

The ANSO Online Open Conference initiative hosted its first workshop with climate change as its theme on 2-3 March, 2021. Decided at the ANSO Governing Board meeting in November, 2020 and co-organized with the Russian Academy of Sciences and in partnerships with the concerned ANSO Members, this international initiative strives to facilitate dialogue on pressing and major global science and technology themes and issues with the organization and convene of a series of workshops in 2021 under different topics such as Climate Change, Public Health, Food Safety, Agriculture, Biodiversity, Fundamental Sciences & Higher Education, Ecology & Green Technology, Innovation & Tech-Transfer, etc.

We find ourselves facing growing threats from climate change and related challenges, once considered an issue for the distant future, now firmly impacting the present. The emerging and increasing magnitude of climate change was the reason for our choosing the topic as the opening workshop. By its nature, climate change calls for international cooperation and interdisciplinary communication and efforts in both understanding and addressing the challenges caused. These are lots of crucial scientific and technological issues to be understood for the better services of the global community, a founding principle of ANSO.

We invited more than 20 world-class scientists and experts to speak who are from more than 7 countries including China, Russia, Belgium, Nepal, Mongolia, Hungary, Germany. All the presentations were well made, which attracted over 5000 viewers at high point on YouTube and Bilibili.

Prof. Alexander Sergeev, President of RAS and Vice President of ANSO, and Prof. Chunli Bai, President of ANSO, both gave a warm welcome on behalf of the organizing committee. In Prof. Sergeev's opening address, he introduced the background and key topics of the meeting.



The ANSO Online Open Conference Hosts its First Workshop on

“Climate Change and Its Impact”



Prof. Bai called for the enhancement of multilateral and multi-disciplinary cooperation among the ANSO members and partners to cope with emerging challenges. Prof. Jian Liu, chief scientist of UNEP and Prof. Jürg Luterbacher, chief scientist of WMO, both highlighted the big gaps in climate change research for developing countries, especially in the B&R regions. They delivered strong messages about strengthening the capacity building of scientific research and policy making in these areas through international cooperation.

A number of excellent talks presented the evidence and projections of climate change in hotspot areas, such as the Tibetan Plateau, Hindu Kush Himalaya, the Arctic, the Far East of Russia and Northern Eurasia. The increasing glacial retreat, permafrost thawing and extreme weather in recent decades have resulted in significant impacts to the environment in climate change hotspots and the regions downstream of the hotspots. Human wellbeing, in terms of water resources, biodiversity, ecosystem services, food supply and energy security is threatened by climate change, especially in the developing countries of the B&R regions. Mitigation

and adaptation strategies supporting climate change policy formation were also presented. Plans and ideas for water management in the Yangtze River basin, ecological restoration in the Himalayan region and agricultural adaptation for the Asian and African regions were shared with the participants. To meet the goals of the Paris Climate Agreement, China's policy on carbon neutrality and emissions reduction plan were introduced in details.

Prof. Yuri Balega, Vice President of RAS, and Jinghua Cao, Executive Director of the ANSO Secretariat, co-chaired the workshop. In his wrap-up, Prof. Cao praised the wisdom and stimulating ideas from all the speakers. He further emphasized ANSO as a unifying platform to facilitate cooperation on global challenges.

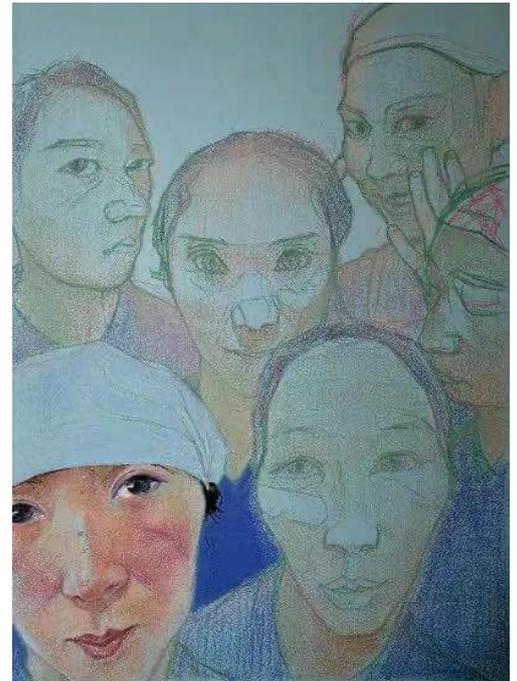
ANSO Highlight

ANSO Project “Women’s Capacity Building & Empowerment” Focuses on the “Female Great Wall” and Women’s Health during COVID-19

ANSO Facilitates the CAS-Developed Recombinant Protein COVID-19 Vaccine to be on the Market in Uzbekistan

As the world celebrated the International Day of Women and Girls in Science on February 11, the ANSO Project “Women’s Capacity Building and Empowerment in B&R Countries: Pillars of Global Science and Environmental Sustainable Development”, released its latest study entitled “COVID-19 and the ‘Female Great Wall’: Significance and Challenges in Women’s Health and Development”.

The study summarizes women’s global contribution to fighting against COVID-19, including from the work of female health workers, researchers, community social workers, industrial workers, family managers, and political leaders, which collectively symbolizes the “Female Great Wall”. The study further analyzes the short-term and mid- to long-term impact of COVID-19 on women’s health, including disruption to women’s health services, the rising family care burden, domestic violence, shocks to women’s economic security, and the retreat of women’s standing and rights. The study makes several recommendations to governments to safeguard women’s sustainable health and development by strengthening the focus on women’s health, taking advantage of the pandemic era and adopting multi-sectoral measures that span women’s life course.



Thanks to continuous efforts from different parties and countless webinars across time zones, ANSO has played a bridging role in the generation of results for over 7000 subjects from the Phase III Clinical Trial in Uzbekistan. The good news is finally out! The results show good safety and high efficacy outcomes.

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

In addition, ANSO also coordinated with the Pakistan Academy of Sciences to promote a cooperative vaccine trial in Pakistan which will be carried out in the near future.

"I thank you, all ANSO and Zhifei leaders and the team for all your support to bridge this collaboration!!! We achieved this level because of great teamwork and friendship. I believe that this is the beginning and the best is yet to come!"

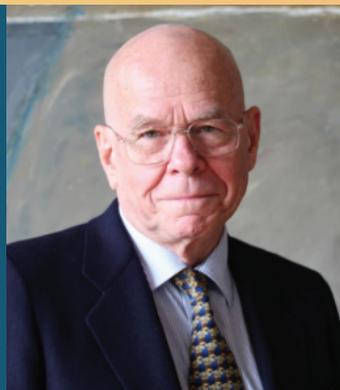
--- Mr. Ibrokhim Abdurakhmonov, the Minister of Innovation and Development of the Republic of Uzbekistan



**CAS
Award**



The Award for International Scientific Cooperation of CAS in 2020



Karl Barry Sharpless

United States

Recommended by
the Shanghai Institute of
Organic Chemistry,
Chinese Academy of Sciences

"As long as there is a blackboard and chalk, we all speak the same language. My first impression was of the warmth and keen intelligence, and wonderful enthusiasm of SIOC's chemists."

—Karl Barry Sharpless

Professor Sharpless was the winner of the Nobel Prize in Chemistry in 2001 and is a foreign academician of the Chinese Academy of Sciences (CAS), an academician of the National Academy of Sciences and of the American Academy of Arts and Sciences, Chair Professor of The Scripps Research Institute (TSRI) and founder of the field of asymmetric catalysis and click chemistry.

Professor Sharpless and the Shanghai Institute of Organic Chemistry (SIOC) have maintained long-term and close academic exchanges since the 1990s. In 2016, he was hired as a distinguished professor of the institute and established a laboratory to lead on a new generation of click chemistry research based on Sulfur Fluoride Exchange (SuFEx). Under his leadership, CAS has made a series of breakthroughs in research on synthetic chemistry methods, providing powerful tools for organic synthesis, medicinal chemistry, chemical biology and materials science, and especially for the rapid discovery of drug lead compounds. Relevant results were selected as one of the top ten outstanding papers in the world in 2019 by Nature.

Professor Sharpless pays close attention to the country's scientific research development and the discipline of strategic planning, and has participated in important frontier and academic seminars of our academy many times, always providing suggestions. Working at The Scripps Research

Institute, he continues to train young Chinese scientists in the field of chemistry for decades, and has personally participated in the recruitment and training of graduate students using the laboratories established by CAS. Professor Sharpless has trained many outstanding young scientific talents and researchers forming the backbone of the field of chemistry in China, greatly enhancing the country's technological innovation capabilities in the field of synthetic chemistry.



The China-Sri Lanka Joint Centre for Education and Research (CSL-CER) of the Chinese Academy of Sciences (CAS) plays an important role due to its location on the 21st Century Maritime Silk Road. The diplomatic ties between Sri Lanka and China have been strengthened over the decades in all spheres.

Climate change in the Indian Ocean is an important issue that has close attention paid to it by the Intergovernmental Panel on Climate Change (IPCC) of the United Nations (UN). It is one of the key areas of forecasting regular flooding in East Asia, especially in China. Moreover, just off the southern coast of Sri Lanka is one of the key international shipping routes in the Indian Ocean. Sri Lanka is an important partner of China in the area of commercial shipping.

Due to uncoordinated development activities, Sri Lanka is currently facing numerous issues with safety standards and capacity in disaster prevention and mitigation. In addition, there is high incidence of Chronic Kidney Disease of Unknown etiology (CKDu) in the north-central region of Sri Lanka. Consequently, a collaboration with China would

improve facilitation of disaster risk reduction, management and mitigation, and clean & safe drinking water technology.

A Memorandum of Understanding for cooperation was signed between CAS and the Ministry of Higher Education of Sri Lanka in the presence of the Their Excellencies the Presidents of China and Sri Lanka to establish the CSL-CER in August 2015 officially. CSL-CER was established as the first overseas physical oceanography observation centre of CAS. The founding parties of the CSL-CER were the South China Sea Institute of Oceanology of CAS, and the University of Ruhuna, Sri Lanka.

In addition to CSL-CER, a China-Sri Lanka joint research and demonstration center for water technology was recently established at the University of Peradeniya, Sri Lanka. There are also more than 80 Sri Lankan students pursuing their post-graduate studies at UCAS and many of them are studying oceanography and marine sciences. As a result of more than 10 years of cooperation, a group of young Chinese and Sri Lankan scientists have now been trained to focus their scientific research on earth and environment sciences.



■ CSL-CER Vision:

The main research focus of the CSL-CER is on the monsoon climate and marine environment in the tropical Indian Ocean. This cooperation will help Sri Lanka to achieve the UN SDGs of “Climate Action”, “Clean Water and Sanitation for All”, and “Quality Education”. It is intended that the CSL-CER will expand and develop gradually as the South Asian joint scientific research and talent training platform.

■ Mission and Tasks:

- ▶ Conduct continuous observations of the monsoon climate, sea level change, and seasonal ocean currents to increase scientific understanding of ocean climate change in the Indian Ocean;
- ▶ Develop a high-resolution marine meteorological disaster forecasting system to enhance Sri Lanka’s disaster prevention and mitigation capacity;
- ▶ Provide a water purification technology to improve the quality of drinking water that is supplied to the central and north-central parts of Sri Lanka and CKDu-affected districts;

▶ Promote cooperation on marine sciences between China and Sri Lanka, and create more collaborative endeavors through cultural exchange and bilateral friendship;

▶ Train a team of young scientists from China and Sri Lanka who are committed to scientific research on earth sciences and environment sciences in the tropical Indian Ocean.

