

RIHN 4<sup>th</sup> International Symposium

The Dilemma of Boundaries:  
Toward a New Concept of Catchment

Oct. 20 – 22, 2009

Kyoto, Japan

Organized by

Research Institute for Humanity and Nature (RIHN)

National Institutes for the Humanities (NIHU)  
Inter-University Research Institute Corporation



## Symposium Outline

Though water circulates continuously and seamlessly on Earth, various research areas such as oceanography, surface hydrology, subsurface hydrology, climatology and glaciology are usually undertaken separately. However, recent findings related to interactions of water in land, oceans, and the atmosphere encourage researchers to more comprehensively understand the behavior of water through collaborative works that go beyond the boundaries of each discipline.

Water is also separated by numerous human-made boundaries such as national borders, vertical administrative systems and so on. When these human created boundaries disrupt natural water circulation, water-related environmental problems can be invoked, and/or it gets very difficult to cope with these issues. Thus, mainly in the social science, boundaries that are drawn artificially in natural water circulation are important topics that need to be reconsidered.

In the symposium, we will especially focus on two boundaries; one is that between surface water and ground water; the other is that between drainage area and ocean water. The symposium will hold 4 sessions on these two boundaries: (1) Ignored linkages between surface and sub-surface environments, (2) Trans-boundary linkage of land and ocean, (3) Impact of human-made boundaries, and (4) Challenges for new management going beyond boundaries.

In sessions (1) and (2), we will consider the importance of interactions between land water and ocean water, and between surface water and groundwater based on findings from the natural sciences. Next, in sessions (3) and (4), we consider the impact of human-made boundaries, mainly based on findings from the social science. Finally, we will also hold a general discussion in which we will try to redraw the traditional 'catchment' concept into a new one that might overcome the disadvantages caused by artificial boundaries.

# PROGRAM

Tuesday Oct 20

## Opening Session

Chair: Takayuki Shiraiwa(RIHN): Tentative

9:00-9:10 Opening Remarks

Narifumi Tachimoto (RIHN, Director-General)

9:10-9:20 Objectives of the Symposium

Makoto Taniguchi (RIHN)

9:20-10:00 Keynote Address

Title : Codification of International Law for Transboundary Aquifers by the United Nations"

Chusei Yamada (Special Assistant to the Minister for Foreign Affairs of Japan / Former Member of UN International Law Commission)

10:00-10:10 Coffee break

## Session 1 Ignored Linkage between Surface and Sub-surface Environments

Chair: Takeo Onishi (RIHN): Tentative

10:10-10:50 Linkages of boundaries between surface/subsurface and land /ocean for better management of environment in Asia

Makoto Taniguchi (RIHN)

10:50-11:30 Isotope approach for elucidating the linkage between surface and subsurface aquatic environments

Takahiro Hosono (Kumamoto University)

11:30-12:10 A Model to Assess Groundwater Inflows to Lakes via a Rn-222 Mass Balance

William Burnett and Natasha Dimova (Florida State University, USA)

12:10-14:00 Lunch

## Session 2      Transboundary Linkage of Land and Ocean

Chair:                Makoto Taniguchi (RIHN): Tentative

14:00-14:40        "Giant" Fish-Breeding Forest: A new environmental system linking continental watershed with open water

Takayuki Shiraiwa (RIHN)

14:40-15:20        Numerical Simulation of Dissolved Iron Production and Transport in the Amur river and the Sea of Okhotsk

Takeo Onishi (RIHN) and Fumio Mitsudera (Hokkaido University)

15:20-16:00        Basic Concept of a Newly Established Integrated Study on the Linkage of Forest-Sato-Sea Collaborating with a Social Movement Flagged “The Sea is Longing for the Forest” and Its Actual Case Research Conducted in Ariake Bay-Chikugo River System, Japan

Masaru Tanaka (Kyoto University)

16:00-16:10        Coffee break

16:10-16:50        Coastal changes in the Anthropocene: The perspective of the IAEA - Marine Environment Laboratories

Jan Scholten (IAEA-Marine Environmental Laboratories)

16:50-17:30        Transportation of Marine-derived Nutrients (MDN) onto Land by Anadromous Fish: A Case Study of Pacific salmon in Russian Far East

Takeshi Murota (Doshisha University)

17:30-18:00        Discussion

18:10-                Buses leave for Grand Prince Hotel from RIHN Entrance

18:30                Reception at Grand Prince Hotel Kyoto

## Wednesday Oct 21

### Session 3      Impacts of Human-made Boundaries

Chair:            Takayuki Shiraiwa (RIHN): Tentative

10:00-10:40    National boundaries and the fragmentation of governance systems: Amur-Okhotsk ecosystem from the legal, political perspective

Yasunori Hanamatsu (RIHN)

10:40-11:20    The History of "Uotsukirin"(Fish-Breeding Forest) in Japan

Hiroshi Wakana (Muroran University of Technology)

11:20-11:30    Coffee break

11:30-12:10    Integrating Groundwater Boundary Matters into Catchment Management

William Todd Jarvis (Oregon State University)

12:10-12:50    A Boundary between Surface and Ground Water in Japanese Legal System

-Its Consequence and Remedy-

Takahiro Endo (RIHN)

12:50-14:00    Lunch

### Session 4      Challenge for New Management beyond the Boundaries

Chair:            Takahiro Endo (RIHN): Tentative

14:00-14:40    HELCOM Baltic Sea Action Plan – Ecosystem based approach to manage a semi-enclosed European sea area with nine riparian countries

Juka – Markku Leppänen (Finish Environmental Institute)

14:40-15:20    Combining Activities of Sato-umi and Sato-yama in Japan: Towards a New Type of Integrated Coastal and Watershed Management

Osamu Matsuda (Hiroshima University)

15:20-15:30    Coffee break

- 15:30-16:10      Aquifers know no boundaries... but farmers do ! So, who should care?!
- Shammy Puri (UNESCO)
- 16:10-16:50      The trans-boundary management of groundwater resources in the Kumamoto area,  
Japan — Sustainable management of groundwater resources for over 700,000  
residents —
- Jun Shimada (Kumamoto University)
- 16:50-17:20      Discussion

## Thursday Oct 22

### Session 5      Discussion and Conclusion

Chair:              Makoto Taniguchi (RIHN)

9:00-9:15          Summary of session 1

Rapporteur: Takanori Nakano (RIHN)

9:15-9:30          Summary of session 2

Rapporteur: Takeshi Nakatsuka (Nagoya University)

9:30-9:45          Summary of session 3

Rapporteur: Jumpei Kubota (RIHN)

9:45-10:00        Summary of session 4

Rapporteur: Osamu Ieda (Hokkaido University)

10:00-10:10        Agenda Setting

Takeo Onishi (RIHN)

10:10-10:20        Coffee break

10:20-11:20        Roundtable discussion

11:20-11:30        Symposium closing

Tomoya Akimichi (RIHN, Deputy Director-General): Tentative

11:30-12:30        Business meeting

12:30- Lunch