



Alliance of International
Science Organizations

ANSO ANNUAL REPORT 2021



ANSO ANNUAL REPORT 2021



Dear colleagues and friends,

2021 is coming to an end and the new year is drawing near. At the season of bidding farewell to the old and welcoming the new, I want to extend you all my cordial greetings and my sincere gratitude for your dedication and support to ANSO and the ANSO Secretariat, and wish you and your loved ones all my best wishes for a Very Happy and Prosperous 2022.

2021 has seen the continuous rise and development of ANSO with respect to both its impact and recognition, despite of the effects of the COVID-19 pandemic. The ANSO Secretariat has done a good job in putting the ANSO strategic objectives into actions in challenging times. Focused on its vision and mission, ANSO has made new contributions to the promotion of the advancement of the UN SDGs and the development of a community with shared interests for humankind. Our efforts include continuing the collective fight against the pandemic in partnership with both ANSO member organizations and other partners. These efforts are reflected in our facilitation of international cooperation in the joint development of COVID-19 testing kits, vaccines and medicines, and the organization of a number of international workshops and seminars online relating to public health and infectious diseases. There has also been publication and submission of a dozen strategic studies, and the dissemination of the latest scientific progress through the ANSO website. We also organized a series of online international meetings focused on other major common concerns and challenges such as climate change, sustainable agriculture, biodiversity conservation, science and education, and women in science. These have been very well received by the public.

To make a contribution to the CBD COP15 in Kunming, China, ANSO took the lead in organizing The Beauty of Life on Earth exhibition with the UNESCO Beijing Office, MAB China and others. The exhibition which was held both in Beijing and Kunming,

and the academic meetings organized contributed to the public understanding of the importance on biodiversity protection and the enhancement of public awareness about biodiversity protection and ecosystem conservation.

The ANSO scholarship program kept up the momentum in attracting an increasingly large number of applications from all parts of the world. Overcoming the challenges brought about by the pandemic, efforts were made to offer online training courses with good results. For example, CropWatch training was carried out with the support of UNCSTD. The training was highly praised by the officials and experts who attended from a wide range of developing countries.

The international call for the ANSO cooperation program attracted wide interest and applications and a few of the best applications were supported based on merit after expert review.

The 4th Governing Board meeting of ANSO went very well. The Board reached consensus on a number of major issues including endorsing all the previous applications to join ANSO and the composition of a new Governing Board. The consensus decisions will be put to the forthcoming General Assembly for approval according to ANSO Statutes.

Lastly, I shall mention the successful launch of the Greater Bay Science Forum 2021. At the invitation of the Guangdong Provincial Government, ANSO participated in the launch. The Forum was a wonderful success and attracted wide attention, which also helped further the reputation and impact of ANSO. Chinese President XI Jinping sent a letter of congratulations to the meeting.

The above is only a brief summary of what ANSO has done in the past year. All of these achievements could not be accomplished without your strong support. On this journey to success, we are so pleased and privileged to have you as a partner.

We are proud to have achieved all these successes in the midst of the pandemic. In the New Year, I am confident ANSO will accomplish more for the advancement of the UN SDGs and for our joint benefit. We will give particularly focused attention to solidarity and international cooperation in addressing various common challenges including the pandemic. I look forward to working with you in an ever-closer way to make ANSO a better and stronger organization, and more importantly, to make our world a better place.

Thank you for your strong support for ANSO and I wish you all the very best for a very happy, safe and prosperous New Year.

BAI Chunli

ANSO President

31 December 2021

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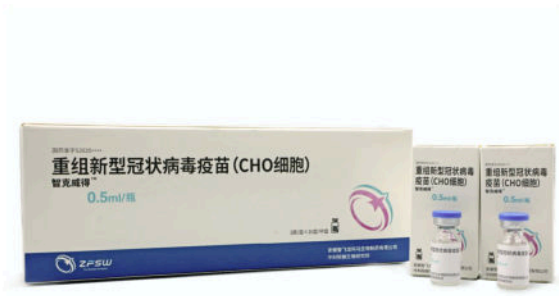
Highlights of Major Actions

In 2021, while the world was dealing with the turmoil and uncertainty caused by COVID-19, we did see real progress in broad vaccine development along with new drugs to combat the pandemic. Meanwhile, ANSO was working hard to enhance cooperation with members and partners across different aspects of the challenge. This chapter highlights the major activities led by ANSO, which include playing a role in promoting R&D for COVID-19 vaccines, organizing COP15 exhibitions in Beijing and Kunming, China, enhancing partnerships with other international organizations, and hosting theme-focused ANSO online workshops and the Greater-bay Science Forum 2021, along with the organizational development of ANSO itself.



1.1

Facilitating COVID-19 Vaccine



ANSO Facilitates the Emergency Use of a Recombinant Protein COVID-19 Vaccine Together with Partners and Friends

On 2 March 2021, the Ministry of Innovative Development of the Republic of Uzbekistan certified a COVID-19 vaccine (registered as "ZF-UZ-VAC2001") developed by the Chinese Academy of Sciences (CAS) and produced by China's Anhui Zhifei Longcom Biopharmaceutical Co., Ltd. Uzbekistan registered it for emergency use and marketing authorization.

ANSO played a crucial bridging role in this cooperation. From August of 2020, the ANSO Secretariat promoted and organized over 20 online workshops on implementing a Phase III Clinical Trial by working together with scientists, pharmacists and government officials from CAS, Zhifei Longcom as well as their counterparts from Uzbekistan, Pakistan, Brazil, Chile, Ghana, the Philippines, Senegal, South Africa, Sri Lanka, and other countries.

Thanks to strong support from the Ministry of

Innovative Development of the Republic of Uzbekistan, the Phase III Clinical Trial of the said vaccine began in December 2020. The results for over 7000 subjects showed good safety and high efficacy (scientific outcomes to be published soon), which led to the registration for emergency use and marketing authorization in Uzbekistan. On 10 March 2021, the vaccine was granted emergency use authorization and has since been rolled out in China's mass vaccination program.



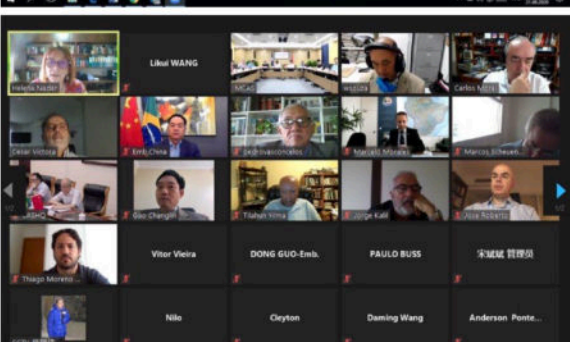
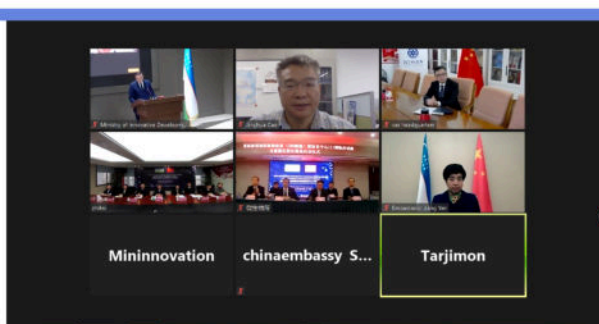
Mr. Ibrokhim Abdurakhmonov, the Minister of the Ministry of Innovative Development of the Republic of Uzbekistan, expressed appreciation in a letter to Prof. CAO Jinghua, Executive Director of the ANSO Secretariat, saying "I thank you, all ANSO and Zhifei leaders and the team for all your support and bridging this collaboration! We come up to this level because of great teamwork and friendship. I believe that this is the beginning and the best yet to come!"

In addition, ANSO also coordinated with the Pakistan Academy of Sciences (PAS) to promote trial cooperation in Pakistan for a subsequent trial with another few thousand participants.

In August 2021, late-stage clinical trial

results of this vaccine showed nearly 82% effectiveness in preventing disease related to COVID-19 and over 77% effectiveness against the highly transmissible Delta variant of the novel coronavirus.

We owe our gratitude to the officials, scientists and numerous individuals in Uzbekistan, Pakistan and in other ANSO partner countries for their great efforts in this matter. Paving the way for a post-pandemic world, ANSO is keen to be more actively involved in tackling global challenges through joint actions on science, technology, innovation, and capacity building. We look forward to working with more members, partners and countries to overcome the current pandemic.



1.2

ANSO Exhibition for COP15

To echo the theme of "Ecological Civilization: Building a Shared Future for All Life on Earth" for CBD COP15 in Kunming, China this year, ANSO held an exhibition with the theme of "**The Beauty of Life on Earth-Man and Biodiversity in Protected Areas**", jointly hosted with the UNESCO Beijing Office, the Chinese National Committee for UNESCO's Man and the Biosphere Programme (UNESCO-MAB China), the Endangered Species Scientific Commission, P.R. China (China CITES SA), the International Society of Zoological Sciences (ISZS), the Institute of Botany, Chinese Academy of Sciences (IBCAS) and the Kunming Institute of Botany, Chinese Academy of Sciences (KIBCAS)



The Beauty of Life on Earth-Man and Biodiversity in Protected Areas

Beijing, 30 August – 19 September 2021



The Kickoff ceremony of the ANSO Exhibition The Beauty of Life on Earth-Man and Biodiversity in Protected Areas was held on 30 August 2021 in the Beijing Botanical Garden, IBCAS. ANSO President, Prof. BAI Chunli; CAS Vice President and Chair of UNESCO-MAB China, Prof. ZHANG Yaping; Director of the UNESCO Beijing Office, Prof. Shahbaz Khan; Director of the Division of Ecological and

Earth Sciences and Secretary of MAB of UNESCO, Ms. Noëline Raondry Rakotoari-soa, and representatives from other organizing institutions attended the ceremony and offered remarks. Ambassadors and representatives from the embassies of Brazil, Indonesia, Pakistan, Spain, and Uruguay, also attended the event. Their countries had panels displayed at the exhibition.



The Beauty of Life on Earth-Man and Biodiversity in Protected Areas

Kunming, 11 October 2021 – March 2022

As one of the components of the COP15 Biodiversity Experience Garden hosted by KIBCAS, the ANSO exhibition "The Beauty of Life on Earth-Man and Biodiversity in Protected Areas" was on display in the Kunming Botanic Garden from 11 October. By the end of 2021, about 470,000 people had visited the exhibition, including COP15 participants, children, students, and tourists. This event successfully promoted the awareness of biodiversity protection and eco-environment conservation among citizens and local communities and emphasized the role of individuals and institutions in protecting biodiversity and our eco-environment.



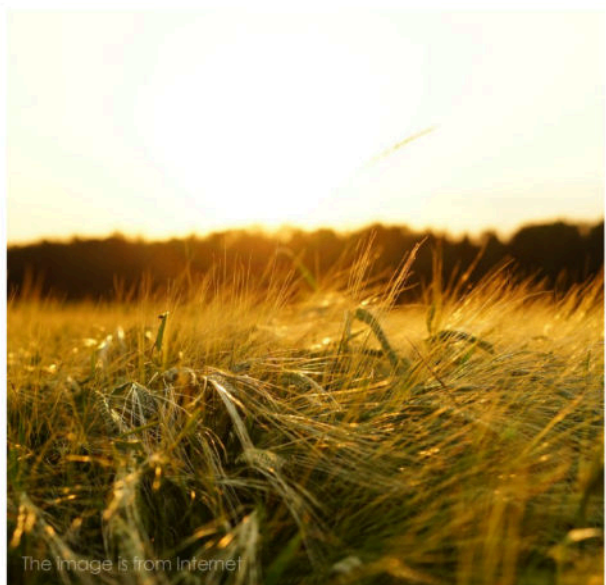
1.3

Actions on Improving People's Livelihoods by ANSO Collaborative Research and Training

Food Security

ANSO is always concerning with issues of food security. Due to the impacts of climate change and human activities, food security problems are becoming more challenging. The ANSO collaborative research project entitled "CropWatch Innovative Cooperation Programme for Agricultural Monitoring (ANSO Crop-Watch-ICP)" facilitates and stimulates agricultural monitoring addressing information gaps for ensuring food security in the Belt and Road (B&R) countries through the support of the CropWatch Cloud. The project aims to serve the UN SDG of zero hunger and improve the capacity for agricultural monitoring in developing countries. The project was highly commented the UNCTAD15 Ministerial Round Table IV.

The main activities carried out are training and capacity-building programs as well as system customization to meet country-specific requirements and the provision of support for model calibration and validation in priority countries. CropWatch agricultural training during the pandemic period was explored. Two training courses held in 2021 combined online training and



offline practice, involving 16 countries and more than 70 technical personnel, demonstrating a new way to promote international cooperation under new conditions. During these difficult times, CropWatch provided accurate information services to respond to the global food security crisis. Agricultural monitoring analysis showed that the droughts in early 2020 had a limited impact on rice production in the countries of the lower Mekong Basin, while COVID-19 had a bigger impact on food production in the northern and southern hemispheres in early 2021.

Clean Drinking Water

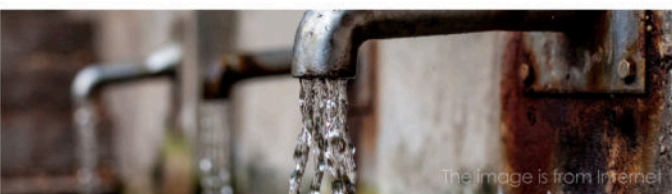
With the aim of promoting the UN SDGs for clean water and sanitation, an ANSO collaborative research project entitled "Distributed Water Purification Station System for Drinking Water Safety in Rural Regions of Kyrgyzstan" was established as a cooperation between CAS and the National Academy of Science of the Kyrgyz Republic, and implemented in remote rural areas of Kyrgyzstan. The ZLIB-R1-500 water purification equipment installed at the demonstration sites was able to purify polluted or even slightly salty water. Combined with the filtration and adsorption system, the equipment can effectively remove harmful substances such as bacteria, sediment, and heavy metal ions from the water, as well as carcinogens that cannot be removed by conventional methods. More than 15,000 people in 11 rural villages of Kyrgyzstan have benefited from this project.

Toktoshev Askarbek, Advisor to the Director-General of the State Agency for Architecture, Construction, Housing, and Public Utilities, highly appreciated the achievements of the China-Kyrgyzstan cooperation project on drinking water. The issue of drinking water supply for local residents has always been a focus of the Kyrgyz government, as only 30% of around

1800 rural settlements in Kyrgyzstan have achieved a centralized water supply to date. The purification system implemented increased water quality by more than double in rural areas and allowed local residents to access high-quality water that meets necessary hygiene standards.

Biotechnology

Industrial Biotechnology, driven by synthetic biology, is a major sustainability solution for the grand challenges of energy security, resource optimisation, and environmental protection faced by human beings. Through collaboration with the Department of International Cooperation, the Chinese Ministry of Science and Technology, COMSATS, and UNESCO, the Second International Training Course on Industrial Synthetic Biotechnology was successfully held at the Tianjin Institute of Industrial Biotechnology (TIB), CAS on December 20-30, 2021. Seventy-eight scientists and engineers from 17 developing countries participated in the course. About 30 famous professors and experts were invited to introduce the dynamic progress being made in the major application fields of industrial biotechnology such as biomedicine, bio-agriculture, and bioenergy, and in enabling technologies such as high throughput genome editing, systems biotechnology, intelligent fermentation technology, etc. This training activity greatly accelerated the capacity building process in the field of industrial biotechnology in developing countries, forming a solid foundation for future collaborations among these countries.



1.4

International Organization Partnership



Bill & Melinda Gates Foundation

At the invitation of the Bill & Melinda Gates Foundation, ANSO applied for official partner status and was awarded the partnership following a rigorous review. The Foundation expressed an intention to work with ANSO to promote global well-being, particularly in the global public health sector.



UNESCO

ANSO applied for UNESCO consultative status in 2021. As ANSO and UNESCO embrace a shared vision in achieving green and sustainable development, an official partnership under the UNESCO framework will enable both organizations to jointly identify priorities of actions, mobilize resources and expertise and contribute more forcefully to tackling global challenges.



IUCN

ANSO supported a range of joint activities in biodiversity and eco-civilization in collaboration with the International Union for the Conservation of Nature (IUCN), which particularly contributed to the advancement of UN SDG 15.



COMSATS

With the support of the Commission on Science and Technology for Sustainable Development in the South (COMSATS), ANSO sponsored joint training on industrial synthetic biotechnology, hosted by the TIBCAS. The training course aimed to provide new solutions to the major challenges for resources, health and environment faced by human beings.



ITTN

ANSO signed a Framework Agreement with the International Technology Transfer Network (ITTN), aiming to explore new cooperation mechanisms and models, pool resources from both sides, and conduct substantive cooperation in training.



IGSNRR, CAS

ANSO signed an agreement with the Institute of Geographic Sciences and Natural Resources Research of the Chinese Academy of Sciences (IGSNRR, CAS). ANSO plans to set up the ANSO Platform for DATA Publishing and Application Show-cases - ANSO-DataPA, which aims to promote data sharing and to play a positive role in the Open Science movement.

1.5

ANSO Online Workshops and Forum

ANSO Topic-Focused Workshops

The 2nd ANSO General Assembly (GA) scheduled for May 2020 was postponed due to the worldwide outbreak of COVID-19. The ANSO Governing Board (GB) agreed to re-schedule the 2nd ANSO GA during its 3rd annual meeting on 9 November 2020. A series of topic-focused workshops proposed by the Russian Academy of Sciences (RAS) was co-organized with ANSO Members and Partners in the format of online meetings during 2021.

List of Workshops in 2021

Date(s)	Topic / Theme(s)	Lead Organizer(s)
3.2-3.3	ANSO Workshop on Climate Change and Its Impact	RAS
4.23	ANSO Workshop on Agriculture and Food Security (Parallel Session of The 4th China (Sanya) International Rice Forum and the Belt and Road Food Security Corridor Forum)	Alliance of International Science Organizations in the Belt and Road Region on Rice & Wheat Variety Technology Innovation and Transfer (ANSO-RWIT)
5.27-5.28	ANSO Workshop on Fundamental Science and Higher Education	Hungarian Academy of Sciences (MTA)
6.11	ANSO International Forum on Green Technology (Parallel Session of The 14 th China Bioindustry Convention)	National Science and Technology Development Agency (NSTDA), Thailand
9.23	ANSO Workshop on Global Health	University of Belgrade, Serbia
10.15	ANSO Workshop on Biodiversity: Ecological Civilization and Ecological Security of the Tibetan Plateau (Parallel Session of COP15)	Institute of Tibetan Plateau Research, CAS(IIPCAS)

Date(s)	Topic / Theme(s)	Lead Organizer(s)
11.18-11.19	ANSO Workshop on Women in Science "Towards a Diversity of Research and Researcher"	MTA; The Organization for Women in Science for the Developing World (OWSD)





The Greater-bay Science Forum 2021

The Greater-bay Science Forum (GSF) 2021, initiated by ANSO and sponsored by the Government of Guangdong Province, with the theme of "Exploring the Future, Sharing Scientific Achievement", attracted over 100 experts and academicians from all over the globe to gather and discuss topics on the frontier of science, thus pushing scientific and technological cooperation in the Greater Bay Area and the whole globe. As one of the sub-forums of GSF, the sub-forum on sustainable development, which was sponsored by ANSO, the Chinese University of Hong Kong (CUHK), and the State Key Laboratory of Urban Water Resource and Environment, invited scientists from worldwide, representatives of ANSO Members and international partners to give the keynote speeches and to extend their congratulations to the meeting.



1.6

New Publication

ANSO is committed to providing useful and productive deliverables associated with significant scientific topics and highlighting good practices in science and technology. In 2021, the ANSO Secretariat released two new publications, ANSO Outreach and ANSO Highlight, which aim to support all members, partners and others to facilitate stepwise progress in S&T development.

ANSO Outreach

In 2021, three issues of ANSO Outreach were released to promote effective technology transfer from research to innovation and from demonstration to market. All the products presented in ANSO Outreach were focused on improving the quality of life and well-being of people all over the world by following the principle of promoting practical, low-cost, and user-friendly technologies. We also aimed to further strengthen international cooperation on Science, Technology, Innovation, and Capacity Building (STIC) by sharing advanced technologies and new products with ANSO members and partners.



Collaborating Institutions



The Suzhou Institute of
Biomedical Engineering
and Technology, CAS



The Institute of Process
Engineering, CAS



Tianjin Institute of Industrial
Biotechnology, CAS

ANSO Highlight

ANSO Highlight aims to share new ideas, methodologies, datasets, and technologies of sustainability research by summarizing the latest progress and achievements of scientific projects funded by ANSO and ANSO partners. Through this publication, we would like to stimulate active collaboration and communication among ANSO members and partners. In 2021, two issues of ANSO Highlight were released by focusing on food security, climate change, biodiversity, and environmental conservation.



Collaborating Institutions

- Multi-model-Integrated Sub-seasonal-to-Seasonal Prediction and Application in Disaster Risk Reduction (ANSO-MISSPAD)

The CropWatch Innovative Cooperation Programme (ANSO-CropWatch-ICP)

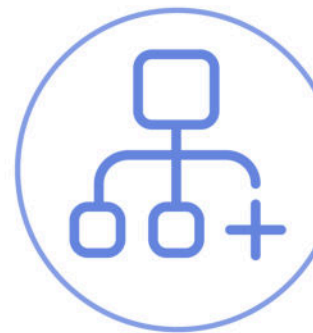
- Research on Ecological Security Assessment and Countermeasures along the China-Mongolia-Russia Corridor in the Belt and Road Region
- Investigation and monitoring of agricultural and forestry pests in the interior of Central Asia

1.7

Organization Development

As a newly established organization, the remarkable progress of ANSO is inseparable from the excellent job done by the Secretariat. Up to now, the Secretariat has grown to 15 full-time employees including five who were recruited this year. Along with the rapid growth, the Secretariat has built a high-performing team that continually produces high-quality work in administration to ensure the smooth operation of ANSO and provides strong and efficient support to carry out all activities through this year.

To attract more young talents, the Secretariat has established part-time and off-site positions for international recruitment and internship cooperation with local universities. In 2021, ANSO signed an MoU with Nanjing University (China) for long-term cooperation.







Capacity Building Program

Capacity Building is one of the major approaches of ANSO, aiming to enhance S&T capability by providing education, training, and exchange opportunities for talents from across the world. Despite all the obstacles caused by the pandemic, we implemented the ANSO Scholarship for Young Talents and ANSO Training Projects as usual in 2021, attracting even more attention and enthusiasm. Moreover, a brand-new project called the ANSO Visiting Fellowship on Mega-Science Facilities was designed and launched in 2021, echoing the needs of ANSO members and beyond.

2.1

ANSO Scholarship for Young Talents 2021

2021 was the second recruitment year of the ANSO Scholarship for Young Talents. The ANSO Secretariat worked closely with the University of Science and Technology of China (USTC) and the University of Chinese Academy of Sciences (UCAS) to refine and implement the program.

The application process started in December 2020 and ended at the end of April 2021. Despite the pandemic, over 6000 applicants from more than 110 countries applied for the scholarship in 2021, representing all continents. 300 PhD awardees and 200 Master's awardees were selected following strict screening and merit-based review procedures, and were enrolled at the target universities in September 2021. The ANSO Secretariat also coordinated ANSO member recommendations and supervised the review process. 13 of the 20 recommended candidates were selected after the expert review.

Additionally, the Secretariat also made a promotional video for the ANSO Scholarship which was distributed to CAS institutes, ANSO members, collaborators, UCAS, and USTC.

By the end of October 2021, the new Call for Applications was released, with simplified application procedures and better programs.



<http://www.anso.org.cn/programmes/talent/scholarship/>

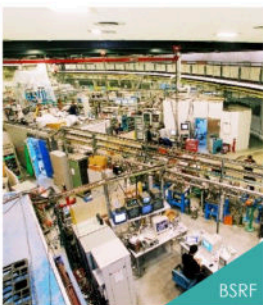
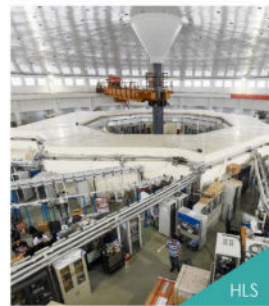


2.2

ANSO Visiting Fellowship (on Mega-science Facilities)

The ANSO Visiting Fellowship (on Mega-Science Facilities) is a new project launched in 2021. It provides scholars worldwide an opportunity to access high-impact & high-quality mega-science facilities in China and to address scientific problems of common interest to both academia and society. ANSO provides a competitive stipend for the Fellows. Eight facilities that joined the project are: FAST (Five-hundred-meter Aperture Spherical Radio Telescope); LAMOST (The Large Sky Area Multi-Object Fiber Spectroscopic Telescope); EAST (the Experimental Advanced Superconducting Tokamak); SHMFF (the Steady High Magnet Field Facility); CSNS (China Spallation Neutron Source); BSRF (Beijing Synchrotron Radiation Facility); HLS (Hefei Light Source); and SSRF (Shanghai Synchrotron Radiation Facility).

In 2021, the fellowship was open for application worldwide from late April to June 2021. From July to September, qualification screening, and preliminary and expert reviews were conducted, and 29 candidates were selected. They are active experts from both developed countries like the U.S. UK, Italy and developing countries like Argentina, India, Pakistan, Russia, Ukraine and so on.



2.3

ANSO Training 2021

Due to the pandemic, some planned onsite training workshops were postponed. Instead, a series of online training exercises were organized in the fields of green technology, agricultural monitoring, leadership enhancement, disaster risk reduction, synthetic biotechnology, vitro diagnostic technology, and big data.

22 March-28 May 2021

CropWatch-ICP Online Training Workshop

Organized by Aerospace Information Research Institute, CAS



28 June 2021

Training Course for Water Purification Equipment Operating and Maintenance Personnel

Organized by XIEG, CAS



24-30 April 2021

Advanced Training Program for Agricultural Technology Innovation Transfer on "Belt and Road" Rice

Organized by ANSO-RWIT

20-30 December 2021

2nd International Training Course on Industrial Synthetic Biotechnology

Organized by TIBCAS

26 October-5 December 2021

The 13th Advanced Field-course in Ecology and Conservation

Organized by Xishuangbanna Tropical Botanical Garden, CAS



15-24 November 2021

International Training Course on Advanced In Vitro Diagnostic Technology

Organized by Suzhou Institute of Biomedical Engineering and Technology, CAS

28-31 October 2021

International Training Workshop on Disaster Risk Reduction Knowledge Service in China-Pakistan Economic Corridor

Organized by IGSNRR, CAS



3

Science-based Advisory

The ANSO Science-based Advisory Program aims to provide development policy making to governments based on ANSO scientific research, assessment and consultation, to support regional and national sustainable development.

3.1 Reports

Up to now, a total of 62 development reports (including epidemic forecasts), which are based on ANSO-supported projects and networks have been submitted to CAS and relevant administrations.

- The Belt and Road Science-based Advisory Report (13 issues have been published)
- ANSO Pandemic Forecast Information Platform Monthly Report (10)
- ANSO Pandemic Forecast Information Platform Weekly Report (39)



3.2 Book

"The B&R Innovative Development Report" is led by BAI Chunli, President of ANSO, under the guidance of chief scientists and experts from the ANSO network and think tank, with the UN SDGs and building a community with a shared future for mankind as the theme. The report highlights research and discussion on major issues of human development and well-being. The content of the series covers life and health, economic society, natural resources and environment, and other fields, and explores the challenges and solutions faced by innovation and development of the B&R in the new era and new situation in an all-round and multi-perspective. Each year, the series will organize reporting from different aspects on major issues in the construction of the path for B&R innovation from a different perspective, with a view to providing scientific support and policy references for high-quality and sustainable development in the B&R.





4

Industrial Partnership for Tech-transfer

ANSO continues to establish partnerships with various industrial companies and private sector actors to support technology transfer. The ANSO industrial partnership aims to improve the competitiveness of technologies developed by ANSO members. It is also an investment model that promotes greater interactions with capital markets and expands the range of resources for long-term funding commitments or investment in ANSO-supported activities.



4.1

Continuous Collaboration with Zhifei Longcom Biopharmaceutical Co., Ltd. on Overseas Production of the Vaccine



ANSO has played a pivotal role in facilitating the phase III clinical trials of CAS-Developed Recombinant Protein COVID-19 Vaccine implemented in Uzbekistan. This vaccine, jointly developed by the Institute of Microbiology of CAS and Anhui Zhifei Longcom Biopharmaceutical Co., Ltd, has been approved for emergency use in Uzbekistan and China. By September, Anhui Zhifei Longcom Biopharmaceutical and Uzbekistan had established bilateral cooperation on vaccine production in Uzbekistan. It was ANSO's effort to make Chinese-made vaccines a global public good.



4.2

MoU with China Construction Investment Group Co., Ltd.



Cooperation with large enterprises like China Construction Investment Group Co., Ltd. (CCIG) marks an important step for ANSO making more substantial contributions to the socio-economic development of B&R region.





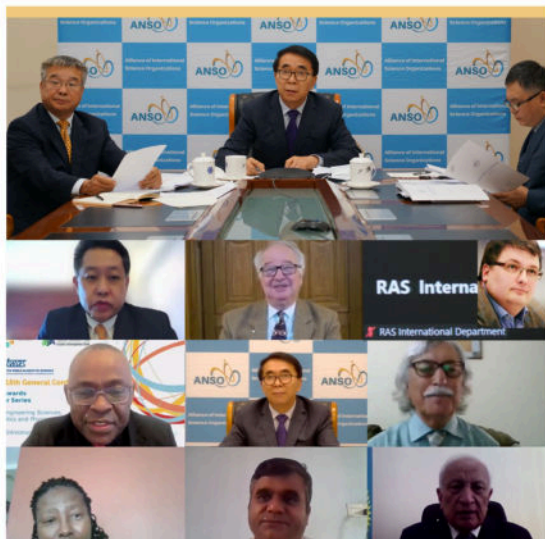


Networks

Although the pandemic has brought many difficulties, we still worked hard to expand ANSO's networks. A number of organizations have expressed their interest in joining ANSO, of which eight were endorsed during the 4th ANSO Governing Board Meeting in 2021. Meanwhile, by the end of 2021, the number of ANSO scientific associations reached 19. ANSO also furthered networks by continuing to release publications to inform and connect members and partners.

5.1

The 4th ANSO Governing Board (GB) Meeting

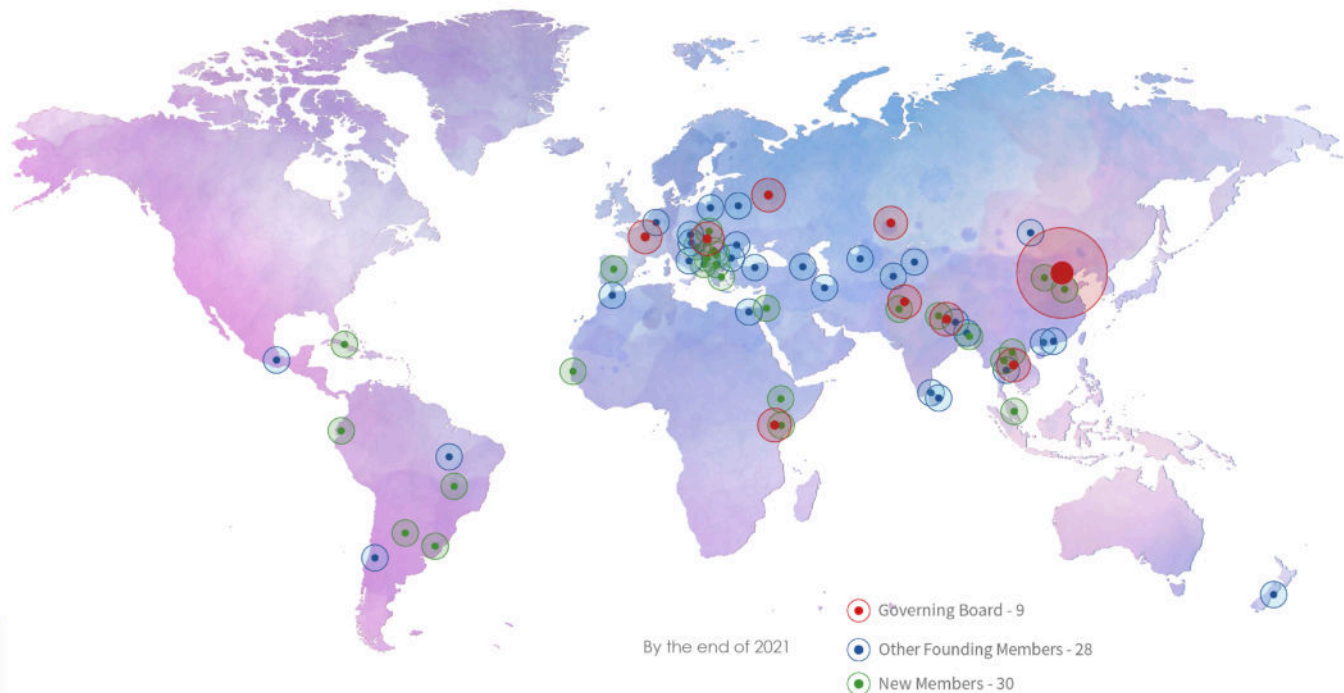


The 4th ANSO Governing Board (GB) Meeting was successfully held online with the participation of representatives from all 9 GB organizations on 9 October 2021. Prof. BAI Chunli, President of ANSO, extended both a welcome speech and a concluding remark. Prof. CAO Jinghua, Executive Director of ANSO Secretariat, gave the ANSO progress report 2021. Prof. M. Qasim Jan, Vice President of ANSO, proposed additional amendment suggestions to ANSO Statutes and also shared his suggestions on the election of the new GB given the special circumstances. The major decisions and consensus reached at the meeting are as follows.

- Decided to call this GA a special GA as it is to be held in a special situation and in an online manner. Due to the uniqueness of the GA, matters cannot be taken up in a “business-as-usual” manner and an innovative approach must be adopted, particularly concerning the election of the new GB.
- Reached consensus on amending Article 8.3 of the ANSO Statutes and further confirmed all the amendment suggestions endorsed by the previous GB that was held on 9 November 2020.
- Endorsed all the 8 new applications to join in ANSO that were submitted since the previous GB meeting and further confirmed the 22 applications endorsed in the previous GB meetings. All the applicants will be reviewed by GA.
- Discussion and review on the future development strategies, priorities and activities of ANSO.

5.2

ANSO New Members

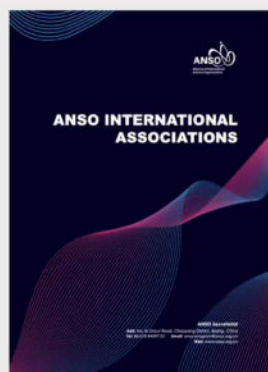


The following eight applications for ANSO membership were endorsed by the Governing Board during its fourth meeting on 9 October 2021.

- Experimental Technology Research University Yachay Tech, Ecuador
- Cuban Academy of Sciences, Cuba
- Institute of International Politics and Economics (IIPE), Serbia
- Instituto Argentino de Radioastronomía (IAR), Argentina
- Buenos Aires Faculty - National Technological University of Argentina (UTN-FRBA), Argentina
- Universidad Nacional de San Juan, Puerto Rico, Argentina
- Universiti Tunku Abdul Rahman (UTAR), Malaysia
- The Instituto de Astrofísica de Canarias (IAC), Spain

5.3

ANSO Publication 2021



5.4

Activities of ANSO International Associations

B&R Environmental Technology and Industry Alliance

On 28 May, the B&R Environmental Technology and Industry Alliance held its experience sharing conference on "Going Global" in the post-pandemic era, with the aim of discussing how environmental protection enterprises could prepare for a better and steadier "go-global" pathway ahead. More than 30 representatives from seven entities, e.g., ANSO, RCEES, USTB, participated in the conference and shared their experience and thoughts.

With support from ANSO, the alliance has finished the two rounds of the study of Inter-laboratory Comparison on Manganese and Permanganate Index in Water (2020), whose certificates and reports have already been sent to the participating member states. The English version of the analysis reports have been published online. This will further prompt bilateral and multilateral cooperation among the B&R area under the guidance of UN SDGs.



Association for Combating Desertification (ACD)

On 17 June, ANSO-ACD held the Taklimakan Desert Forum, with the theme of "Protect Desert Ecology, Beautify Xinjiang Lands". More than 300 representatives from relevant international organizations as well as Chinese scientific research institutes, universities, enterprises, and institutions participated in the event. BAI Chunli, President of ANSO, pointed out that ANSO-ACD had not only enlarged the fields of desertification prevention and control but also expanded China's influence in B&R countries.

By integrating themed publicity, technology sharing, and science communication, the forum gave full play to the global leading role of China's desertification control technology, gathered consensus on the green development of the Silk Road from scientists from B&R countries, strengthened public awareness on combating desertification, and promoted the best practices of China's desertification control technology and achievements in B&R countries.



5.5

List of ANSO Meetings 2021

Date(s)	Event(s)	Main Organizer(s)
1.19	WWRP/WCRP S2S project phase II	The World Weather Research Program
1.20	The second international symposium of mapping Asia plants held online	IUCN
2.23	The webinar on the south-south and triangular cooperation for socio-economic development in south	COMSATS
3.2-3.3	ANSO online open conference: climate change and its impacts	RAS
3.19	Inauguration meeting of momentous advisory program	CAS
4.14	The inauguration meeting of the COMSATS joint center for industrial biotechnology	TIBCAS
4.21-23	ANSO online open conference: agriculture and food security	ANSO-RWIT
5.4	The AASSA-PAS webinar series on pandemic preparedness: science and countermeasures	The Association of Academies and Societies of Sciences in Asia (AASSA)
5.13-5.14	The 20th science council of Asia conference	Government of Guangdong Province

Date(s)	Event(s)	Main Organizer(s)
5.21	MoU with construction investment in Engineering Technology Co., Ltd (CCIG)	CCIG
5.25	The online workshop on the application of CropWatch for agricultural monitoring in Nigeria	Aerospace Information Research Institute, CAS
5.27-5.28	ANSO online conference: fundamental science and higher education	MTA
6.4	Pujiang innovation forum-workshop for global health and development summit: vaccines and global health	Ministry of Science and Technology of the People's Republic of China
6.6	Meeting on research on the construction of new pattern of "B&R" science cooperation	ANSO Secretariat
6.11	ANSO online conference: green technology	National Science and Technology Development Agency
6.16	Impact of urbanization on antibiotic resistance in different microplastics: evidence from a large-scale whole river analysis	Chinese Research Academy of Environmental Sciences
6.17	Taklimakan desert forum	Xinjiang Institute of Ecology and Geography(XIEG), CAS
6.22	The "Belt & Road" inter-laboratory comparison program	TIBCAS
7.7	The "Belt and Road" innovation and development institute network	ANSO; Research Institute of the Belt and Road, UCAS
7.21-23	The international forum on black soil conservation and utilization held in Changchun	Northeast Institute of Geography and Agroecology, CAS

Date(s)	Event(s)	Main Organizer(s)
7.27	MoU with Liaoning provincial people's government	Liaoning Provincial People's Government
7.28-29	2021 annual symposium of the ANSO-MISSPAD project	National Astronomical Observatory of the Chinese Academy of Sciences
8.30	Exhibition "The Beauty of Life on Earth"	ANSO; MAB-China; UNESCO Beijing Office
9.12	The launching ceremony for the international program office (IPO) of the ANSO "Green Aral Sea Initiative"	XIEG, CAS
9.23	ANSO Online conference on Global Health	The University of Belgrade
10.9	The Fourth ANSO Governing Board Meeting Held Online	ANSO Secretariat
10.13-10.16	The 11th Forum on China's Rural Water Environment Governance and the Forum on Environmental Infrastructures in Rural Area	RCEES; CAS; EMCC; CMEA
10.15	CBD COP15-Ecological Civilization Forum, Session VI: Ecological Civilization and Ecological Security of the Tibetan Plateau	ITPCAS; South China Institute of Environmental Science, Ministry of Ecology and Environment of the People's Republic of China
11.1-11.3	Research and Innovation Forum on Coronavirus, The World Flu Day 2021 Symposium	IMCAS; ANSO
11.3	The China-Russia Forum on Infectious Disease Prevention and Control	CAS; RAS; IMCAS

Date(s)	Event(s)	Main Organizer(s)
11.6	Forum on Green Transformation and High Quality Development of Resource-based Cities in New Era	Regional Ecological Economics Professional Committee of the China Ecological Economics Society; World Resources Research Branch of China Society of Natural Resources; the Inner Mongolia Ecological Economy Research Society
11.17	The press conference of "Distributed Water Purification Station System for Drinking Water Safety in Rural Regions of Kyrgyzstan"	The State Agency for Architecture, Construction, Housing and Public Utilities under the Government of the Kyrgyz Republic; CAS RCEECA (Bishkek)
11.18-19	ANSO Workshop on Women in Science – "Towards A Diversity of Research and Researcher"	MTA; OWSD; CAS
11.19	The International Workshop on the Environmental Dimension of Antimicrobial Resistance	UNEP; IUECAS; UNEP; HKU
12.12	Greater-bay Science Forum (GSF)- The Sub-Forum on Sustainable Development of GSF	State Key Laboratory of Urban Water Resource and Environment of China; CUHK
12.16-17	The International Symposium on Biodiversity Conservation & Sustainable Development in Arid Lands	XIEG, CAS





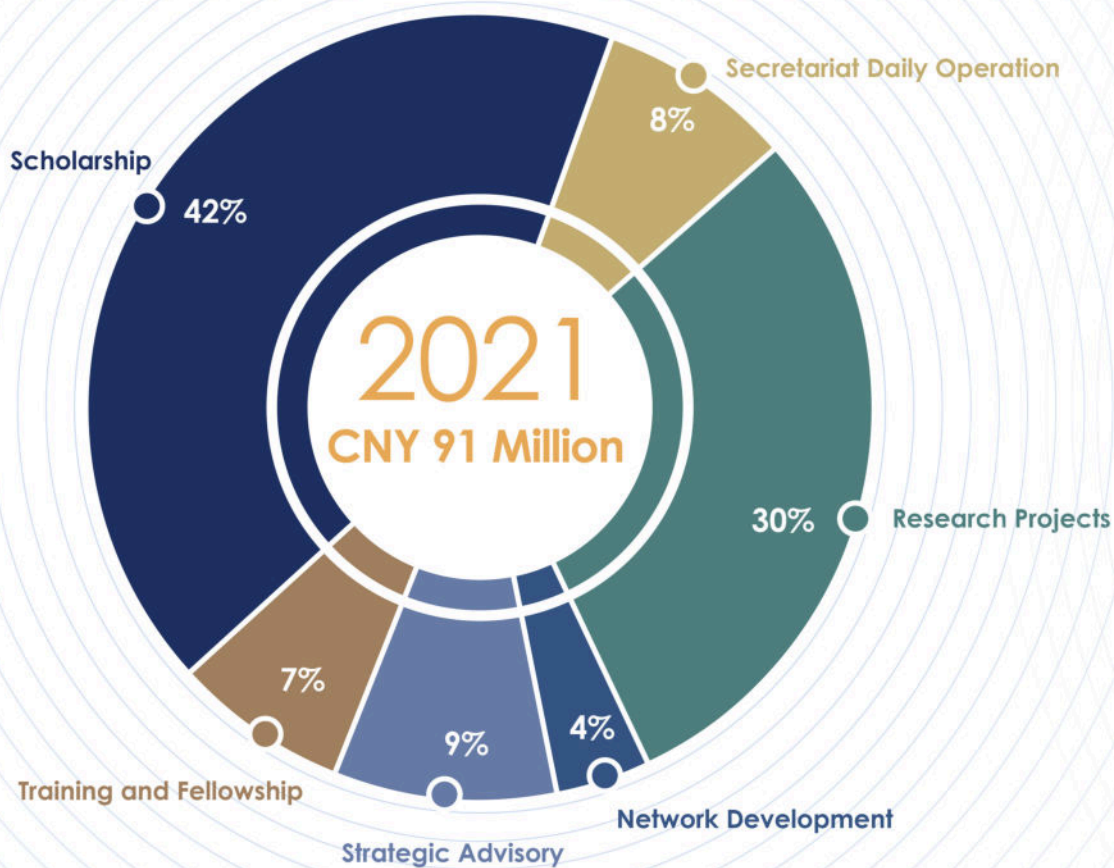
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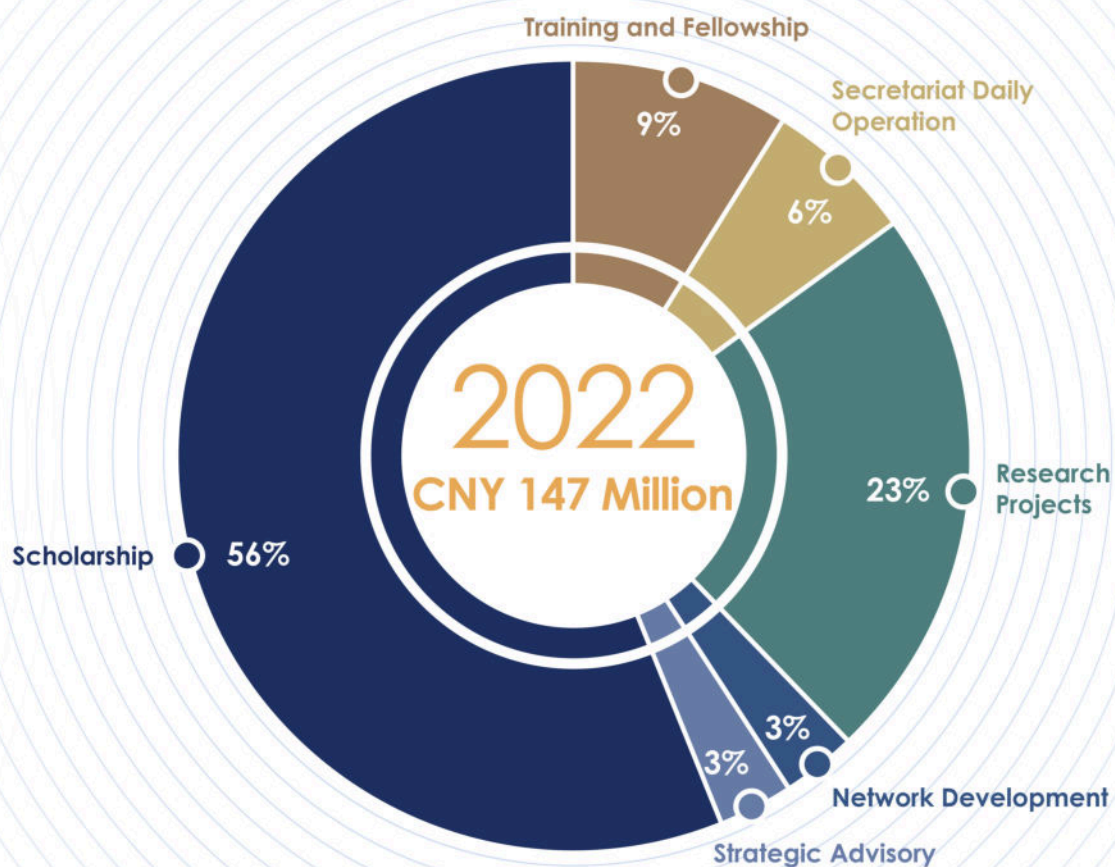
Financial Report



2021 Annual Expenditure



2022 Budget Plan



Other Source of Funding:

- **STIC Endowment**

In collaboration with OVERSEAS CHINESE CHARITY FOUNDATION OF CHINA

Initial capital: RMB 50 million

Can use the earnings from ANSO Investment fund

7

Work Plan 2022



In the 4th ANSO Governing Board meeting on 9 October 2021, the following activities were proposed by board members for 2022:



Host the Second ANSO GA



Organize high level scientific conferences and forums with international organizations, and actively participate in the International Year of Basic Sciences for Sustainable Development



Develop joint funding mechanism/projects with ANSO members, partners, international funding agencies and other organizations



Strengthen the ANSO industrial partnership and find more resources to support ANSO



Establish more ANSO regional offices both inside and outside China



Continue to develop high quality ANSO members, especially reaching the countries that are not represented yet



Appendix

List of Acronyms

AASSA	Association of Academies and Societies of Sciences in Asia
ACD	Association for Combating Desertification
ANSO-APRD	Alliance of Poverty Reduction and Development
ANSO-MISSPAD	Multi-model-Integrated Subseasonal-to-Seasonal Prediction and Application in Disaster Risk Reduction
ANSO-RWIT	Alliance of International Science Organizations in the Belt and Road Region on Rice & Wheat Variety Technology Innovation and Transfer
ASEAN	Association of Southeast Asian Nations
B&R	Belt and Road
BSRF	Beijing Synchrotron Radiation Facility
CAS	Chinese Academy of Sciences
CBD COP15	Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity
CCIG	China Construction Investment Group Co., Ltd
China CITES SA	Endangered Species Scientific Commission, P.R. China
CMEA	China Municipal Engineering Association
COMSATS	Commission on Science and Technology for Sustainable Development in the South
CropWatch-ICP	The CropWatch Innovative Cooperation Programme
CUHK	The Chinese University of Hong Kong
CSNS	China Spallation Neutron Source
EAST	Experimental Advanced Superconducting Tokamak
EMCC	Ecological Municipal Construction Committee
FaSPIT	The Fast-Track Science-Policy Interactive Training Program

FASTX	Five-Hundred-Meter Aperture Spherical Radio Telescope
GA	General Assembly
GB	Governing Board
GSF	Greater-bay Science Forum
HKU	University of Hong Kong
HLS	Hefei Light Source
IAC	Instituto de Astrofísica de Canarias
IAR	Instituto Argentino de Radioastronomía
IBCAS	Institute of Botany, Chinese Academy of Sciences
ICIMOD	International Centre for Integrated Mountain Development
IPE	Institute of International Politics and Economics (Serbia)
IGSNRR, CAS	Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences
IMCAS	Institute of Microbiology, Chinese Academy of Sciences
IPO	International Program Office
ISZS	International Society of Zoological Sciences
ITPCAS	Institute of Tibetan Plateau Research, Chinese Academy of Sciences
ITTN	International Technology Transfer Network
IUCN	International Union for Conservation of Nature
IUECAS	Institute of Urban Environment, Chinese Academy of Sciences
KIBCAS	Kunming Institute of Botany, Chinese Academy of Sciences
LAMOST	Large Sky Area Multi-Object Fiber Spectroscopic Telescope
MAS	Mongolian Academy of Sciences
MORATOXA	Monitoring and Risk Assessment of Toxic Chemicals in the Air
MoU	Memorandum of Understanding
MTA	Hungarian Academy of Sciences

NAST	Nepal Academy of Science and Technology
NSTDA	National Science and Technology Development Agency
OWSD	Organization for Women in Science for the Developing World
PAS	Pakistan Academy of Sciences
RAS	Russian Academy of Sciences
RCEES	Research Center for Eco-Environmental Sciences
S&T	Science and Technology
SHMFF	Steady High Magnet Field Facility
SSRF	Shanghai Synchrotron Radiation Facility
STIC	Science, Technology, Innovation, and Capacity Building
TIBCAS	Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences
TU	Tribhuvan University
UCAS	University of Chinese Academy of Sciences
UDG	University of Donja Gorica
UN SDGs	United Nations Sustainable Development Goals
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-MAB China	The Chinese National Committee for UNESCO's Man and the Biosphere Programme
USTB	University of Science and Technology Beijing
USTC	University of Science and Technology of China
UTAR	Universiti Tunku Abdul Rahman
UTN-FRBA	Buenos Aires Faculty - National Technological University of Argentina
WCRP	World Climate Research Programme
WWRP	World Weather Research Programme
XIEG, CAS	Xinjiang Institute of Ecology and Geography of the Chinese Academy of Sciences



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