

# NATIONAL REPORT OF IGBP - JAPAN FOR 1992

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## 1. Introduction

Since the last national report on IGBP - Japan by Yoshino (IGBP Report No. 22, 73-74), the studies and related activities have been progressing satisfactorily. The Committee organized an international meeting for assessment of the first-year results on 4-5 February, 1992, in Tokyo. The proceedings of this meeting were included in Japan - IGBP Report No. 2, 119 pages, published in March, 1992. In the present report, the activities after the meeting in February, 1992, are summarized.

## 2. Organization of the Committee

The Japan National Committee for IGBP is one of the professional committees (Senmon linkai) belonging to the Committee on International Scientific Cooperation (Kokusai-Taio linkai) of the Science Council of Japan:

- (1) IGBP-Liaison and Regulation Subcommittee (IGBP Renraku-Chosei Sho-linkai),
- (2) Japan National Committee for Joint Global Ocean Flux Study (JGOFS Sho-linkai),
- (3) Japan National Committee for the International Global Atmospheric Chemistry Project (IGAC Sho-linkai),
- (4) Japan National Committee for Global Change and Terrestrial Ecosystems (GCTE Sho-linkai), and
- (5) IGBP-Land-use/Land-cover Change Subcommittee (IGBP Tochiryo Sho-linkai).

Groups corresponding to BAHC, LOICZ, DIS, GAIM and PAGES are now preparing to establish formal sub-committees, respectively.

A Japan National Committee for Human Dimensions of Global Environmental Change has been also established in the Science Council of Japan.

## 3. Symposia, Conferences and Meetings related to IGBP

As mentioned above, the first-year results of studies related to IGBP were discussed at the international meeting on 4-5 February, 1992. This meeting was attended by about 300 participants. The distribution of the participants is of importance to consider how interest in IGBP is distributed among the people in Japan and East Asia. Namely, members of the Science Council of Japan were 10; members of the related National Committees of the Science Council of Japan, 34; professors and researchers, 78 (from 33 Universities); scientists and officers, 96 (from 12 Ministries and 16 National Research Institutes); other researchers and members, 37 (from 29 private companies); organizing committee members, 32; and 15 foreign participants.

An "International Symposium on Global Change (IGBP)" was held at Waseda University in Tokyo on 27-29 March, 1992. Presentations of 101 papers from 16 countries and territories in Asia, Europe, North and Central Americas, and Oceania, were given on the themes of (a) source and sink of greenhouse gases, (b) role of ocean in global change, (c) effects of global change on terrestrial ecosystem and (d) palaeoenvironments in Monsoon Asia.

On 7-8 October, 1992, an International Symposium on "Rural Land-use in the Asian Region" was held in Tokyo, which concerns mainly to the land-use/land-cover change in IGBP and HDP. Details will be reported elsewhere by the chairperson of the National Committee on this subject.

On 9 October 1992, a Symposium on "Active Role of Agriculture and Forestry for Recover and Conservation of Global Environment" was organized. Five lectures were given.

On 30 October 1992, a Symposium on "How should Japanese Scientists cope with the Global Environmental Problems?" was held. Five lectures were given from the standpoints of (a) a politician, (b) the economic world, (c) a governmental official, (d) non-governmental organizations and (e) an economist.

Further, on 11 December 1992, a symposium on "Tropical Environment - Its Conservation and Sustainable Use - : Towards HDP" will be held. There are four lectures planned:

- (a) Main types of tropical geoecosystem and man-made change in Northeast Brazil,
- (b) Development, farmers and rural settlements in the Bengal Delta as ecohistory,
- (c) Forest resources of the multi-complex-societies - an example of Sarawak, and
- (d) Soil environment in the tropics.

Many other symposia have been organized at a level of single or joint learned societies. For example: Association of Japanese Geographers and Tohoku Geographical Society organized jointly a "Symposium on Humid Tropics Environment" at the Tohoku University, Sendai on 10 October, 1992. Seven lectures were presented and actively participated by more than 100 members with comments and discussions.

#### **4. IGBP-Related Activities in Japan**

The Ministry of Education, Science and Culture promotes the following fields of sciences related to IGBP:

- (1) New-Programme for promoting the large-size studies on global environmental change in the Asia and Pacific regions,
- (2) International cooperation studies on the Arctic zone global environment,
- (3) Observation in Antarctica,
- (4) HEIFE(Sino-Japanese Cooperative Program on Atmosphere-Land Surface Processes in the Heihe River Basin) project by China, Beijing and Japan, and
- (5) IGBP itself and WCRP.

Support for scientific researchers has been given particularly for:

- (1) studies on man-environment systems and their control,
- (2) analysis on global environment by using satellite data, and
- (3) geographical information system (GIS) on global change by modernization etc.

The Ministry of Agriculture, Forestry and Fishery also sets the projects for global change such as "Developing control techniques utilizing the agricultural, forestry and fishery ecosystems as factors of global environment change". This project contains themes on dynamics of CO<sub>2</sub>; control method for CH<sub>4</sub> and N<sub>2</sub>O circulation; and dynamics of agricultural, forestry and fishery ecosystems etc.

The Research Group on the Energy Consumption in Asia and the Global Environment, (4th Policy-oriented Research Group in the National Institute of Science and Technology Policy (NISTEP) in Science and Technology Agency, Japan), published recently a result on analysis of structure of energy consumption and dynamics of emission of atmospheric species related to the global environmental change (SO<sub>x</sub>, NO<sub>x</sub>, and CO<sub>2</sub>) in Asia (NISTEP Report No. 21, Nov. 1991, 241p., Its Data Volume 157p. in Japanese). This contributes to the IGBP and HDP analysis in our country.

The Environmental Agency in Japan summarized the results of studies supported for fiscal year 1991. They will be reported elsewhere in detail, but the fields are: ozone layer problems, global warming, acid rain, marine pollution, tropical forests and other subjects.

As for the international cooperation, the Japan National Committee for IGBP has sent participants for the IGBP-related workshops, conferences, symposia etc. held in Asia. They are:

- (1) the Asian Workshop in New Delhi, India, 11-15 February, 1991, (Global Change IGBP Report No. 18:2),
- (2) IGBP Asian Planning Meeting in Singapore, 12-14 December, 1991 (Global Change News Letter, No. 9, 8-9), and
- (3) the Start Regional Meeting for Southeast Asia, in Chiang Mai, Thailand, 13-17 January, 1992 (Global Change IGBP Report No. 22).

We are planning many international cooperations in organizing such activities. Among them, one of the important is a conference on the Sciences for the Pacific, held in Okinawa on 27 June to 3 July, 1993. A session is prepared for IGBP in Japan: Its Development in Relation to the Research on the Global Environmental Problem. In addition, a session on "Impacts on Coastal Zone and Islands in the Pacific" will be organized by Prof. L. G. Eldredge, Hawaii University; Prof. K. Ooya, Ryukyu University; and Prof. N. Yonekura, University of Tokyo (Fax: 81-3-5684-0518).

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