

**【 INDAS】 The 8<sup>th</sup> INDAS International Conference  
Toward Sustainable Development of India and South Asia**

Date: December 17 (Sat) - 18 (Sun), 2016

Venue: Large Conference Room, 3F, Inamori Foundation Hall, Kyoto University

The 8<sup>th</sup> INDAS international conference to be organized in December 2016 takes up critical issues on sustainable development in South Asia.

The Integrated Area Studies on South Asia (INDAS-South Asia), a program sponsored by the National Institute of Humanities (NIHU), Japan, is now renewed for 6 more years till March 2022 by succeeding the program of the Contemporary India Area Studies (INDAS) conducted between FY 2010-15. The new program is refreshed under the overall theme of “Structural Transformation in Globalizing South Asia: Integrated Area Studies for Sustainable, Inclusive and Peaceful Development” and many researches are now under way.

To facilitate activities in the new program, three major international conferences are scheduled in coming years. The first conference to be held in this December takes up issues related to “sustainable development” by gathering eminent scholars working on the topic.

In South Asia, technological innovations in agriculture, including the Green Revolutions in rice and wheat, largely overcame the food problem by the mid-1990s and the economy entered into a new phase, in which farmers’ low and stagnated income becomes one of the major issues due to the disparity in the growth rates between agriculture and non-agriculture. It is quite natural that migration from rural to urban areas, including international migration, has been accelerated especially among younger generations. The saturated per capita consumption of food is the major cause behind such a phenomenon. It should be noted that such a new situation is recently observed even in the traditionally most backward areas in the subcontinent like Bangladesh.

However, the majority of people still live in rural areas. Though the linkage between rural and urban lives has become closer, their livelihood continues to depend on agriculture and allied sectors. While Indian agriculture, especially cereal production, becomes unprofitable due to the escalating labour wages under low agricultural prices, a series of serious resource and environmental issues have come to the surface. First, the key resources for sustaining agricultural production such as land and water become increasingly scarce or degraded due to the intensification of irrigated agriculture, increased competition with (or influence from) non-agricultural sectors, etc. Second, the emerging problem of labour scarcity, coupled with the breakdown of the traditional rural social system, makes the maintenance of tank and other rural common-pool resources more difficult. Many of such problems need to be clarified and attended when the agricultural sector in the region is expected to maintain the growing population in coming decades.

If we locate these problems in a wider context of South Asia, our tasks may be formulated as follows.

The major part of South Asia belongs to semi-arid climate. Stress in water has been a major issue for agricultural development since the early 20<sup>th</sup> century in various parts of the subcontinent. The Green

Revolutions in rice and wheat had not been realized if groundwater were not tapped efficiently by electricity and other fossil energy. We cannot find any other areas in the world where agriculture depends on groundwater resources to the extent South Asia does. Furthermore, the power subsidy policy for agriculture in different parts of India has accelerated its utilization and led to overexploitation of groundwater to risk the sustainability of food production. We think, therefore, that the food-water-energy nexus is one of the most important issues for the future of India and other South Asian countries. The conference sets this issue as the most important one.

The conference has three sessions in addition to general discussion. The outline of the three sessions are as follow.

The first session investigates the features of the long-term development processes of population, land, and agriculture since the 19<sup>th</sup> century by focusing upon eastern and southern parts of India. With wide regional variance across the subcontinent, India has shown rapid increase of population supported by land and agricultural development in the past. Eastern and southern parts have been the two major areas that saw typical developments in India. During their historical processes each experienced similar or differentiated phases of developments, overexploitations, crisis, adjustments, and further developments that have significantly affected overall sustainability. The long-term investigations on these two areas by historians compose fundamental steps in considering issues of sustainability of today.

The second session focuses on the food-water-energy nexus, the central theme of the conference. Three of the papers will focus on Punjab. It is because the issue of food-water-energy nexus is observed most typically there. Here we intend to deal with the issue in an as much as wider context of the environment, economy and society, including salient features of agrarian structure and its recent changes, labour market movement including international migration, power sector policy and farmers' reaction to it, etc. Another paper will discuss about nitrogen cycle and environmental problem, in which regional disparity in the input intensity of chemical fertilizers as well as changes in food consumption habit will be illustrated.

The third session focuses on the management issue of water, the key resource for sustainable development in South Asia. Among the three sources of water for irrigation including canal, tank, and groundwater, we will mainly focus on tank and groundwater. The first two papers deal with tank and groundwater in India respectively by the two most prominent experts in each field, covering the past, present and the future. Lastly, a special paper is presented on diversified agricultural development paths in Bihar, West Bengal and Bangladesh under different agro-ecological conditions, technological development in agriculture, and government policies, etc.

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**【 Program】**

[Day 1: Dec. 17 (Sat)]

9:00-9:30 Registration

9:30-9:40 Opening Addresses: Koichi Fujita (Convener, INDAS-South Asia)

**Session 1: Long-term Changes in Population, Land, and Agriculture in South Asia (9:40-12:25)**

Chair: Kohei Wakimura (Osaka City University)

1. Tsukasa Mizushima (University of Tokyo) (35 min)

“Agricultural Development and Demographic Change in Tamil Nadu since the late 18th Century”

2. Arun Bandopadhyay (Institute of Development Studies Kolkata) (35 min)

“Ecology, Demography and Agrarian Change in Bengal, c.1770-1900”

Tea Break (10:50-11:05 15 min)

3. Comments by Akio Tanabe (University of Tokyo) (10 min)

4. Comments by Shinkichi Taniguchi (Tokyo University of Foreign Studies) (10 min)

5. Discussion (60 min)

12:25-13:25 Lunch

**Session 2: Food-Water-Energy Nexus in India (13:25-17:20)**

Chair: Hidenori Okahashi (Hiroshima University)

1. Takahiro Sato (Kyoto University) (30 min)

“Overview of Food-Water-Energy Nexus in India: With Special Reference to Punjab and Tamil Nadu”

2. Daizo Sugimoto (Meijo University) (30 min)

“Groundwater Depletion, Outmigration, and Agrarian Change in Punjab”

3. Atsushi Fukumi<sup>1</sup>, Jagannath Mallic<sup>1</sup>, Manabu Furuta<sup>2</sup> (<sup>1</sup>University of Hyogo, <sup>2</sup>Kyoto University) (30 min)

“Power Tariff Policy and Manufacturing Sector Productivity in India”

4. Ippei Sekido (University of Tokyo) (30 min)

“Sustainability of Food Production in India from the Viewpoint of Nitrogen Flow”

Tea Break (15:25-15:40 15 min)

5. Comments by Kaoru Sugihara (Research Institute of Humanity and Nature) (10 min)
6. Comments by Kamal Vatta (Center for International Projects Trust) (10 min)
7. Comments by Hisaya Oda (Ritsumeikan University) (10 min)
8. Comments by Kuppannan Palanisami (International Water Management Institute, Hyderabad) (10min)
9. Discussion (60 min)

18:00-20:00 Reception

[Day 2: Dec. 18 (Sun)]

**Session 3: Water Management Issues in India and South Asia (9:30-13:00)**

Chair: Arun Bandopadhyay (Institute of Development Studies Kolkata)

1. Kuppannan Palanisami (International Water Management Institute, Hyderabad) (35 min)

“Sustaining Tank Irrigation in South India through Time Tested Options”

2. Tushaar Shah (International Water Management Institute, Anand) (35 min)

“Farm Power Policies and Working of Groundwater Markets: Contrasting Gujarat with West Bengal”

3. Koichi Fujita (Kyoto University) (35 min)

“Agricultural Stagnation in Bihar Revisited: Agro-ecological Conditions, Groundwater Irrigation, and Government Policies”

Tea Break (11:15-11:30 15 min)

4. Comments by Yasuyuki Kono (Kyoto University) (10 min)
5. Comments by Akihiko Ohno (Aoyamagakuin University) (10 min)
6. Comments by Tushaar Shah (International Water Management Institute, Anand) (10 min)
7. Discussion (60 min)

**Session 4: General Discussion (13:00-14:00)**

14:00-15:00 Lunch