

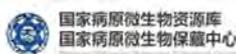
President Chunli Bai Shares COVID-19 Information with ANSO Members and Partners

The outbreak of the COVID-19 pandemic poses tremendous challenges for the whole world, reminding us more than ever of the importance of global solidarity and collaboration in addressing common challenges.

On 27 April 2020, Prof. Chunli Bai, President of ANSO and CAS, sent a letter to all ANSO Member Organizations voicing determination to work with ANSO Members and partners to overcome the difficulties presented by the COVID-19 pandemic, and emphasizing the role and goal of ANSO in promoting information sharing.

In his letter, Prof. Bai shared information on two COVID-19 databases developed by CAS scientists, and one online column on diagnosis and treatment measures that has been set up by the National Health Commission of People's Republic of China. The two CAS databases include the comprehensive integration of genomic and proteomic sequences as well as the metadata information for 2019-nCoV. The databases are: the 2019 Novel Coronavirus Resource developed by the Beijing Institute of Genomics, and the Novel Coronavirus National Science and Technology Resource Service System developed by the Institute of Microbiology.

Enthusiastic responses have been received from ANSO members through expressions of gratitude and encouragement for the generosity of information and knowledge sharing. As Dr. S. M. Junaid Zaidi (the Executive Director of COMSATS) puts it in his letter, "I have no doubt in my mind that, through our united efforts, we will rise above this challenge". Prof. Jinghua Cao, Executive Director of the ANSO Secretariat, also distributed this letter to ANSO working group colleagues. More communication and collaboration activities are on the way.



Related Links: <https://bigd.big.ac.cn/ncov?lang=en>
<http://nmdc.cn/nCov/en>
<https://covid19.21wecan.com/covid19en/index.shtml>

ANSO COVID-19 Special Issues and Online Column

Immediately after the global outbreak, two COVID-19 special issues were published as ANSO Updates to help ANSO Members and other partners to combat this pandemic (Update download: <http://www.anso.org.cn/index/publications/202003/P020200320797040864704.pdf>, <http://www.anso.org.cn/index/publications/202004/P020200408630690594586.pdf>). A Special COVID-19 Column was set up on the ANSO Website to distribute information, knowledge, diagnosis and treatment measures for COVID-19. The ANSO Secretariat also invited related member organizations to provide country reports on COVID-19 for this Column (<http://www.anso.org.cn/news/coron/Handbook/>).

COVID-19 Prevention and Treatment Handbooks

To share the experiences and measures of frontline experts, the ANSO Secretariat distributed high-quality handbooks through the ANSO Website. The handbooks are the "COVID-19 Prevention and Treatment" published by the First Affiliated Hospital, Zhejiang University School of Medicine, "The Diagnosis and Treatment Protocol" published by the National Health Commission of the People's Republic of China, and the "China's Fight Against COVID-19" published by the China Watch Institute. These handbooks can be downloaded from the ANSO Website (<http://www.anso.org.cn/news/coron/Knowledge/>).

I. ANSO Science-based Advisory Program

ANSO provides science-based advice for public good, and the organization's scientific outputs may be made available to this end. ANSO will initiate more strategic studies to address issues of regional or global importance. In so doing, it will give science-based advice to the ANSO priorities and actions.

■ 3C Approach for Advancing SDGs

The 3C approach is an important theoretical achievement proposed by Prof. Bojie Fu and his research group at the Beijing Normal University, China, which is expected to give guidance to the effective obtainment of the UN sustainable development goals (SDGs). The 3C approach is a systematic scheme composed of classification, coordination and collaboration. It not only emphasizes the importance of previous studies on transformations, but also draws on the key methods and approaches adopted by China in the Belt and Road Initiative, such as ecological civilization construction and targeted poverty alleviation projects.

Among the 3C constituents, classification is the foundation, aiming to identify the main features of the different SDGs, the differences between countries, and the influence of scale. Coordination is the core link, aiming to ensure policy coherence among countries and departments by formulating reasonable policies. Collaboration is the means necessary to achieving the SDGs as a whole. This approach calls for significantly greater collaboration in economy, science & technology and culture. In addition, each constituent interacts with the others. For example, classification



A systems approach for advancing the SDGs: Classification–Coordination–Collaboration.

requires the coordination and collaboration of multiple stakeholders, and classification can also enhance coordination and promote more efficient collaboration.

Faced with the pandemic challenge today, China has effectively contained the spread of the COVID-19 in China by adopting the joint prevention and control strategy. It can be summarized as a combination of actions involving coordination, classification, and collaboration. Coordination in this context refers to the organization of the medical teams and resources needed to combat the epidemic, with the government as the lead actor. Classification is employed to divide the outbreak areas and their associated risk factors into different levels, bringing into consideration the number of confirmed cases and the factors closely related to disease transmission, including population characteristics and the living environment. Collaboration refers to the cooperation among the government, social organizations and individuals. These measures also further verify the effectiveness of the 3C framework. By the 3C framework, Prof. Fu and his research group have introduced China's experience to the world, and call on all countries to collaborate with each other and adopt a systematic approach to jointly fight the epidemic.

COVID-19 has exacerbated the difficulty in achieving various SDGs by 2030. However, a timely adoption of the 3C approach will help countries and the world to strengthen global partnerships, based on which, we can jointly better advance the implementation of all SDGs.

This study was supported by the National Key Research and Development Program of China, the National Natural Science Foundation of China, and the ANSO Science-based Advisory Program.

Sources: Fu B., Zhang J., Wang S., Zhao W., 2020. Classification–coordination–collaboration: A systems approach for advancing sustainable development goals. National Science Review, DOI: 10.1093/nsr/nwaa048. Zhao, W., Zhang, J., Meadows, M.E., Liu, Y., Hua, T., Fu, B., 2020, A systematic approach is needed to contain COVID-19 globally. Science Bulletin, 65:876-878. DOI: 10.1016/j.scib.2020.03.024.

II. Webinars Between China and Thailand Sharing Diagnosis and Treatment Experiences

Since the outbreak of COVID-19, researchers and medical teams from the University of Science and Technology of China (USTC) have been working day and night with frontline experts on new treatment measures. For the first time, they discovered the effect of Tocilizumab treatment on patients with severe disease and developed a "Tocilizum-

ab Therapy," which is included in China's latest version of the diagnosis and treatment guidelines for COVID-19.

The USTC's research results and clinical experience in "Tocilizumab Therapy" have been actively promoted by ANSO. The National Science and Technology Development Agency of Thailand (NSTDA), one of the ANSO Govern-

ing Board Members, has organized webinars with USTC, inviting experts from Universities and Hospitals across China and Thailand.

On March 30 and April 22, two online meetings were held to share information on the "Tocilizumab Therapy". USTC scientists gave an introduction of the therapy and answered questions raised by the Thai counterparts. Specifically discussed were detailed diagnosis and treatment experiences, as well as medication instructions. The two parties showed determination to jointly overcome difficulties through international scientific collaboration. NSTDA officers also expressed thanks to ANSO for introducing Chinese experiences to Thailand.



Participants from USTC and the First Affiliated Hospital of USTC include Prof. Kun Qu, Prof. Tengchuan Jin, Prof. Binqing Fu, Dr. Xiaowen Hu, and Dr. Hongliang He.

Participants from NSTDA, Mahidol University, Ramathibodi Hospital, and Siriraj Hospital include Prof. Prasit Palittapongarnpim, Dr. Lily Eurwilaichitr, Piyamit Sritra, Boonsong Ongphiphadhanakul, Somnuek Sungkanuparph, Kumthorn Malathum, Mongkol Kunakorn, and Prof. Prasert Auewarakul.

III. ANSO Collaborative Research & ANSO Association

■ CropWatch-ICP Updates Related to COVID-19

At the beginning of the COVID-19 pandemic, people began to worry about food security as the pandemic is likely to affect global food storage, processing, transportation, and even food production to various levels.



Source: Prof. Bingfang WU
The Aerospace Information Research
Institute (AIR), CAS

Agriculture and food security are a major focus and long-term commitment of ANSO in promoting global sustainable development. Recently, ANSO initiated the CropWatch Innovative Cooperation Programme for Agricultural Monitoring (ANSO CropWatch-ICP) to facilitate and stimulate the agricultural monitoring of the "Belt and Road" countries for the advancement of the UN SDG towards zero hunger. The CropWatch team of the Chinese Academy of Sciences has many years of experience in the monitoring and forecasting global food production and publishes its quarterly bulletin both in Chinese and English (<http://cloud.cropwatch.com.cn>). The team has taken immediate action to trace food production at the domestic, regional and global scale in response to the impact of COVID-19, with particular concern for the Lancang and Mekong River Basin.

ANSO would like to share the information with its members and beyond in combating the impact of COVID-19. ANSO CropWatch-ICP has monitored crop conditions as they are affected by drought in the Mekong River Basin from February to April 2020 and rice production in Cambodia, Thailand and Vietnam from September 2019 to mid-April 2020. The most recent update of the ANSO CropWatch-ICP is available on the ANSO Website (<http://www.anso.org.cn/programmes/flagshipProject/activities/>). We hope this information will be useful to individuals, institutions and policymakers in ANSO countries and beyond.

■ 2020 Green Technology Training Workshop

Since the outbreak of COVID-19, lots of people are facing the serious work consequences of lockdown or quarantine. An online training workshop was successfully hosted by the ANSO International Green Technology Association. In order to share and exchange knowledge and experiences in solving shortages of resources/energy and environmental degradation, with the support by ANSO, CAS-TWAS Centre of Excellence for Green Technology (CEGT) and the Institute of Process Engineering of the Chinese Academy of Sciences organized the "2020 Training Workshop on Green Technology" by video conference on March 25-27, 2020. Discussion was focused on the following major topics: New Technologies in Green Chemical Engineering, Computational Chemistry, Science Paper Writing and others. The workshop aims to promote the concept of green technology, and to provide a healthy environment for advanced learning in green chemistry for students from developing countries.



Source: Jiayu Xin
Institute of Process Engineering, CAS

IV. Appreciation from Sri Lankan President for a CAS Donation

On April 18, Sri Lankan President Gotabaya Rajapaksa expressed his appreciation on twitter to the Chinese Academy of Sciences (CAS) for the timely donation of essential medical supplies to Sri Lanka.

A donation ceremony was conducted at the Embassy of Sri Lanka in China on April 2, 2020. Professor Yuansong Wei from the Research Center for Eco-Environmental Sciences of CAS, handed over 11,830 face masks and 150 medical protective goggles to the Acting Ambassador Mr. K. K. Yoganaadan, on behalf of the China-Sri Lanka Joint Research and Demonstration Center for Water Technology, CAS and One Belt and One Road Environmental Technology and Industry Alliance.



*Sources: Research Center for Eco-Environmental Sciences, CAS
China-Sri Lanka Joint Research and Demonstration Center for Water Technology, CAS
One Belt and One Road Environmental Technology and Industry Alliance*

V. ANSO Association

A range of scientific Associations have been established as the operating arms of ANSO to help achieve its objectives and enhance the global influence and operations of ANSO in different professional areas. This Section introduces the associations that ANSO supports.

■ The International Scientists Union for the Belt and Road

■ Who We Are:

As the first and one of the most important scientific associations established by ANSO, the International Scientists' Union of the Belt and Road (ISU), was initiated by the Institute of Geographic Sciences and Natural Resources Research of CAS, and consists of more than 20 institutes, universities from Asia, Europe and Africa such as the Baikal Institute of Nature Management, the Siberian Branch of the Russian Academy of Sciences (SB RAS), the V. B. Sochava Institute of Geography SB RAS, Pacific Institute of Geography, the Far East Branch of the Russian Academy of Sciences (FE RAS), the Institute of Economics and Industrial Engineering SB RAS, and the Institute of Geography and Geoecology, Mongolian Academy of Sciences (MAS). So far, ISU has more than 300 individual scientist members. Academician Sun Jiulin of the Chinese Academy

of Engineering (CAE), and academician A. K. Tulokhonov of RAS are the co-presidents, and Prof. Dong Suocheng is the Executive Vice President and Secretary General with 8 other Vice Presidents and academic counselors.

■ Mission of Union:

The union is focused on the construction of the green “Belt and Road”, an international think tank, training of scientific talent and conducting comprehensive research on global climate change, ecological environmental risk and socio-economic development in the Belt and Road region.

■ Activities Organized:

The First International Forum on Environment and Sustainable Development of the Belt and Road, and Establishment of the International Scientists Union for the Belt and Road in 2014

The First Think Tank Forum of the International Scientists Union for the Belt and Road on 33rd International Congress of IGU in 2015

The Sustainable Development of the China-Mongolia-Russia Economic Corridor Forum in 2016

Research on Ecological Environment Problems and Counter-measures for the Construction of Transportation and Pipelines in the China-Mongolia-Russia Economic Corridor in 2018

Joint Multidisciplinary Scientific Expedition in the China-Mongolia-Russia Economic Corridor, 2017-2020

Source: Li Fujia, Cheng Hao, Institute of Geographic Sciences and Natural Resources Research, CAS

