

International (Regional) Cooperation and Exchange

Focusing on its core tasks and following the 24-character working principles for the new period, NSFC will, in 2007, carry out active and effective international cooperation and exchanges guided by the scientific outlook of development, aiming at promoting fountainhead innovation, fostering talented personnel and facilitating the attainment of research achievements. The following tasks will be strengthened:

- 1) Playing a guiding role in the organization and implementation of international cooperation programs through measures such as policy study, expert consultation, guide promulgation, and so on;
- 2) Improving the environment for international (regional) cooperation in basic research by expanding cooperation channels, increasing investment and streamlining the evaluation and approval procedures, and fulfilling the funding task of various international (regional) cooperation projects strictly within the budget;
- 3) Planning and organizing substantial joint research projects of high academic calibre in more research areas;
- 4) Stressing on the cultivation of substantial joint research programs from projects within the agreement framework of NSFC with its foreign partners by bringing into full play the bilateral or multilateral cooperation channels;
- 5) Emphasizing on attracting more prominent overseas scientists into Chinese research teams, and encouraging Chinese institutions to invite excellent foreign scientists to work in China for a relatively long period of time;
- 6) Promoting the international evaluation of NSFC projects to raise the research quality and perfect the science funding system.

Please refer to NSFC website and the *Guide to Programs* for detailed information concerning the requirements for applicants and management regulations of various programs, the main mission of the Bureau of International Cooperation (BIC), its organizational structure and related responsibilities, general information on the agreements signed between NSFC and its partners abroad, and the list of agreements.

The program of “international conferences to be held aboard” was canceled on May 11, 2005, and no application is accepted thereafter.

In 2007, only applications for Major International (Regional) Cooperation Projects will be received during NSFC’s centralized application submission period.

Part A. Project Categories

Major International (Regional) Joint Research Program

In order to keep in pace with the globalization of scientific research, make full use of international scientific resources and raise China's international competitiveness in basic research, NSFC set up the Major International (Regional) Joint Research Program in 2001 to promote the entry of some Chinese basic research areas into the world arena. Following the policy of "doing things in a selective way" and in conformity with the principle of setting limited goals, emphasizing on key points and interdisciplinary study, the Program sets its strategic targets as enhancing China's innovation capability based on equality, mutual benefits and sharing of results.

The Program mainly funds research that can only be conducted with international cooperation, that is:

- 1) Research in the funding priority of NSFC;
- 2) Joint research in areas that China urgently needs to develop;
- 3) Large international projects and programs with Chinese participation;
- 4) Major research projects by utilizing large-scale scientific facilities abroad;
- 5) Large bilateral or multilateral projects jointly recommended by NSFC and its counterparts abroad.

NSFC adopts a mechanism of centralized submission and evaluation for the Program. Applicants should submit applications according to the deadline announced in the call for proposals. For research projects jointly organized with partner funding organizations abroad, the time of call for proposals will be decided by consensus and announced on the NSFC website. Applicants may also refer to the *Guide to Programs*.

In 2006, 126 such proposals were received during the application submission period, applying for a total funding of 170 million yuan. Through rigorous correspondence and panel reviews, 20 were finally approved, with a successful rate of 15.9%. Altogether 19.06 million yuan were allocated for these projects, accounting for 11.2% of the total funding applied. Among the projects approved, 2 were from the Department of Mathematical and Physical Sciences, 3 from Chemical Sciences, 5 from Life Sciences, 4 from Earth Sciences, 4 from Material and Engineering Sciences and 1 from Information Sciences and 1 from Management Sciences. 8 of the approved projects were cooperation with the United States, 3 with Germany, 2 with the United Kingdom, 1 each with Japan, South Korea, France, Switzerland, Canada, Australia and Russia. With the background of a long-term and strongly complementary cooperation all those approved fell into the priority areas set by NSFC and boasted of high academic and innovative caliber. All of them paid special attention to the protection of intellectual property rights and share of research results.

A further analysis of 2006 applications provides insights to some problems worthy of careful attention. Some of the applications fell out of the priority of the Program; some application forms were not properly filled in. 17 of them failed the preliminary check due to various reasons such as lack of professorship title, cooperation agreements, NSFC grants or English version applications, accounting for 13.5% of the total applications. Some applications need to show more innovativeness, more necessity and complementarity of the collaboration or a stronger cooperative basis. It is hoped that applicants in the future can study carefully the *Guide to Programs* and fill in the application forms strictly following relevant requirements in terms of innovativeness, necessity and complementarity of the cooperation, substantial investment of both sides, IPR protection, English or Chinese version, etc.

Joint Research Project

NSFC grantees are encouraged to carry out joint research projects with foreign scientists on subjects of common interests through information and data exchange, personnel exchange as well as scientific research in the principle of equality, mutual interests and result sharing. This fund covers international travel expenses for Chinese scientists, and accommodation and domestic inter-city travel expenses for foreign scientists in China.

Applicants for this fund should be key investigators of ongoing NSFC projects. The joint research should benefit the exchange of academic ideas, facilitate the ongoing NSFC projects through making full use of the partners research facilities, and help to raise the research standards and train young researchers. The joint research should base on NSFC funded projects and contain no classified contents.

International Conferences Held in China

International conferences held in China can help more Chinese scientists to follow the development trends of related research areas and establish wide contacts with peers abroad, so as to promote the cooperation between them. Meanwhile, it also displays the development and progress of Chinese science to the world and expands the influence of Chinese basic research in the international scientific community.

Attention should be paid to the promotion of the quality of the conferences and the attraction of more high-level international conferences to be held in China. The priority will be given to serial academic meetings of important international organizations and seminars aimed at young scientists and students, important global or regional international conferences, conferences closely related to the priority areas supported by NSFC and to the newly emerging disciplines, conferences with world eminent scientists as invited speakers, and bilateral and multilateral seminars of small scale and high level on research priority and hotspots.

Special Fund for Chinese Scholars Abroad Returning for Short-period of Work or Lecture in China (including the “two bases” projects)

Chinese scholars abroad make up an important part of our precious human resources. In August 1992, NSFC established the Special Fund for Chinese Scholars Abroad Returning for Short-period of Work or Lecture in China and it has achieved prominent results ever since. Some of these scholars have built up their research units in China, and realized the model of “two bases”. Some of them have found their suitable positions in China through short-period work, realizing “soft landing” from overseas to China.

In 2007, NSFC will keep improving the “two-bases” model. It will elaborate in organizing and directing more and more scholars to combine closely their work abroad and in China, such as key research projects, the fostering of young scholars and base building in China. Information for the “two-bases” projects is available in the “Complementary Regulations on the Implementation of NSFC Fund for Chinese Scholars Abroad Returning for Short-period of Work or Lecture in China”.

NSFC will continue to support Chinese scholars abroad to work or lecture in China in various effective ways. Meanwhile, in order to keep pace with the situation, NSFC will actively explore new ways for these scholars to work for China. It will continue to invite some Chinese scholars abroad to participate in the panel review of research proposals, so as to listen directly to their opinions, select projects with creative ideas and improve the assessment quality. At the same time, NSFC will organize or co-organize with related ministries or academic organizations academic activities for these scholars to take part in.

Part B. International (Regional) Cooperation and Exchange with Different Countries and Regions

Asia, Africa and International Organizations

NSFC has signed bilateral agreements or memoranda of understanding on S&T cooperation with nine scientific funding organizations in Asia and Africa, and six international research organizations in the world.

According to the agreement with Japan Society for the Promotion of Sciences (JSPS) in 2006, the number of joint research projects co-funded by both sides will be increased from 5 to 10.

A3 Foresight Program sponsored jointly by NSFC, JSPS, Korea Science and Engineering

Foundation (KOSEF) supports the cooperation of scientists from China, Japan and Korea to conduct world level research in selected strategic areas. The purpose of this program is to enable Asia to become one of the core research centers in the world in selected areas. Meanwhile, through the implementation of this program, the goal of fostering excellent young researchers and making contributions to the solution of common regional issues can also be reached. The joint research area of current year is the same as the topic of the Northeastern Asian Symposium organized by NSFC, JSPS and KOSEF in the previous year. The joint research area of A3 Foresight Program is climate change for 2007. The projects of A3 Foresight Program will be conducted as Major International Joint Research Project. NSFC, JSPS and KOSEF will respectively make call for proposals on their websites on December 1. Two 3-year projects will be selected for support at a funding level of two million yuan each by NSFC.

Since 2004, NSFC and Japan Science and Technology Agency (JST) have developed cooperation on the theme of “S&T for Environmental Conservation and Construction of a Society with Less Environmental Burden”. Each year, both organizations will decide the joint research areas through discussion, and workshops with topics selected from the decided joint research areas will be organized in China and Japan alternatively. The joint research areas for 2006 were the development of environmental impact assessments and conservation technologies for sustaining watershed ecosystems. Both sides will announce the cooperation research areas and call for proposals on the websites in April. A maximum of five 3-year projects will be selected for support with the funding of up to one million yuan per project from NSFC.

The memorandum of understanding on scientific exchange between NSFC and JSPS stipulates that the two sides jointly support ten 3-year joint research projects and four bilateral workshops per year organized by Chinese and Japanese scientists, of which two are held in China and two in Japan. Both organizations will issue call for proposals on their websites in July every year. The application deadline is the Friday of the first complete week in September.

NSFC and KOSEF jointly support bilateral activities including joint research projects and academic seminars. The duration of each project is two years. Participants of bilateral seminars from each side must come from at least three institutions. Both organizations will issue call for proposals on their websites in July and the deadline is December 15 every year. The Sino-Korean Joint Committee on Basic Science makes final decisions on the support of bilateral activities. In 2006, the Joint Committee approved a total of 40 bilateral activities, including 26 joint research projects and 14 bilateral seminars.

NSFC and Indian Council of Scientific and Industrial Research (CSIR) cooperate to fund bilateral cooperation and exchange programs such as bilateral workshops, joint research projects with a duration of three years. In 2007, both sides will co-sponsor 3 joint research projects and two bilateral workshops. Call for proposals will be publicized by both sides in June each year and the deadline for application is July 31.

NSFC has signed scientific agreements with the Academy of Scientific Research and Technology of the Arab Republic of Egypt, Pakistan Science Foundation, National Research Council of Thailand, Council for Science and Industrial Research of India and the Department of Science and Technology of India, and jointly fund research projects and bilateral workshops co-organized by both sides.

NSFC has also signed scientific agreements with the following six international research organizations: the Center of European Nuclear Research (CERN) in Geneva, Switzerland, International Center for Theoretical Physics (ICTP) in Italy, International Institute of Applied Systems Analysis (IIASA) in Austria, International Rice Research Institute (IRRI) in Philippines, International Maize and Wheat Improvement Center (CIMMYT) in Mexico and International Institute for Software Technology of the United Nations University (UNU/IIST) in Macao.

Together with the Ministry of Science and Technology and the Chinese Academy of Sciences, NSFC supports Chinese scientists' participation in LHC experiment, a major international program at CERN. Every year, NSFC sponsors about 50 Chinese young scholars in the areas of mathematics, physics and atmospheric physics to participate in many research activities at ICTP, such as summer seminars, short-term joint research or post-doctoral research. The Steering Committee of the Tianyuan Fund for Mathematics, the Steering Committee of the Special Fund for Theoretical Physics and expert panels for relevant research areas in earth science are responsible for recommending qualified scholars to ICTP.

As one of the 16 member organizations of IIASA, NSFC attends IIASA council meetings to decide research areas, approve research plans, and appoint or sack IIASA directors, etc. NSFC encourages Chinese scientists to conduct multilateral cooperation with various IIASA project groups in the areas of energy, environment, land use, population, etc., and to jointly apply research funding from various governmental organizations, private and national foundations, World Bank and EU Framework Program. NSFC fully or partially supports several Chinese young scholars to take part in the annual 3-month "Young Scientists Summer Program" from May to August at IIASA. In 2006, five young scholars received support from NSFC. For detailed information, please refer to IIASA website at <http://www.iiasa.ac>. NSFC mutually supports joint research projects in specific areas with IIASA, IRRI, CIMMYT and UNU/IIST.

NSFC encourages excellent young researchers undertaking NSFC grants to take positions in important international academic organizations. Their academic activities in those organizations will be selectively supported with certain emphasis.

America, Oceania and Eastern Europe

NSFC has signed scientific cooperative agreements or MOUs with counterpart science funding organizations and research institutions in 12 countries in America, Oceania and Eastern Europe. A detailed list can be found on the website of BIC, NSFC.

NSFC encourages collaboration between China and the USA with emphasis on mutual benefit, talent fostering and the attainment of research achievements. In 2007, priority will be given to Sino-US cooperation in areas of information science, network technology, engineering and materials sciences, mathematical and physical sciences, chemistry, biology, social economic dynamics, etc.

Projects funded under the agreement of NSF and NSFC can be classified into two categories. First, Chinese applicants apply to NSFC at any time of the year while American counterparts apply to NSF according to its specific requirements. In 2007, NSF and NSFC will continue to support bilateral academic workshops and substantial cooperation in the fields of common interests. Second, NSF and NSFC collaborate to receive joint research projects in the area of social economic dynamics at a certain time of the year. Please refer to the website for further notice about the call for proposals.

NSFC and Russia Foundation for Basic Research (RFBR) jointly support collaborative research projects with a two-year implementation period in mathematical and physical sciences, chemical sciences, life sciences, earth sciences, materials and engineering sciences, information sciences and management sciences. The call for proposals for 2007 will be announced at the websites of NSFC and RFBR. Scientists of the two countries shall submit proposals respectively to NSFC and RFBR according to the relative regulations and requirements based on communication and cooperative plans.

In 2007, NSFC and RFBR will continue to receive applications for bilateral academic workshops all the year round. Applicants from both sides can apply to their respective foundations according to relevant requirements after agreeing on the themes and arrangements of the workshops.

In 2007, NSFC and Fonds de la Recherche en Sante du Quebec (FRSQ), Canada will support joint research programs. Scientists of the two countries shall submit proposals to NSFC and FRSQ respectively according to their respective requirements.

In 2007, NSFC and Canadian Institutes of Health Research (CIHR) will jointly support health research programs in certain areas. The implementation period for each project will usually be 3 years and the call for proposals will be announced each year simultaneously on the websites of NSFC and CIHR. The exact date for the announcement of the 2007 call for proposals is to be decided.

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In 2007, NSFC will give further attention to cooperation and exchanges with Australia on energy, environment and health research. Under the cooperation framework between NSFC and Australia Research Council (ARC), sustained support to research of common interests will be provided in 2007. The China/Australia Special Fund co-sponsored by NSFC and the Department of Education, Science and Training of Australia (DEST) will continue to launch a new round of call for proposals in 2007, which will be publicized simultaneously at the websites of NSFC and DEST at the beginning of 2007.

In 2007, support will be continuously given to large scale joint research programs with major scientific importance. Please refer to various call for proposals publicized on NSFC websites.

West Europe

NSFC has signed agreements and memoranda of understanding on scientific cooperation with 26 science foundations or research councils in 15 countries in North, South and West Europe, providing funding for joint research among scientists on topics of common interests. Activities to be funded include short-term exchange visits, bilateral academic workshops and joint research.

On the basis of “equality and mutual benefits, complementary advantages, collaboration among top scientists, joint investment, and sharing of risks and accomplishments”, NSFC gives special emphasis to the cooperation in information science, life science, nano science and technology, agriculture, materials science, human health and environment. It will provide priority support to bilateral workshops and joint research projects, especially those under the memoranda of understanding between NSFC and its partners, to excellent middle-aged and young researchers and research teams undertaking NSFC projects, and to those Chinese scientists returned from abroad who already have some collaboration with domestic counterparts. Chinese researchers, research teams and institutions are encouraged to establish long-term and steady relationship with their European counterparts for substantial cooperation and exchange of scientific significance.

UK: NSFC and the Royal Society of UK (RS) support up to 20 joint projects with the duration of 2 years. Chinese and British scientists should submit their proposals to NSFC and RS, respectively. Please refer to NSFC website for detailed information.

In 2007, NSFC will continue to cooperate with UK research councils such as EPSRC, BBSRC, PPARC, NERC and MRC to fund small bilateral workshops co-organized by Chinese and British scientists. Chief organizers from both sides should submit applications to their funding organizations respectively, which will be responsible for the evaluation and approval. Substantial joint research projects between researchers from both countries will be encouraged.

Germany: According to the agreement on cooperation between NSFC and DFG of Germany, both sides will support short-term research visits (usually not exceeding three months), bilateral workshops and joint research projects. Chinese and German scientists shall submit their applications to their own funding organizations, which will make the final decision after respective evaluation and consultation. Since 2005, NSFC and DFG have started to encourage scientists to apply for substantial joint research projects. Applicants should jointly make the research plans and then submit their applications to their own funding organizations. NSFC and DFG will organize evaluation and then together make the funding decision.

France: NSFC supports cooperation and exchange programs, such as joint research and bilateral academic workshops, between Chinese and French scientists in basic research and applied basic research areas under its agreement with CNRS, INRA, IFREMER, CEA. Meanwhile, NSFC is responsible for the organization of earth scientists to evaluate the PRA projects in earth science and supports the implementation of PRA projects related to NSFC.

NSFC will continue to participate in and support China-France intra-governmental cooperation projects such as PRA, make effective use of the agreements signed, encourage substantial cooperation between Chinese and French scientists and strive to foster leading academic figures in China-France cooperation and exchange.

Finland: According to the agreement of scientific cooperation between NSFC and the Academy of Finland, both sides will support short-term study visits (usually not exceeding three months), bilateral workshops and joint research projects between scientists from both countries. Please refer to the NSFC website for detailed information.

Cooperation and Exchange with Hong Kong and Macao SARs and Taiwan Region of China

Adhering to the principles of “one country, two systems” and the Basic Law of the Special Administrative Region of Hong Kong of the People’s Republic of China, NSFC will continue its active support to various forms of cooperation and exchange between inland and Hong Kong scientists in the areas of mutual interests. In such cooperation, the principles of complementary advantages, mutual promotion and sharing of results should be carried through, priorities of cooperation be stressed and flexible means of cooperation and exchange be adopted. For instance, joint research, jointly holding international and domestic scientific conferences and exchange of scientists may be chosen as approaches to the cooperation of both sides.

On November 23, 1998, NSFC and the Research Grant Council of Hong Kong reached the agreement on establishing a joint research fund. According to the agreement, the joint research fund is five million yuan and 10 million Hong Kong dollars in 2007. Priority

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funding areas include information science, biological science, new materials, ocean and environmental science, Chinese traditional medicine and management science. For detailed information, please refer to the announcement of application for 2007. NSFC will make a formal announcement in the 4th quarter of 2006 along with other categories of funding.

NSFC will continue to support various activities of scientific cooperation and exchange with substantial content among inland and Macao scientists. Emphasis will be put on research projects related to environmental protection and urban development.

NSFC has spared no efforts to encourage and promote scientific cooperation and exchange between scientists on both sides of the Taiwan Straits. In 2007, NSFC will keep doing its utmost to promote and fund cooperation and exchange activities, especially joint research projects with substantial content in some mutually interested areas between scientists from both the mainland and Taiwan based on complementary advantages, sharing of research results, fostering each other and lifting the capabilities together.

Sino-German Center for Research Promotion

The Sino-German Center for Research Promotion jointly founded by NSFC and DFG of Germany opened to public in October 2000. It is mainly for the promotion of scientific cooperation and exchange among institutions of higher learning in China and Germany in the fields of basic research and applied basic research.

The Center accepts proposals submitted jointly by Chinese and German scientists at any time of the year and supports activities such as bilateral academic seminars, joint research teams, publications and prophase-preparation for cooperative projects.

According to the suggestions of the Joint Committee of the Center, the Center will select joint projects in the following strategic areas: new materials; nano-tech and micro system technology, information technology and communication technology (including optoelectronics system), food nutrition, energy research, arid and environment research, life science, advanced manufacturing technology, transportation research, etc. In order to establish an exchange platform for project participants from both countries, the Center will commission the project coordinators of both sides to hold meetings in 2007. The Center will make call for proposals and select one or two areas to organize joint research projects. Areas to be considered are water resources, intelligent transportation technology, green chemistry, information and communication technology and advanced manufacturing technology.

In addition, the Center also attaches great importance to the exchange and cooperation between young scientists of the two countries and adopts a flexible mechanism to support such activities as short-term seminars, young scientists' forum, and selecting excellent

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doctoral students to attend the annual conference of Nobel Laureates held in Lindau, Germany. In 2007, twenty-five to thirty excellent doctoral students in life science will be selected from Chinese universities and research institutions to attend the Conference.

Specific requirements and relevant information are available on the website of the Center:
<http://www.sinogermanscience.org.cn>