

THAILAND AND GLOBAL CHANGE RESEARCH

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Thailand is the first country in southeast Asia, that participated in the IGBP, forming a National Committee in 1989. It was only three years after IGBP was established by ICSU. There are many reasons to gain with this interesting and important project of ICSU. The first one is IGBP is an interdisciplinary research initiative and international. The second reason is that in Thailand during the last decade there have been increasing problems of drought in different parts of the country, and also increasing frequencies of natural disasters such as the severe storms and big floods in the southern part of Thailand in 1989, 1990 and 1991. These phenomena cause deep concerns among the people at all levels.

The mass media in Thailand have regularly informed the public on the greenhouse effect and also the decreasing of the ozone layer in the stratosphere. The people also have learnt that human activities such as the deforestation, other damaging land-use practices and pollution of the environment are the major causes of global change.

They are also eager to know how can we predict or forecast the situation in advance in order to prevent the worse situations. It is also understood that the co-operation and collaboration among the countries in the regions and in the world at large are important and necessary.

Therefore, Thailand, although with only a limited number of capable scientists on the global change, and with limited financial resources, has determined to stand up and to join with the international scientific community in studying global change problems.

The Global Change Studies in Thailand According to the UNEP Report

In a draft report which was prepared by the United Nations Environmental Programme (UNEP) for the Intergovernmental Panel on Climate Change (IPCC) in 1992, stated that (1) Thailand has begun a national study on emissions, emissions control measures and alternative energy scenarios and international interaction, (2) Completed Cooperative study with UNEP on potential Socioeconomic effects of climate change in Indonesia, Malaysia and Thailand, (3) Participant country in proposed UNDP/GEF project on least cost emissions reduction and (4) Assistance from the Asian Development Bank is expected for a detailed impacts study.

National Committee Setup for IGBP

In order to combine the limited resources in Thailand in dealing with the Global Change issue in a systematic way of thinking, The Ministry of Science Technology and Energy* appointed a National Committee for IGBP in 1989. This committee consisted of 8 members. It was later expanded to sixteen members in 1992. This enlargement was the result from the IGBP START meeting in Chiang Mai on January 13-17, 1992. The members are the mixture of the scientists from the natural science and also the social science. The names and addresses of them are shown in Table 1.

A brief report on the activities of the Thailand IGBP National Committee during 1992 is shown in the following.

1) International Participation in IGBP.

1.1 Attending a symposium on Studies on IGBP-Japan Present status and Future

Place : Science Council of Japan
Date : 4-5 February 1992
Attended by : Chairman of the IGBP National Committee

The Chairman reported on "A progress report on the activities of Thailand National Co-ordinating Committee in 1991-1992.

1.2 JGOFS SSC 7 and the Continental Margin Studies Workshop

Place : Taipei, China, Taipei
Date : 19-24 Oct. 1992
Attended by : Associate Professor Dr. Gullaya Wattayakorn

* Science Technology and Environment, in 1992.

2) START regional meeting

In order to follow up the resolution of Chiang Mai meeting in January 1992, a working group committee was set up. There were two meetings.

2.1 The First Meeting of the Southeast Asian Regional Committee for START (SARCS)

Place : Jakarta, Indonesia
Date : 28-29 July 1992
Attended by : Chairman of the IGBP National Committee

There were six participants from ASEAN who participated in this meeting. Prof. Thomas Rosswall and Dr. Richard H. Moss represented IGBP and HDP respectively.

2.2 The Second Meeting of SARCS

Place : Kuala Lumpur, Malaysia
Date : 9-10 October, 1992
Attended by : Chairman of The IGBP National Committee

There were five participants from ASEAN in this meeting and Prof. Thomas Rosswall who represented the International START Secretariat.

Thailand's Global Change Projects that related to the IGBP Core Projects

Prior to joining the IGBP, in 1989, there were some studies in Thailand that can be classified as the Global Change research projects. The National Research Council of Thailand, together with the assistances from some research funding agencies from abroad such as UNEP, and others are the major financial supporters. The results from these studies are limited to the national or at the local level. However, they might be also as a regional information as well.

By the co-ordinating efforts of the IGBP National Committee through the support of the National Research Council it is expected that in 1994, at least related six core projects of IGBP such as shown in Table 2, will be participated by Thai scientists. The financial support for each subproject under the IGBP core projects are now being requesting from the National Research Council of Thailand for the 1994 budget.

However, one should understand that many other research activities which are related to global change are still going on. Examples of these studies are the atmospheric chemistry of certain greenhouse gases; the issue of eutrophication; sea level change; the monitoring of the coastal erosion; the study of the influences of ENSO; and the study of land use change, and so on.

The IGBP National Committee has tried to inform the scientific communities as well as the general public on the science of the global change and its possible impacts. For example, on October 28, 1992, in conjunction with the 18th Congress on Science and Technology of Thailand, there was a session on the Marine Science and the Global Climate Change. There were three selected speakers who spoke on (1) The interaction between land and ocean on the global climate change, (2) Influence of El-Niño on the fluctuation of global climate and (3) The United Nations Conference on Environment and Development in Rio de Janeiro. There was considerable interest in these subjects by the scientists who attended the session.

Table 1 Thailand National Committee for IGBP

No.	Name	Institution	Phone/Fax
1	Sabhasri, Sanga (Advisor)	Chairman NRCT Executive Board National Research Council, 196 Phaholyothin Road Bangken, Bangkok 10900	Phone: (662)5792284 Fax: (662)5613049 Telex: 82213 Narecou TH
2	Piyakarnchana, Twesukdi (Chairman)	Institute of Environmental Research Chulalongkorn University, Bangkok 10330	Phone: (662)2525929 (662)2514426-7 Fax: (662)2154804 (662)2525929
3	Vibulsreth, Surit	Deputy Secretary General National Research Council of Thailand, Bangkok 10900	Phone: (662)5790171 Fax: (662)5794761
4	Chankaew, Kasem	Faculty of Forestry Kasetsart University, Bangkok 10900	Phone: (662)5790171 Fax: (662)5794761

No.	Name	Institution	Phone/Fax
5	Thanasukarn, Prapasri	Research Project & Coordination Division National Research Council of Thailand, Chatuchak Bangkok 10900	Phone: (662)5792284 (662)5797581 Fax: (662)5613049 (662)5793402 Telex: 82213 Narecou TH
6	Patvivatsiri, Patipat	Studies and Research Division The Meteorological Department, 4353 Sukhumvit Road, Bangna Bangkok 10260	Phone: (662)3989875
7	Piamphongsant, Suphavit	Office of the National Environment Board Soi Prachasumpun 4, Rama 6 Road Bangkok 10400	Phone: (662)2797108-9 Ext: 175 Fax: (662)2790672 Telex: 20838 Minsten TH
8	Boonjawat, Jariya	Dept. of Biochemistry Faculty of Science Chulalongkorn University, Bangkok 10330	Phone: (662)2511952 Fax: (662)252-7847
9	Kreasuwun, Jiemjai	Dept. of Physics Faculty of Science Chiang Mai University, Chiang Mai 50001	Phone: (6653)221699 Ext: 3375/3366 Fax: (6653)222268
10	Wattayakorn, Gullaya	Dept. of Marine Science Faculty of Science Chulalongkorn University, Bangkok 10330	Phone: (662)251-1951 (662)251-6968 Fax: (662)252597
11	Boroomthanasat, Somsak	Coastal Resources Institute Prince of Songklaa University, P.O. Box 102 Hat Yai, Songklaa 90110	Phone: (6674)234113 (6674)235800-9 Ext: 2960 Fax: (6674)231376
12	Omakupt, Manu	Director Landuse Planning Division Land Development, Phaholyothin Road Bangkok 10900	Phone: (662)5794775 Fax: (662)5613049
13	Dowreang, Darasri	Chief of Data Analysis Sub-Division Remote Sensing Division National Research Council of Thailand, 196 Phaholyothin Road Bangkok 10900	Phone: (662)5790733 Fax: (662)2529924
14	Pongsapich, Amara	Director Institute of Social Research Chulalongkorn University, Bangkok-10330	Phone: (662)2150871-3 Fax: (662)2155523
15	Chineswasdi, Wandee (Secretary)	Research Project and Coordination Division National Research Council, 196 Phaholyothin Road Bangkok, Bangkok 10900	Phone: (662)5792284 Fax: (662)5613049 Telex: 82213 Narecou TH
16	Surarerks Vanpen	Professor Department of Geography Faculty of Social Science Chiang Mai University, Chiang Mai, 50002	Phone: (6653)221693 Ext: 3325 Fax: (6653)222763
17	Butthep, Chetphong (Assistant- Secretary)	Research Project and Coordination Division National Research Council 196 Phaholyothin Road Bangkok, Bangkok 10900	Phone: (662)5792284 Fax: (662)5613094 Telex: 82213 Narecou TH
18	Boonpragob, Kansri	Dept. of Biology, Faculty of Science Ramghamhaeng University, Bangkok 10240	Phone: (662)2461360 Fax: (662)3142035

Table 2 Thailand Participation Research Projects
which are related to the IGBP Core Projects

1) International Global Atmospheric Chemistry (IGAC)

1.1 Continuous Monitoring and Behaviours of Carbon dioxide and Methane in the Atmosphere of Bangkok

Project Leader/Institute

Associate Prof. Jariya Boonyawat:
Department of Biochemistry
Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand
Phone (662)2511952
Fax (662)2527847

2) Biospheric Aspects of the Hydrological Cycle (BAHC)

2.1 Effects of Ecological Changes on Surface Hydrology:

The upper Ping River watershed above Chiang Mai City.

Project Leader/Institution

Prof. Kasem ChanKaew
Faculty of Forestry Kasetsart University, Bangkok 10900, Thailand
Phone (662)579-0171
Fax (662)579-4761

3) Land Ocean Interactions in the Coastal Zone (LOICZ)

3.1 Eutrophication in the Gulf of Thailand

Project Leader/Institution

Prof. Twesukdi Piyakarnchana
The Institute of Environmental Research Chulalongkorn University, Bangkok 10330, Thailand
Phone (662)2514426-7
Fax (662)2525929

4) Global Ocean Euphotic Zone Study (GOEVS)

Project Leader/Institution

Assoc. Prof. Gullaya Wattayakorn.
Dept. of Marine Science, Faculty of Science Chulalongkorn University, Bangkok 10330
Phone (662)2511951
(662)25116968
Fax (662)2525971

5) Global Change and Terrestrial Ecosystems (GCTE)

5.1 Understanding Global Change in the Pacific Rim : El-Niño and Southern Ocean Oscillation as a Model.

Project Leader/Institution

Associate Prof. Kansri Boon Pragob
Department of Biology Faculty of Science,
Ramgham Haeng University, Bangkok 10240, Thailand

5.2. Research Project on CO₂ fixation of the tropical trees

Project Leader/Institution

Faculty of Forestry, Kasetsart University Paholyothin Road Chatuchak, Bangkok 10990

6) Past Global Changes

6.1 Quaternary Kinetic Changes in Thailand

Project Leader/Institution

Dr. Soomboon Jaraponsakul
Department of Geology Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand

Conclusion

Thailand believes that the problems of global change and its impacts could be tackled effectively through the strong cooperation among the member countries of IGBP. Thailand will strongly support, and if possible become a host country, for establishing the Regional Research Center for the Tropical Asian Monsoon Region (TAM). Through the cooperative effort of IGBP, the Thailand scientific community will benefit from the START activities such as training, workshops and symposia. It is hoped that Thailand will partially participate in the major core projects of IGBP in 1993, and if possible fully participate in 1994.