

## **Human disturbances on land-surface in the North East Asia and the impacts on ocean ecosystem**

Date: 22-24 March 2005

Venue: PALULU Plaza KYOTO

676-1 Higashi Shionokoji-cho, Shimogyo-ku, Kyoto 600-8216 JAPAN

Organizers: Assoc. Prof. Shigeko HARUYAMA (The University of Tokyo)

Assoc. Prof. Hideki NARITA (Research Institute for Humanity and Nature)

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Graduate School of Frontier Sciences, The University of Tokyo

Research Institute for Humanity and Nature

The Institute of Low Temperature Science, Hokkaido University

Conference Language: English (Translation from Russian/Chinese to English is available)

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Conference Objectives:

Land-ocean linkage by material transport through rivers is now believed to play a key role for the growth of fish populations in the coastal area. People concerned with fishery and/or environmental conservation begin to plant trees on the areas around the upstream of rivers in order to create the forest so-called as "Uotsuki-Rin" and improve the condition for fish growth in the coastal areas. However, it has not yet been well understood to what extent the material discharged from rivers affect the marine ecosystem, how much and what kinds of materials are exported under various conditions of land surfaces and how far the terrestrial materials affect the off-shore marine ecosystem. Therefore, it is very important to clarify the real relationship between land conditions and marine ecosystem and to predict the changes in land-use by human beings for precise assessments of future changes in marine biological productivities in the ocean. This information will be helpful not only for the people concerned with the

“Uotsuki-Rin” but also for most of the people consuming the sea product. In this context, the Amur River basin and the Sea of Okhotsk are the most typical and biggest examples in the world.

This international conference deals with the following topics and discuss how we reach the goal of AMur-Okhotsk REsearch project <AMORE> which assesses the human impacts in the Amur River basin on the marine ecology in the Sea of Okhotsk and the northern North Pacific. The conference provides various problems in concerning the land-ocean linkage occurring in the Amur river basin and the Sea of Okhotsk, and it will be followed by practical discussion for the start of AMORE.

Topics:

- Physical oceanographic conditions in the Sea of Okhotsk and the northern North Pacific
- Geochemical and biological conditions in the Sea of Okhotsk and the northern North Pacific
- Transport of biogeochemical materials from the Amur River to the Sea of Okhotsk
- Biogeochemical transport from terrestrial ecosystem to the Amur River
- Background of the anthropogenic impacts in the Amur River basin
- Spatial and historical monitoring of land-use changes in the Amur River basin
- Estimation of atmospheric transports of terrestrial material
- Natural variability of the hydro-meteorological and hydro-chemical conditions in the Amur River basin
- Modeling of biomass production in the Sea of Okhotsk and northern North Pacific

Organizing Committee:

Chairmen: Assoc. Prof. Shigeko HARUYAMA, GSFS-UT

Assoc. Prof. Hideki NARITA, Leader of AMORE, RIHN

Secretary General: Assoc. Prof. Takayuki SHIRAIWA, ILTS-HU

Members: Prof. Masaaki WAKATSUCHI, ILTS-HU

Assoc. Prof. Takeshi NAKATSUKA, ILTS-HU

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Assoc. Prof. Hideaki SHIBATA, FSCNB-HU

Assoc. Prof. Hiroaki KAKIZAWA, Dept. Agr., HU

Assoc. Prof. Yoshihiro TACHIBANA, Tokai Univ.

Prof. Hiroyuki MATSUDA, Yokohama National Univ.

Academician Valentine SERGIENKO, FEBRAS  
Academician Peter Ya. BAKLANOV, PIG-FEBRAS  
Prof. Boris A. VORONOV, IWEP-FEBRAS  
Dr. Yuri N. VOLKOV, FEHRI  
Prof. ZHANG Bai, NEIGAE-CAS  
Prof. Shi FUCHEN, Nankai University  
Prof. ZHOU Likai, IAE-CAS

< Program >

March 22

09:00-09:10      Opening Remarks      Hideki NARITA (RIHN)

09:10-12:20      **Session 1**      Chairman: T. NAKATSUKA (ILTS)

09:10-09:40

**AMUR OKHOTSK PROJECT- Summary of 2004 Activities and  
Research Plan in 2005**

Takayuki SHIRAIWA (ILTS) and Hideki NARITA (RIHN)

09:40-10:30

**Amur River Basin: Regional and Global Importance**

Oleg SHCHEKA (FEBRAS)

10:30-11:20

**The Problems of GIS Creation :Support for Amur-Okhotsk Project**

P.Ya.BAKLANOV, V.V.ERMOSHIN, S.S.GANZEY (PIG, RAS)

11:20-12:10

**Biogeochemical Transport of Iron from Terrestrial Ecosystems in the  
Three Rivers Plain of Northeast China to Nearby Waters: Research  
Proposal**

ZHOU Likai, CHEN Xin and CHEN Lijun (IAE, CAS)

12:10-13:20      Lunch

13:20-15:20      **Session 2**      Chairman: H. NARITA (RIHN)

13:20-14:10

**Circulation and Heat/Salt Transport in the Sea of Okhotsk and Its  
Relation to Sea Ice**

Kay. I. OHSHIMA (ILTS)

14:10-15:00

**Water Temperature and Salinity in the North-West Part of The Okhotsk Sea during Normal and Extreme Amur River Discharge**

N. A. RYKOV (FERHRI)

15:00-15:20

**Water Transport Through the Nevelskogo Strait (northern part of the Tartar Strait)**

M. A. DANCHENKOV and N.A. RYKOV (FERHRI)

15:20-15:40 Coffee Break

15:40-18:10 **Session 3** Chairman: Kay I. OHSHIMA (ILTS)

15:40-16:30

**Biological productivity and material transport in the Sea of Okhotsk**

Takeshi NAKATSUKA (ILTS)

16:30-17:20

**A Lower Trophic Ecosystem Model of Okhotsk Sea Including Iron Effect**

Michio KISHI, Yukiko ONO and Takeshi OKUNISHI (Hokkaido Univ.)

17:20-18:10

**Modeling hydrology and material transport from Amur River basin to the Sea of Okhotsk (tentative)**

Yoshihiro TACHIBANA (Tokai Univ.)

19:00-21:00 Banquet

March 23

09:00-11:50 **Session 4** Chairman: H. SHIBATA (Hokkaido Univ.)

09:00-09:50

**Natural Factors Determining Terrigenous and Chemical Flux in the Amur River**

Alexei MAKHINOV (IWEP, RAS)

09:50-10:40

**Transport of biogeochemical materials from the Amur River to the Sea of Okhotsk**

Seiya NAGAO (Hokkaido Univ.)

10:40-11:30

**Amur Hydrochemical Regime in Winter**

Vladimir SHESTERKIN (IWEP, RAS)

11:30-11:50

**Biogenic Substances in Mountain Stream Water in the Lower Amur**

Vladimir SHESTERKIN (IWEP, RAS)

11:50-13:00 Lunch

13:00-14:40

**Session 5**

Chairman: S. NAGAO (Hokkaido Univ.)

13:00-13:50

**Analysis of the Water Quality Change of Songhua River during the Last Few Years**

SHI Fuchen (Nankai Univ.)

13:50-14:40

**Processes of Iron Transport from Terrestrial Ecosystem to River**

Hideaki SHIBATA (Hokkaido Univ.)

14:40-15:10

**Aerial Transport of Dust and Iron: Observation and Analyses**

T. SHIRAIWA (ILTS), M. UEMATSU (Tokyo Univ.) and S. MATOBA (ILTS)

15:10-15:30 Coffee Break

15:30-18:50

**Session 6**

Chairman: T. SHIRAIWA (ILTS)

15:30-16:20

**Land Cover Change in Heilongjian Farm Group Company of China**

ZHANG Bai, LI Jianping and LI Fang (NIGAE, CAS)

16:20-17:10

**Land Cover and Human Impact of the River Basin**

Shigeko HARUYAMA (Tokyo Univ.)

17:10-18:00

**Land-use and Land-cover Changes in the Trans-boundary Territories Between South of the Russian Far East and North-East China (Amur River Basin)**

N.V.MISHINA and S. GANZEY (PIGRAS)

18:00-18:50

**Underlying Causes of Land Use Change and Degradation of Resources in the Amur River Basin**

Hiroaki KAKIZAWA (Hokkaido Univ.)

March 24

09:00-12:00 Discussion Chairman: T. SHIRAIWA (ILTS)

12:00-12:10 Closing Remarks Hideki NARITA (RIHN)

12:10-13:30 Lunch

13:30-16:30 Group meetings

End

Key dates:

28 February 2005 Deadline of abstract submission

21 March 2005 Arrival of overseas participants

22 March 2005 Opening / Sessions

23 March 2005 Sessions

24 March 2005 Follow-up meeting

24 March 2005 Deadline of paper submission