SO₄, K, Na, Ca, Mg), HCO₃⁻, Mn(II), silicate, nitrate, nitrite, ammonium, phosphate, pH, EC).
- to observe ground water level from some small holes dug with a thin auger at certain sites.
- to collect seepage water from holes above mentioned after measurement.
- general management and co-ordination of works.
- to submit the final report and analyzed data to the CUSTOMER by 15 March 2009.

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 1 June 2008 till 15 March 2009.
- 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 2,170,000 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 1,736,000 Japanese Yen being just after the conclusion of the Contract;
- The second (final) payment of 434,000 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, 2009.

4.2 On termination of the work at March 15, 2009, 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. Akihiro Kinda
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)

Zhang Bai

12, 06, 2008

10, 06, 2008

The Contract is made in two copies in English

Date and place:

Detailed Contents of
"Biogeochemical Cycling of Iron in Sanjiang Plain for 2008"

1. Research on river water and ground water chemistry in and around Sanjiang plain
 - 1) Rivers and ground waters: Sampling of broad-area river water and ground water is to be made in August and October 2008 at about 20 locations which cover most north part of Sanjiang Plain, including main rivers and agricultural drainages. Their positions are similar to that in 2007. In June 2008, five water samples near Sanjiang Experimental Station are to be collected. Care should be taken so as to collect samples adequately representative of respective river water flows. The information of ground water tables in sampling sites is to be collected as far as possible.
 - 2) Ground water level observation: The ground water level in a depth range within 1.5m at six sites is to be measured about six times in Yalu River or Bielahong River catchment this year. The monitoring small holes are to be chose and dug by the effort of two sides. The holes are located in a "transect", which cover different geomorphic surfaces (different elevation). Ground water levels are to be measured using a tape measure a few minutes after digging when water level becomes almost stable.
 - 3) Seepage water collection: Seepage water samples are to be collected from the monitoring holes above mentioned after measurement of tables. Some important chemical analyses are carried out for such limited quantities of water; e.g., Fe^{2+} and dissolved total Fe, or else.
 - 4) Analyses and measurements: Items and their treatments should be as listed in Tab. 1.
 - 5) Aliquot of water samples are to be brought to Japan for their chemical analyses.

2. General management and co-ordination of works

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

3. Data transformation:

EXECUTOR should send all data of chemical analyses and measurements in these 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	Treat Method	Analysis
1	pH	electrode method	Field analysis
2	EC	electrode method	Field analysis
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 ₄ , 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	HCO ₃ ⁻	no filtration	Field analysis
15	Fluorescence spectra	filtration	Frozen
16	Size exclusion chromatogram	filtration	Frozen
17	Stable Isotope Ratio of Fe in water	filtration	ambient temperature
18	Stable Isotope Ratio of Water (Oxygen, Hydrogen)	no filtration	ambient temperature

Calculation of "The Joint Research on Biogeochemical Cycling of Iron in Sanjiang Plain for 2008"

Category		Unit Price	Cost in Japanese Yen
Salary		¥ 2,000/person/day x 45 days x 2 people	¥180,000
Materials		¥100,000 for sample bottles and ¥240,000 chemical reagent	¥340,000
Analyses		¥15,000/sample x 45 samples+¥5,000/sample x 30 samples	¥ 825,000
Field trip	Rent for transportation (jeep)	¥ 30,000/day x 18days	¥ 540,000
	Wage for sampling	¥ 2850/person/day x 25days x4people	¥ 285,000
Total			¥ 2,170,000

The above cost is paid in Japanese Yen.

Document
on the cost of work
According to the Contract between NEIGAE-CAS and RIHN for
2008

Project title: "The Joint Research on Biogeochemical Cycling of Iron in Sanjiang Plain for 2008".

We, undersigned Prof. Akihiro Kinda, on behalf of the Inter-University Research Institute Corporation, National Institute for Humanities, hereinafter to be called CUSTOMER, on the one side, and Prof. Zhang, Bai on behalf of Northeast Institute of Geography and Agricultural Ecology, Chinese Academy of Science, hereinafter to be called EXECUTOR, on the other side, concluded the agreement about the cost on the above mentioned research in sum in Japanese Yen ¥ 2,170,000 (Two millions, one hundred and seventy thousand Japanese Yen).

This Document is the basis for the calculations and payments between CUSTOMER and EXECUTOR.

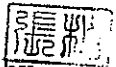
CUSTOMER

Prof. Akihiro Kinda
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)

Zhang Bai


12, 06, 2008

10, 06, 2008

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Chinese Academy of Sciences
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10.06.2008

INVOICE

Customer

Name: Research Institute for Humanity and Nature (RIHN)
Address: 457-4 Motoyama, Kamigamo, Kita-ku, Kyoto 603-8047
Phone: +81-75-707-2320
Fax: +81-75-707-2508

Total: Japanese Yen ¥ 1,736,000 (One millions, seven hundreds and thirty six thousands Japanese Yen).

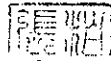
Description: Payment for the contract exchanged between Research Institute for Humanity and Nature and Northeast Institute of Geography and Agricultural Ecology, Chinese Academy of Science for "The Research on Biogeochemical Role of Sanjiang Plain for 2008". This is the payment of 80 % of total price of Japanese Yen ¥2,170,000. The rest of 20 % (Japanese Yen ¥ 434,000) will be billed to RHIN after RHIN receive the Final Report in March 2009.

Please transfer the payment to the following bank account of Northeast Institute of Geography and Agriculture Ecology, Chinese Academy of Sciences.

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

Executor
Zhang, Bai

Zhang Bai



Northeast Institute of Geography and Agriculture Ecology,
Chinese Academy of Sciences
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Price List

To: Research Institute for Humanity and Nature

Total : ¥ 2,170,000

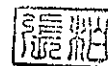
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Total			¥ 2,170,000

Issued by

Name: Zhang, Bai

Signature

Zhang Bai



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Quotation

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Total			¥ 2,170,000

Issued by

Name: Zhang, Bai

Signature

Zhang Bai

Address:

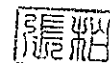
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Price Estimate

To: Research Institute for Humanity and Nature

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Name: Zhang, Bai

Signature



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