



## Update on the ISZS/IUBS International Research Program: Biological Consequences of Global Change

### → **Progress Report**

October 2010: An international symposium with the theme of Invasion of Alien Species was held in Myshkin, Russia 5-9 October 2010 within the framework of the BCGC program. About 100 scientists from 13 countries attended the meeting. Dr. Zhibin Zhang, a BCGC program leader, was a Co-President of the symposium and Dr. Yury Dgebuadz, also a BCGC program leader, was Vice President of the Scientific Committee of the symposium. Dr. Nathalie Fomproix, Executive Director, IUBS, also attended the symposium. Mr. Chunxu Han, coordinator of the BCGC program, delivered a presentation on the BCGC program.

June 2010: Dr. Fuwen Wei, a leading scientist in the Program, presented a progress report to the Chinese Academy of Sciences (CAS). The presentation included a synopsis of recent BCGC work on the impact of climate change on biodiversity and endangered species as well as bio-disasters in Asia, Europe, Australia and America. The CAS is satisfied with the progresses made in the Program and has guaranteed its continued support. In addition, the IUBS has approved a €15,000 grant for the implementation of the BCGC Program in 2010.

March 2010: The ISZS submitted an application to the National Natural Science Foundation of China (NNSFC) to raise more funds to support the BCGC program. At the same time, the number of researchers in the program increased from 7 to 15. The new researchers are David B. Wake at the Graduate School at the University of California, Berkeley, USA; Yury Yu. Dgebuadze at the Institute of Ecology and Evolution, the Russian Academy of Sciences; Alain Roques at the French National Institute for Agricultural Research, France; Hari C. Sharma at the International Crops Research Institute for the Semi-Arid Tropics, India; Bernard Cazelles at the Université Pierre et Marie Curie in Paris, France; Boris I. Sheftel, Senior Scientist, the A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences; Jianghua Sun, Yiming Li and Xinhai Li at the Institute of Zoology, the Chinese Academy of Sciences, China. (For details, please refer to the Researcher Profiles at the end of this update).

January 2010: The ISZS completed a concept plan for constructing an online working platform and database for scientists in the BCGC program to communicate and share research.

October 2009: Representatives from the ISZS made a presentation on the ISZS international research program – Biological Consequences of Global Change - at the Workshop on Integrated Climate Change Biology (an IUBS scientific research program granted in 2006) before the 30th General Assembly of the International Union of Biological Sciences (IUBS) in Cape Town, South Africa. Afterwards, Dr. Zhibin Zhang submitted a proposal to integrate the ISZS international research program – Biological Consequences of Global Change – into the IUBS programs. In the end, also based on the recommendations of the IUBS "Scientific Program Committee," the General Assembly adopted Dr. Zhang's proposal and named the Biological Consequences of Global Change (BCGC) program a new IUBS International Scientific Program with Drs. Zhibin Zhang (China), Yury Yu. Dgebuadze (Russia) and Hari Sharma (India) appointed as leaders. Resolutions also passed that the IUBS would provide some seed funds to support the program.

12 July 2009: Dr. Yan Xie, the ISZS Secretary General, delivered a speech at a workshop on climate change at the 2009 International Congress for Conservation Biology in Beijing, introducing the ISZS international research program – Biological Consequences of Global Change.

9 July 2009: The ISZS had a special workshop on the ISZS international research program – Biological Consequences of Global Change. Jean-Marc Jallon, Vice-President, International Union of Biological Sciences (IUBS); Rosa Polymeni, Professor, Section of Zoology and Marine Biology, Professor, Department of Biology, University of Athens, Greece; Nils Chr. Stenseth, Professor, Centre for Ecological & Evolutionary Synthesis (CEES), Department of Biology University of Oslo, Norway; Alain Roques, Director, Zoology Forestry, French National Institute for Agricultural Research; Jeffrey A. McNeely, Chief Scientist, IUCN (International Union for Conservation of Nature); Abraham Haim, Professor, Biology and Geography, University of Haifa, Israel; Yan Xie, Associate Professor, Institute of Zoology, Chinese Academy of Sciences, China; Zhibin Zhang, Professor, Institute of Zoology, Chinese Academy of Sciences, China; and John Spotila, President, The Global Cause Foundation, were at the workshop. Consensuses were reached that climate change is happening and effecting biological species around us and biological consequences of global change are important to our future. However, these scientists concluded that current research on biological consequences of global change is insufficient. As a result, international research programs, such as ISZS program for biological consequences of global change, are necessary and timely.

8 July 2009: The ISZS had its 3<sup>rd</sup> International Symposium of Integrative Zoology (ISIZ) in Beijing with the theme "Biological Consequences of Global

Change.” Over 130 scientists and researchers from over 25 countries in the world attended the symposium. Eighty-three attendees delivered academic speeches and presentations on biological consequences of global change and related scientific topics. The ISZS Secretary General, Dr. Yan Xie, delivered a special presentation on the ISZS international research program – Biological Consequences of Global Change at the opening session of the symposium.

7 July 2009: The ISZS had an online visual conference with the United States National Science Foundation (NSF) on the ISZS international research program – Biological Consequences of Global Change. The NSF is interested in the program and expressed its strong intent to support the program.

June 2009: John Buckeridge presented an overview of how marine conditions in Australasia are reflected in changes to barnacle fauna. He also expressed that he would very much like scientists in Asia to complement this research with data from their region. In particular, he is interested in marine systems. The objectives are to use the past to model the likely future marine conditions.

March 2009: The ISZS worked with the IUBS and integrated the international symposium of biological consequence of climate change with the IUBS program Darwin 200 Symposium, with the theme of biological consequence of climate change.

February 2009: In order to put the program into action, the ISZS planned an international symposium with a focus on the biological consequence of climate change to be held from 8 to 10 July 2009 in Beijing.

January 2009: The ISZS had a meeting at the IOZ China to introduce and promote the program. Dr. John Buckeridge and Dr. Mauricio Lima Arce sent over research progress on the program to the ISZS Secretariat. Dr. Yan Xie, Secretary General, ISZS, delivered a presentation on the progress of the program at the meeting. Representatives from CAS, CAST, TNC, CI, IFAW and Peking University were at the meeting. They all expressed their support for the program and would like to integrate their work in the program where possible.

December 2008: The ISZS produced a Call for Expressions of Interest to participate in the program and disseminated it to potential researchers and co-sponsors. Dr. Anwar Tumor, College of Life Sciences and Technology, Xinjiang University, China, and Dr. Igor Khorozyan from Armenia, wrote to the ISZS to confirm their willingness to participate in the program. The Earth and Oceanic Systems Research Group, at RMIT University, Australia, expressed their interest to integrate their research into the program.

October 2008: The Chinese Academy of Sciences set the ISZS research program as a Key International Cooperation Program and granted RMB900,000 (USD130,000) in seed funding.

August 2008: The 20th International Congress of Zoology (ICZ) was held in Paris, France. Dr. Zhibin Zhang delivered a speech on the program at the General Assembly of the ISZS. A resolution was passed that "the ISZS will be the coordinating body and all are invited to participate."

June 2008: The Biological Consequences of Global Change research program was established. Seven leading scientists from five countries across five continents indicated their interest to participate in the program. They are Nils Chr. Stenseth from the University of Oslo, Norway; Kung-sik Chan from the University of Iowa, USA; Mauricio Lima Arce from Pontificia University, Chile; John Buckeridge from RMIT University, Australia; and Zhibin Zhang, Fuwen Wei and Yan Xie from Chinese Academy of Sciences, China.