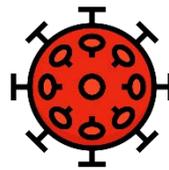




---

## REPORT ON ASSAf'S RESPONSE TO THE COVID-19 PANDEMIC



The [Statement](#) by the Academy of Science of South Africa (ASSAf) on the Implications of the Novel Coronavirus (SARS-CoV-2; COVID-19) in South Africa, was published on 2 March 2020, three days before the first COVID-19 positive case was announced in the country. The COVID-19 pandemic, hailed as an “unprecedented” event, culminated in the announcement of the national disaster management plan by President Ramaphosa on 15 March, followed by the lockdown measures which came into effect on 26 March 2020.

As of 21 May 2020, there are 19137 confirmed COVID-19 positive cases in the country, with 369 deaths reported. With 8950 people who have recovered from the disease, there are now 9 818 active cases. These are the types of daily statistics we have grown accustomed to in South Africa, together with the statistics published internationally. On 8 April 2020, during his daily update on CNN on the COVID-19 pandemic in New York, Governor Andrew Cuomo reminded us about the human factor when we deal with statistics: “Every number is a face, every face is a family.”

ASSAf is mindful of the human consideration and societal impact of its activities as outlined in the mission to *use science for the benefit of society* (See Figure 1). As a Membership-based organisation, this mission is achieved in part through the work of the ASSAf Members who represent all fields of scientific enquiry and includes the full diversity of South Africa’s distinguished scientists. ASSAf Members provide evidence-based solutions to national problems, inspiration for the use of science, technology and innovation to drive scientific curiosity, as well as facilitation of public understanding of the nature, scope and value of the scientific and technological enterprise.

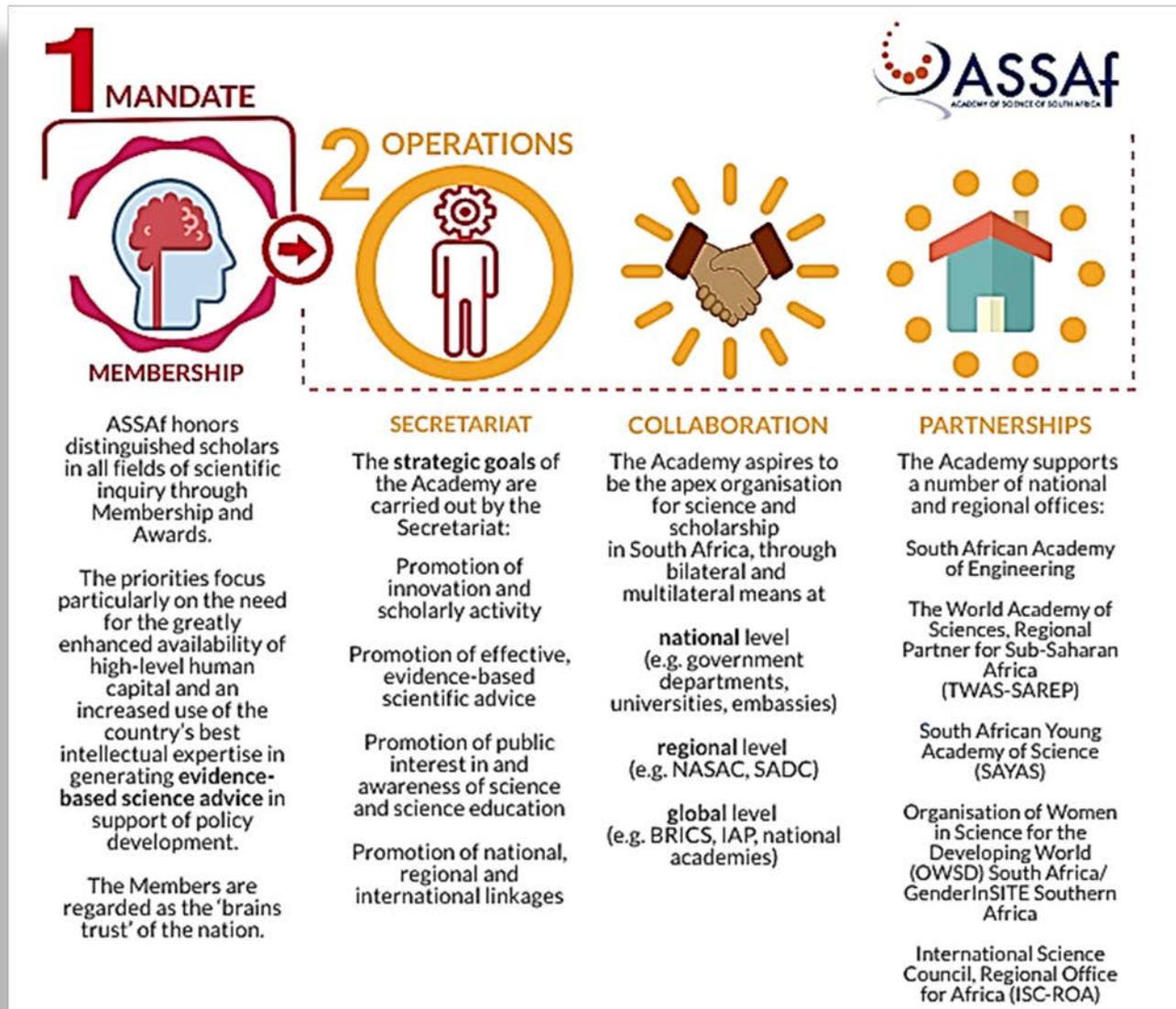


Figure 1: Operational model of the Academy of Science in South Africa

## 1. MEMBERSHIP

ASSAf Members feature prominently in the **Ministerial Advisory Committee** on COVID-19. Professor **Salim (Slim) Abdool Karim** (Co-Director of the Centre for Aids Research in Africa, UKZN), chairs the Ministerial Advisory Committee. Two of the four sub-committees are chaired by ASSAf Members: Public Health Strategies – Professor **Shabir Madhi** (Professor of Vaccinology, University of Witwatersrand) and Research – Professor **Glenda Gray** (South African Medical Research Council (SAMRC) President and Chief Executive Officer).

Professors **Fiona Tregenna** (University of Johannesburg (UJ)), **Imraan Valodia** (University of the Witwatersrand (Wits)) and Dr **Renosi Mokate** (World Bank) are members of the **Presidential Economic Advisory Council** which have been consulted widely by Government for information and recommendations during and after the nation-wide interventions to contain the spread of the coronavirus.



Professor **Helen Rees** (Wits Reproductive Health & HIV Institute), leads the drug trial component linked to the development of a vaccine against the SARS-CoV-2 virus.

Professor **Dorrit (Dori) Posel** is currently a co-investigator of the [Coronavirus Rapid Mobile Survey \(CRAM\)](#) being led by the Department of Economics at Stellenbosch University. This work draws on the National Income Dynamics Study (NIDS) sampling frame to construct a nationally-representative panel sample of 10,000 individuals that will be phoned and surveyed every month for the next six months.

A number of Members were signatories to an [open letter](#) to President Ramaphosa and the Cabinet from 76 South African economists, economic and business analysts (30 March 2020). The letter outlines 18 measures which government needs to undertake in order to support and stabilise the economy, and to ensure that the most vulnerable people and businesses will be protected. The measures are based on five requirements of economic interventions: 1) support households and communities; 2) protect workers; 3) sustain businesses; 4) strengthen public health interventions; and 5) strengthen the economy.

### Communicating to the public

To manage the COVID-19 pandemic, we rely on a constant stream of information. This information is important as it forms the basis on which individuals and Governments make important decisions. ASSAf Members have played a significant role in providing evidence-based advice, research findings and information to support Government initiatives in the fight against the COVID-19 pandemic.

Members have authored or co-authored articles, engaged with the media – print, radio and television - and used their profiles to alleviate fear and provide the public with evidence-based information. The ASSAf secretariat has been tracking these [contributions](#) on the ASSAf Website. ASSAf Members' responses to the pandemic (including research articles, letters, media interviews, public webinars), are shared to the public domain through ASSAf's social media platforms.

---

## 2. SECRETARIAT

### 2.1 COUNCIL

Council Members have actively reviewed and endorsed national and international Statements related to the COVID-19 pandemic.

The ASSAf Council, and representatives of the [Standing Committees on Health](#) have endorsed an [open letter](#) signed by the InterAcademy Partnership (IAP). The letter titled "Health Inequity during the Pandemic: A Cry for Ethical Global Leadership" has been sent to the United Nations (UN) Secretary General.

### 2.2 STANDING COMMITTEES

ASSAf secretariat have engaged with Standing Committee Members to actively stimulate discussion and to plan for future studies.



The **Standing Committee on the Science for the Reduction of Poverty and Inequality** met virtually to discuss potential activities. These included an assessment of long-term responses to the impact of the global slowdown that seems inevitable, and to provide input to the policies and programmes being put in place, and later revised by government, for the immediate management of the pandemic in South Africa and its economic fall-out. Currently under consideration:

- Policymakers' booklet which calls for simultaneous consideration of poverty, inequality and climate change in times of crises with COVID-19 as context.
- Statement on integrating the issues of poverty, inequality and climate change in development planning with COVID-19 pandemic interventions as an example.
- A public event to debate the integrity and public availability of the science behind the decision-making.
- A public event to discuss the value and mode of integrating sciences and disciplines to ensure holistic approach to the pandemic.

#### Standing Committee on Biosafety and Biosecurity

- Consensus Study: *The State of Laboratory Biosafety and Biosecurity in the SADC Region*. The objectives of this study are mapping existing assets (including infrastructure, resources, human capacity, and training programmes) in the SADC region in relation to whole-of-government laboratory biosafety and biosecurity; as well as mapping existing country-specific legislation, frameworks, laboratory licencing, policies, guidelines, comprehensive oversight and monitoring systems. This proposal is based on disease outbreaks not respecting borders, including COVID-19 now, thus the need for a regional approach. This is a follow-up to the [study](#) on *The State of Biosafety and Biosecurity in South Africa* (2015). The study panel includes experts from 10 countries in the SADC region and initiated in June 2019.

#### Standing Committee on Health

- COVID-19 Africa Rapid Grant Fund: ASSAf is a member of the NRF-led team which is working on setting-up this Fund.
- Collaboration with the UK Academy of Medical Sciences (UK AMS): ASSAf together with the UK AMS will co-host an international virtual workshop alongside other countries from low- and middle-income settings on the response to COVID-19 at the end of June/beginning of July 2020. The workshop will consider the current response to COVID-19 pandemic in eight low- and middle-income countries across the world and ask how we can build on the lessons learned and identify opportunities to better support the global response to the pandemic. Proposed focus of the meeting will be on three specific areas: Public health response; Social and behavioral response; and Clinical response
- This collaboration is a follow-up on the [joint report](#) released in February 2020 on issues of multimorbidity.
- The Committee will be meeting on 22 May 2020 to discuss activities that are underway and/or proposed in response to COVID-19.

ASSAf will convene a meeting of members of all the Standing Committees to discuss an integrated approach to dealing with the health, economic and social consequences on the pandemic.

## 2.3 SCHOLARLY PUBLISHING ACTIVITY

- **South African Journal of Science (SAJS)**

The *South African Journal of Science* is a multidisciplinary journal published bimonthly by ASSAf. The SAJS mandate is to publish original research with an interdisciplinary or regional focus, which will interest readers from more than one discipline, and to provide a forum for discussion of news and developments in research and higher education. The following is proposed:

- Two Commentaries relating to COVID-19 to be published in the July issue.
- A themed issue on reflections on COVID-19 from different perspectives (e.g. health, social and economic) to be published in 2021.

A popular article on “Viral spreading in a small world” by Professor Jane Carruthers (SAJS Associate Editor Professors Amanda Weltman), South African Young Academy of Science (SAYAS) Member and Jeff Murugan (University of Cape Town (UCT)), was published on the [SAJS website](#) and is also available on the [ASSAf institutional repository](#). The article received 475 views (mostly from Italy, South Africa and the USA) and was downloaded 70 times in the first 10 days.

- **SciELO SA**

Currently [SciELO SA](#) hosts 79 prestigious South African open access journals in its collection. As pre-print articles dealing with COVID-19 become available within the [SciELO Network](#) they are made available on the ASSAf [News webpage](#). Thus far almost 90 articles are available. New articles are also emailed to ASSAf Members and the SciELO SA mailing list groups, and SciELO SA articles dealing with COVID-19 will be sent to the SciELO Network to be highlighted in the [SciELO in Perspective Blog](#) dedicated to COVID-19.

## 2.4 SCIENCE EDUCATION

### **Quest: Science for South Africa**

*Quest* is a full-colour, quarterly, popular science magazine aimed specifically at the youth and the general public who have an interest in the sciences. It aims to present the country's foremost scientific work in an accessible form and can be used to support curricula work at various levels and institutions.

The Quest-team embarked on promotion of mathematics and science classes for grade 10–12 learners on [Facebook](#) since 1 April 2020. Tips and information sharing regarding the Departments of Basic Education (DBE) and of Higher Education and Training (DHET) homeschooling on the [Quest website](#), and utilising Twitter to share [information](#) regarding online support and developments in the education sphere due to the COVID 19 pandemic.

### 3. COLLABORTIONS

#### 3.1 AFRICAN SCIENTIST DIRECTORY



The [African Scientist Directory](#) was collaboratively developed by the International Science Council (ISC) Regional Office for Africa (ROA) and ASSAf, with funding made available by the South African Department of Science and Innovation (DSI). It is currently maintained by ISC ROA, with support from a number of partners.

The African Scientists Directory aims to benefit individual scientists, science organisations and more on national, regional, and global levels to Collaborate; Build Trust; Increase Impact; and Connect. The African Scientists Directory profiles a number of eminent virologists via this directory's news feed.

#### 3.2 AFRICAN COLLABORATIONS

Engagement with other African national academies of sciences include (to date):

- ASSAf through the Network of African Science Academies (NASAC), shared its COVID-19 statement with other academies of science on the continent.
- ASSAf through its website disseminated the [NASAC](#) and [Cameroon Academy of Sciences statement](#) on COVID-19.
- Keeping track of news articles from various African countries, which focus on actions taken to manage COVID-19.
- TWAS' [Statement](#) on COVID-19 calling for global collaboration inclusive of developing countries to combat the pandemic (see also section 4.3).

It has been proposed to the DSI that ASSAf work with NASAC, TWAS SAREP, and ISC ROA on a study that can be conducted post COVID-19. This will include estimations of countries impacted, with mappings of the impact; response to the economy; human health impacts; regional response to socioeconomic impact; role of the African Union; and rolling out of stimulus packages. The proposed study could be an opportunity for ASSAf to partner with the Human Sciences Research Council (HSRC).

#### 3.3 OVERSEAS COLLABORATIONS

In February 2020 during the peak of COVID-19 infection in China, ASSAf sent a letter of support to the President of the Chinese Academy of Sciences (CAS).



ASSAf shared its statement on the “Implications of Novel Coronavirus (SARS-CoV-2; COVID-19) in South Africa” with the IAP. The statement has been made available on the IAP website and is accessible to over 130 national academies and regional academies.

ASSAf and the German National Academy of Sciences Leopoldina have been sharing statements on the impact of the pandemic. The following statements were shared by Leopoldina with ASSAf:

- [Coronavirus Pandemic in Germany: Challenges and Options for Intervention](#)
- [Coronavirus Pandemic – Measures Relevant to Health](#)
- [Coronavirus Pandemic – Sustainable Ways to Overcome the Crisis](#)

In April 2020, ASSAf contacted the Cuban Academy of Sciences to explore cooperation in areas of mutual interest. ASSAf proposed working together with the Cuban Academy of Sciences in exchanging information relevant to COVID-19.

ASSAf supported the [open letter](#) drafted by the Brazilian Academy of Science to the UN entitled “Health Inequity during the Pandemic: A Cry for Ethical Global Leadership”, which highlights the plight of the vulnerable and marginalised populations worldwide.

Four ASSAf Members have been nominated to serve on the [IAP’s ad hoc COVID-19 Advisory Committee](#). The IAP hopes to convene a group of about 50 experts to provide science-based responses to the multitude of doubts and queries related to the pandemic. The group will be multidisciplinary in nature and no single expert or field of specialisation can provide clear simple responses to the many queries. Likewise, advice from experts in certain countries may not fit the on-the-ground situation in other countries.

---

## 4. PARTNERSHIPS

### 4.1 Gender in Science, Innovation, Technology and Engineering (GenderInSITE)

GenderInSITE (GIS) through its Africa focal point has been collecting news articles and scholarly articles that apply a gender lens to the coronavirus pandemic. The articles are then disseminated through the [GIS Africa website](#) and social media pages. The role of GenderInSITE African Regional Focal Point is focused on efforts to raise the awareness of the public and scientists around the links between COVID-19 and gender, and the value of understanding these linkages.

### 4.2 International Science Council (ISC)/ ISC Regional Office for Africa (ISC ROA)

- [ISC Headquarters](#)

The ISC Headquarters set up a [COVID-19 Global Science Portal](#). This portal provides an overview of response to the coronavirus pandemic by the ISC community. It shares scientific commentary and analysis, and provides access to information on various initiatives, highlighting the scale and scope of response, and encouraging ISC members and partners to collaborate and share best practices during this global emergency. ROA



contributed to this portal by obtaining and sharing views from the young scientists on how the pandemic has [adversely affected transdisciplinary research in Africa](#). The ISC Office encourages other stakeholders and partners from the continent to share information on this portal.

- **The International Network for Government Science Advice (INGSA)**

The INGSA headquarters established a [hub of information and resources about the science-policy interface of the pandemic](#), as it occurs globally and in individual jurisdictions. This network is about the processes of mobilising and providing evidence-informed advice to decision-makers as well as coordinating advice and action across jurisdictions and globally. ISC ROA as Secretariat of the INGSA-Africa Chapter was approached to encourage members of the Chapter to contribute [to a knowledge base from which lessons from actions that take place at the interface between science and policy](#) can be drawn.

The ISC ROA also collaborated with the INGSA headquarters to identify suitable experts from African countries as collaborators in running a policy tracker to collect and track national and sub-national pandemic response policies and actions for comparative analysis. The project has since been running smoothly with submissions from several African countries on COVID-19.

- **Local Initiatives**

Following a meeting that was held together with the DSI, HSRC and ASSAf, ISC ROA's [Health and Human Wellbeing Consortium](#) led by Prof Charles Wambebe, is developing a project proposal, in collaboration with the Indigenous Knowledge based Technology Innovation Division of the DSI on the evaluation of African natural products from plants and animals to boost human immune responses to the COVID-19. Prof Wambebe is also collaborating with the DSI and the Organisation for Economic Cooperation and Development.

#### **4.3 Organisation for Women in Science in the Developing World (OWSD) South Africa National Chapter (OWSD SA NC)**

OWSD SA NC has engaged its members with the initial response to the Covid-19 outbreak and has steadily been receiving responses from members and their work in this regard. OWSD SA NC aims to compile a knowledge product at the end of this which documents the active engagement of women scientists and technologists during this time.

#### **4.4 South African Young Academy of Science (SAYAS)**

##### **COVID-19 Health messaging**

Given the unprecedented global challenge caused by COVID-19, the scientific community can however contribute to mitigating the effects of the pandemic, and actively engage in the science-policy-society interface. In a bid to do this, SAYAS translated the general health messaging around the virus into local languages: Sepedi, Tshivenda, Afrikaans, isiXhosa, isiZulu, Sesotho, Northern Sesotho, siSwati and Xitsonga; and a few more for dominant migrant groupings in South Africa – Shona, Swahili, Portuguese,



Lingala and French. These have been disseminated mainly online through the [SAYAS website](#), social media platforms (Twitter and Facebook feeds) and by SAYAS members.

The initial work done by SAYAS members in translating COVID-19 health messaging into local languages in South Africa was picked up by the Uganda National Young Academy who did similar work based on the SAYAS English template, translating this to the various languages of Uganda.

The COVID-19 pandemic has presented an unprecedented global challenge. Various SAYAS members have also written informative articles on the impact of the virus and undertaken engagements in various other ways such as holding discussions on community radio. These have been captured on the [SAYAS website](#).

## CONCLUSION

Going forward, ASSAf will encourage its Members to work collaboratively in an effort to use an evidence-based approach to provide attainable solutions to the many problems facing the country. ASSAf's unique strength is the disciplinary diversity of its distinguished Members who have attained national and global recognition. Through strategic partnerships, we can use science and humanitarian considerations towards planning a way forward to alleviate the distress caused by the current situation. ASSAf supports the rebuilding of a country for all South Africans.

