



Final Project Report for Asia Pacific Network for Global Change Research (APN) Project

Young Scientists Conference: APN 2003-07

Project Information



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Abstract

The START Young Scientists Conference on Global Change, the aims of which were to stimulate competition, encourage excellence, reward outstanding performance, and encourage the development of personal and institutional networks among young scientists from both developed and developing countries, was hosted by the Third World Academy of Sciences in Trieste, Italy from 16-19 November 2003.

The endeavor stemmed from the Earth System Science Partnership (ESSP) Open Science Conference on Global Change held in Amsterdam in July 2001, when the ESSP, comprising the IGBP, WCRP, IHDP and DIVERSITAS, asked START to organize a high-level international conference for young scientists (35 years old and younger). The event was co-sponsored by the Asia Pacific Network (APN), the Inter-American Institute for Global Change Research (IAI), the International Council for Science (ICSU), the Netherlands Ministry of Foreign Affairs (DGIS), and the National Science Foundation/US Climate Change Science Program (NSF/USCCSP).

The three-day conference provided the opportunity for over eighty young scientists, selected from over a thousand applicants, to make oral presentations, and exhibit related posters. It provided a forum for discussion, networking and collaboration. At the end of the conference awards were offered for best papers and posters. The main prize, known as the Crutzen Award was presented for best paper. Furthermore, one poster received the Best Poster Award, an additional three papers and three posters were conferred honorable mention.

The keynote presentations included, among others: Prof. Paul Crutzen, Nobel Laureate, and Sir John Houghton, former Director General of the UK Meteorological Office.

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The Asia Pacific Network (APN) awarded a grant of US\$70,000 to START (System for Analysis, Research and Training) for the Young Scientists Conference held in Trieste, Italy, on November 16-19, 2003.

Participants from the following APN countries were funded with this grant:

- Australia (2)
- China (6)
- Fiji Islands (1)
- India (6)
- Japan (2)
- New Zealand (1)
- Pakistan (1)
- Philippines (2)
- Thailand (1)

Introduction

The proposal to APN was submitted on behalf of START's regional networks in Southeast Asia, South Asia, Temperate East Asia, and Oceania to support the attendance of young scientists and selected senior scientists from the Asia-Pacific region to the START Young Scientists Conference on Global Change.

The objectives of the conference were:

- To encourage excellence in research and capacity building activities spearheaded by promising young scientists from developing countries to facilitate their development into roles of scientific leadership;
- To create a forum devoted to the contributions of young scientists to the international global change research community;
- To reward outstanding performance and recognize excellence in global change research conducted by young scientists from developing countries;
- To stimulate competition among today's leading young global change scientists; and
- To encourage the development of personal and institutional networks by facilitating interaction and possible collaboration between young scientists, and with more senior leaders in the field.

Throughout the proceedings of the conference as well as in follow-up communication, the anticipated objectives were successfully met.

An organizing committee comprising three young scientists, Kristy Ross of South Africa, Rita Pongracz of Hungary and Jasper Grosskurth of Holland, together with Professor Roland Fuchs and Amy Freise of START, planned the conference under the Chairmanship of Professor Peter Tyson.

Over one thousand applications were received from all over the world. The conference participants were selected based on scientific excellence, with due regard to a balanced program representative of the sponsoring programmes and regions. Eighty-two participants were chosen through a process of internal and external applications reviews. The external reviews were performed by representatives of ESSP (IGBP, WCRP, IHDP and Diversitas) core and joint projects as well as by global change experts from START regions, and sponsors, including APN.

START's regional committees in the Asia-Pacific region, including several members of APN's Scientific Planning Group, provided assistance in the identification of worthy young scholars and in the selection of applicants. They included:

- Temperate East Asia Regional Committee: Dr. Vladimir Kasyanov, Chair, and Prof. Congbin Fu, Director, TEA Regional Center
- South Asia Regional Committee: Dr. Amir Muhammed, Chair (also Co-chair, APN Scientific Planning Group), and Dr. A.P. Mitra, Director, SA Regional Center
- Southeast Asia Regional Committee: Prof. C.H. Liu, Chair, Dr. Anond Snidvongs, Director, SEA Regional Center, and Dr. Louis Lebel, SARCS Science Coordinator
- Oceania Regional Committee: Dr. Nick Harvey, Chair, and Dr. K. Koshy, Director, Oceania Secretariat

Other Asia Pacific Network region global change scientists involved in the selection of candidates and organization of the conference were:

- Dr. Greame Pearman, Chief Scientist, CSIRO Atmospheric Research, Australia
- Dr. Michael Manton, Chief of the Commonwealth Bureau of Meteorology, Australia
- Prof. Sulochana Gadil, Indian Institute of Science, India
- Dr. Josep Candell, Executive Officer of the Global Change and Terrestrial Ecosystems (GCTE), Interim Executive Officer of the New Land Project (LAND), and Global Carbon Project

Activities Conducted

There were fifty-one 15-minute oral paper presentations and thirty-one 2-minute oral poster presentations by the selected young scientists. Additionally, posters were available for viewing during the first two days of the conference.

Paper and poster presentations were divided into fourteen sessions distributed over the three-day conference. Presentations were arranged thematically, and keynote speeches by senior scientists were presented in between sessions. A copy of the conference program is attached as Appendix I.

Keynote speakers were:

- Prof. Paul Crutzen, Max-Planck-Institute for Chemistry, Germany (Presentation title: The Stratospheric Ozone Hole: a man-caused chemical instability of the stratosphere – what should we learn from it?)

- Dr. Kathy Hibbard, Oregon State University, USA (Presentation title: The role of disturbance in terrestrial ecosystems: understanding the consequences of management on regime shifts of woody ecosystems.)
- Sir John Houghton CBE FRS, UK (Presentation title: Global Warming: science and politics.)
- Dr. Roberto Sanchez, University of California, Santa Cruz, USA (Presentation title: Global change and urbanization.)
- Dr. Will Steffen, IGBP Secretariat, Sweden (Presentation title: Challenges of a changing earth: towards a scientific understanding of global change.)

Session chairpersons included:

- Dr. Keith Alverson, PAGES IPO, Switzerland
- Prof. Congbin Fu, START's Regional Center for Temperate East Asia, China
- Dr. Barbara Göbel, IHDP Secretariat, Germany
- Prof. Mohamed Hassan, TWAS, Italy
- Dr. John Ingram, GECaFS IPO, UK
- Dr. Kanayathu Koshy, START Oceania Secretariat, Fiji
- Dr. Gordon McBean, Institute for Catastrophic Loss Reduction, Canada
- Dr. Daniel Olago, Pan-African START Secretariat, Kenya
- Dr. V. Satyan, World Climate Research Program, Switzerland
- Dr. Anond Snidvongs, START SEA Regional Center, Thailand
- Dr. Will Steffen, IGBP Secretariat, Sweden

The conference presentations were divided into the following thematic sessions:

- Aerosols
- Climate Modeling (2 sessions)
- The Global Carbon and Nitrogen Cycles
- Global Change, Variability, and Agricultural Systems
- Human Dimensions of Global Environmental Change
- Impacts of Global Change
- Land Use Change
- Paleoclimatology
- Polar Studies
- Terrestrial and Aquatic Ecosystems (2 sessions)

Two panels of judges composed of senior scientists, judged the presentations; one panel for paper and one for poster presentations. At the gala dinner, which culminated the conference, one paper received the Crutzen Award, three other papers received honorable mentions, one poster won the Best Poster Award, and three other posters received honorable mentions.

Dr. Linda Stevenson, APN, actively participated in the conference, and met with the young scientists whose support was funded through the APN grant. Dr. Stevenson's presence broadened awareness about APN among the region's young scientists, and encouraged them to take advantage of future opportunities with APN. Dr. Stevenson was also very active in her role as a judge in the poster presentation competition.

Outcomes and Products

As the conference was a forum for encouraging the development of young scientists, one of the major outcomes was a cadre of talented, enthusiastic young scholars from around the world to provide the basis for the development of intra- and inter-regional research activities. Senior scientists, including representatives of the core projects of the ESSP, who chaired the various conference sessions, are working with the young scientists to prepare their papers for submission to international journals. A conference booklet, inclusive of the presented abstracts, was also prepared, printed and distributed among participants, and the wider global change research community.

Prof. Paul Crutzen, Nobel Laureate, conferred the award for the best paper, known as the Crutzen Award. The winner of the Crutzen Award was Gervasio Piñeiro of University of Buenos Aires for his paper 'Long term grazing impact on soil carbon and nitrogen pools in South American grasslands' co-authored by J.M. Paruelo, E.G. Jobbagy, M. Oesterheld and R.B. Jackson.

In addition, three papers received honorable mention. They were 'Climate change, biodiversity hotspots and the endangered tree aloe, Aloe Dichotoma (Quiver tree): the genetic status and management of a flagship species' presented by Jacqueline Bishop of Kirstenbosch Research Center, South Africa, co-authored by G. Reeves, W. Foden, and G.F. Midgley; 'How does the atmosphere cleanse itself: formaldehyde as a pivotal species in atmospheric oxidation pathways' presented by Katia Riedel of National Institute of Water and Atmospheric Research, New Zealand, co-authored by William Allan; and 'Towards regional sustainability: the QSA approach' presented by Jasper Grosskurth of Maastricht University.

The award of Best Poster went to Susanne Marquart of DLR Oberpfaffenhofen for her poster 'Future development of contrail cover, optical depth and radiative forcing: impact on increasing air traffic, alternative fuels, and climate change' co-authored by M. Ponater, and R. Sausen.

Three other posters received honorable mention. They were 'Applicability of water poverty index at meso-catchment scale' presented by Dennis Dlamini of University of Natal, South Africa, co-authored by R.E. Schulze, and G.P.W. Jewitt; 'Global change impacts on litter decomposition: experimental manipulation of UVB radiation, biotic activity and soil carbon and nitrogen in Patagonia, Argentina' presented by Lucia Vivanco of University of Buenos Aires; and 'Tropical forest recovery following human disturbance in central Amazonia: post-pasture forest structure, canopy cover, biomass and nutrient dynamics' presented by Ted Feldpausch of Cornell University, and co-authored by J. Lehmann, E.C.M. Fernandes, M.A. Rondon, S.J. Riha, and E. Wandelli.

A multi-media CD-Rom comprising of paper abstracts, power point presentations of the papers and visual images of the posters will be produced and distributed to the participants, funders, and institutions involved in global change research. The CD-Rom will be available from the International START Secretariat by March 31, 2004. Furthermore, the conference website continues to provide information and updates to participants as well as non-participants of the event, and is continually updated.

http://www.start.org/links/cap_build/young_scientist/ys_conference/ys_conf_home.html

Conclusions

START, as an international non-governmental organization seeking to establish and foster regional networks of collaborating scientists and institutions in developing countries, is uniquely positioned to take on a number of targeted, global programmes that our, organizational and national partners, would find difficult to initiate and carry out on their own. The Young Scientists Conference is an example of such activity, where START enabled the promotion of young scientists, and also engaged many of the secretariats and project offices of the global change-related organizations and institutions around the world.

In organizing the conference START was supported financially as well as programmatically by the extensive system of the Asia Pacific Network for Global Change Research, its staff, members of the Scientific Planning Group, and institutional partners. Corresponding to APN's aim "that scientists and institutions within the countries of the Asia-Pacific region will together conduct high quality, cooperative, multi-disciplinary research on the region's key global environmental change issues," the partnership with START allowed to fulfill a part of that vision.

The conference met all its aims, was an outstanding success and generated great enthusiasm and camaraderie. APN can be pleased with the excellent contributions made by young scientists working in fields covered by the Network's interests and activities. The fact that so many young global change scientists from developing countries were able to compete on merit alone for places at the conference is testimony to the success of more than a decade of research-driven capacity building by START, and conference partners, including APN.

Future Directions

The 2003 Young Scientists Conference was a great success. Currently a list of participants as well as the top 600 applicants is being edited in order to develop it into a coherent database of young scientists around the world. The database will be distributed to the global change research community.

While the Second Young Scientists Conference is being planned, START continues its Young Scientist Award Program. START's Young Scientist Award program recognizes the achievements of outstanding young scientists from developing countries in Africa, Asia and the Mediterranean region, and with award decisions based on a journal article published by the young scientist.

START is very appreciative of the support both financial and organizational it received from APN for the 2003 Young Scientists Conference.

Appendix

AI. Conferences/Symposia/Workshops (attached separately)

File name: APN2003-07 Appendix_I

- Agenda and Programme (with abstracts)
- Participants' list (full contact information)

AII. Funding Sources outwith APN

<u>Organization/ Institution</u>	<u>Type of Support</u>	<u>Amount</u>
International Geosphere-Biosphere Programme (IGBP)	In-kind (including travel and sustenance of its representatives)	
World Climate Research Programme (WCRP)	In-kind (including travel and sustenance of its representatives)	
International Human Dimensions Programme (IHDP)	In-kind (including travel and sustenance of its representatives)	
DIVERSITAS	In-kind	N/A
Third World Academy of Sciences (TWAS)	In-kind	N/A
The International START Secretariat	Organizer	US\$ 13,000
The Inter-American Institute for Global Change Research (IAI)	Co-sponsor	US\$ 40,000
The International Council for Science (ICSU)	Co-sponsor	US\$ 20,000
The Netherlands Ministry of Foreign Affairs (DGIS)	Co-sponsor	US\$ 9,000
The National Science Foundation/ US Climate Change Science Program (NSF/USCCSP)	Co-sponsor	US\$ 35,000

AIII. Glossary of Terms

APN- Asia Pacific Network for Global Change Research

DGIS- the Netherlands Ministry of Foreign Affairs

ESSP- Earth System Science Partnership

IAI- Inter-American Institute for Global Change Research

ICSU- International Council for Science

IGBP- International Geosphere-Biosphere Programme

IHDP- International Human Dimensions Programme on Global Environmental Change

NSF/USCCSP- the National Science Foundation/ US Climate Change Science Program

START- Global Change SysTem for Analysis, Research and Training

WCRP- World Climate Research Programme