

Statement on COVID-19

International collaboration in combating the pandemic is key, says the TWAS Council, and mitigating the disease's impacts depends on joint efforts inclusive of developing countries.

TWAS endorses the global call from [UNESCO](#) and from its close partner organization, the InterAcademy Partnership ([IAP](#)), recognizing the essential need for the global research community to act collectively and for open science to control the spread of the virus. TWAS also emphasizes that efforts to use scientific research to contain the virus must be inclusive of countries in the developing world, with an eye toward strengthening capacity for scientific research in the least-developed countries.

The rapid spread of the novel coronavirus and its resulting condition, COVID-19, has caught much of the world off-guard. The tragedy has yet to fully play out, but it is already clear that the crisis is thoroughly global in nature and that science is on the front lines in the fight against the virus. This includes medical professionals attempting to heal the sick at risk to their own health, public health officials tracking the virus and vigilantly urging such measures as social distancing to mitigate its spread, and researchers now engaged in the development of diagnostics, treatments and vaccines.

All of these will be especially important in the developing world, where resources are scarce, scientific infrastructure remains underdeveloped, and health care services are under-resourced. Science is needed in these countries, where many millions are vulnerable to the virus. Africa alone has an estimated [25.7 million citizens living with HIV](#) as of 2018, who as immunocompromised persons could be highly threatened by the virus. Tuberculosis patients, of which there are [millions in both Africa and South Asia](#), are also a high-risk population.

In fact, there are numerous issues common to the developing world that could worsen the impact of the virus. How can people without access to clean water be expected to wash their hands? How can people living in overcrowded, urban living situations expect to effectively practice social distancing? How will preventative measures impact developing nations that are most vulnerable to the effects of climate change or the economic consequences of a quarantine? These alarming and major challenges confront us today, and they will remain when the pandemic has ended unless the global community takes action.

So TWAS, as a leading organization for the development of science capacity in the developing world, not only endorses IAP's statement but holds that developing countries and especially the

[Least Developed Countries](#) must receive strong support from the global health and scientific communities. We call for international collaboration, especially South-South collaboration between developing countries, both during the COVID-19 pandemic and in its aftermath, to provide developing nations with expertise and scientific knowledge to respond to this crisis and guard against similar future events.

In doing so, this call places emphasis on three key points:

1. There needs to be joint action by leading scientists, universities and research institutions worldwide to find appropriate cures for and vaccines against the virus.

This global pandemic is an “all hands on deck” moment. It will require the best minds in the scientific fields of contagious disease from every corner of the globe, working together with important international organizations such as the WHO, UNESCO research centres and Chairs to offer up their advice and services and bring the novel coronavirus under control.

Scientists, universities and research institutions in developing countries have specific experience and expertise in mitigating outbreaks of infectious diseases because of the prevalence of neglected tropical diseases in their home countries. They can provide valuable insights and indispensable contributions that must not be overlooked. So it is important that these international efforts include scientists from sub-Saharan Africa, from Latin America, from the Caribbean, from the Arab Region and from Central, South, and Southeast Asia. People all over the world will be deeply impacted by this pandemic, and institutions from all over the world must play a part in finding solutions.

2. There must be joint action by governments and the private sector to strengthen the health care systems in developing countries, especially in Africa, Latin America and the Caribbean, through South-South and North-South cooperation.

Science capacity is critical. There must be international collaboration to strengthen the health care systems in countries with poor facilities, including the development of well-equipped hospitals, and well-qualified doctors and nurses. Developing countries also need workers and experts who can collect and interpret epidemiological data, and provide policy advice based on those interpretations. And these researchers are needed everywhere, because a future outbreak could start anywhere in the world before it spirals out of control. Furthermore, developed countries must be aware of the risks to their own populations and health systems if the pandemic is not halted in developing countries.

TWAS, in its 37 years as an institution, has shown that South-South cooperation can work, having facilitated the PhD education of hundreds of scientists from the developing world. North-South cooperation also continues to be an important source of expertise for the developing world’s next generation of scientists. Countries with strong institutions for science must not only continue this work, but take action to accelerate scientific research capacity in countries that have the least resources for research. By strengthening science capacity across all fields, basic and applied,

countries can develop the institutional strength they need to support repeated generations of new scientists who can address whatever critical need arises.

3. National governments and Academies of Science in countries that have successfully responded to COVID-19 should exchange best practices in controlling the disease.

Numerous countries — notably including China, Republic of Korea, Japan and Singapore — have at the moment successfully brought COVID-19 under some measure of control. Meanwhile other countries that are currently battling the spread of the disease will likewise develop unique experience, and thus expertise, on the nature of the pandemic.

Information about which measures worked, which measures didn't, and which may have had adverse effects is expected to be freely available to countries that are just now beginning to fight the disease and implement quarantine measures. To date, some countries, like China, have actively shared valuable experiences and provided necessary support to many countries. We call upon more research institutions and policymakers in countries that are successful against COVID-19 to share best practices with countries still fighting the pandemic, and to include developing countries in opportunities to both acquire and share these "lessons learned". To facilitate this constructive spirit of sharing, openness and full transparency, the international scientific community should:

- (i) continue to ensure that the tremendous power of science to shape the future of humanity is enshrined in 'scientific literacy' for all humankind through reducing the knowledge gap, shared values and the spirit of 'Open Science';
- (ii) mobilize the policy makers, civil society and private sector and patent holders to further collaborate with scientists to share scientific information to meet societal needs through equal opportunities, and preserve our planet;
- (iii) embrace the principles of solidarity and knowledge sharing as aptly shown in the coronavirus pandemic.

Furthermore, to help control such diseases, the international community should also consider adopting a more holistic approach to human, animal and environmental health. There is a need to support more monitoring of potential emerging pathogens, especially in developing countries; to reduce the risk of such pathogens spilling over from wild animals by phasing out 'wet markets', and discouraging the exploitation of 'bushmeat'; and to continually collaborate to implement proven measures that would prevent any such outbreak from reaching epidemic or pandemic proportions.

The nature of pandemics means they can begin and gain a foothold in any country from where they would spread throughout the world. So, for the sake of all countries, no single nation can be excluded from this urgent and critical need for international collaboration.

In conclusion, this pandemic highlights an important truth: In today's world, we are all connected, and thus we must all protect one another. It is more important than ever to view the benefits of

science as a global common good and as human right available to all. Science isn't just a tool for discovery, but a means to help people, our lives, our families and our societies, as portrayed in the ongoing work of UNESCO towards an international Recommendation on Open Science. Through cooperation, mutual support, and a spirit of sharing and openness, we can prevail in containing COVID-19 together and build a world that is better prepared for such crises in the future.

With the endorsement of the members of the TWAS Council:

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