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National Science and  
Technology Forum

## Media Release

*S.E.T. for socio-economic growth*

## Scientists advise authorities re COVID-19 and climate change

What are the important discussions that should be taking place between civil society and government? What role should a civil society forum undertake to support the role of scientists in policy advice? These are just some of the questions asked, and answered, at the [Scientists and policy – the role of a civil society forum](#) side event hosted by the [National Science and Technology Forum](#) (NSTF). The NSTF was invited by the [African-Europe Science Collaboration and Innovation Platform](#) (AERAP) to host this side event as part of the [European Union-African Union \(EU-AU\) Summit](#).

The goal of the side event was to consider the role of scientists in policy advice, as well as to unpack the importance of constructive interaction and discussion between civil society and government on key priority areas. The two-hour session showcased experts in science, engineering, technology (SET) and innovation in South Africa in an open forum with government and civil society from various SET-related fields. Policies and how knowledge generated by science were considered from NSTF discussion forums held, namely '[Preparing for epidemics in South Africa – human and animal](#)', '[Skills to prepare South Africa for future pandemics](#)' and '[Plant health in South Africa – threats to biosecurity, biodiversity and food security](#)'.

### The NSTF provides neutral collaborative platforms where issues and sectors meet

- One of the National Science and Technology Forum (NSTF) functions is to hold [Discussion Forums](#), bringing the private and public sector together to address important issues and engage with government policy.
- Feedback from these [Discussion Forums](#) is given to role players and stakeholders.
- Recommendations are put forward to government as part of the [SET community](#)'s (science, engineering and technology) efforts to make input into SET-related policies and implementation.
- The NSTF [represents over 120 member organisations](#) participating as key stakeholders of the SET and innovation community.

### Systems to monitor and track to mitigate epidemics

**Dr Jabu Mtsweni**, Head: Information and Cyber Security Centre, Council for Scientific and Industrial Research (CSIR); and Research Fellow: University of South Africa (UNISA); and Technical Leader: National Policy Data Observatory (NPDO) focused on '[Preparing for pandemics: Science and Policy](#)' and the importance of preparing more effectively for incoming pandemics using data and insights. The NPDO is a government-led, national policy data

observatory that focuses on myriad data sources to support decision-making. They are currently focused on COVID-19 data indicators inclusive of COVID-19 cases, hospitalisation, and vaccinations. Mtsweni highlighted how the more pandemics society experiences, the more prepared we are for the next ones, and how from both a science and policy perspective, everything comes down to preparation.

The goal is to shift mindsets to reduce the chance of future pandemics and to focus on solutions that allow for consistent tracking and monitoring of pandemics. Policy could then be shaped around the 'always on' approach and would allow for health surveillance that can scale. Currently the challenge is a lack of proper systems in place that can monitor and track, and the current data points to how invaluable this can be in terms of mitigating pandemics, disease and improving access to healthcare. He concluded by emphasising the need to connect people, processes, and systems to ensure skills development, that governance is in place to ensure proper decision making, and to use accurate data to inform policies in various ways. This would minimise misinformation, improve reporting, and ensure that people come together to respond to pandemics intelligently, and with the right skillsets and leadership in place.

### Collaboration to find solutions

**Ms Glaudina Loots**, Director: Health Innovation, National Department of Science and Innovation (DSI), South Africa, presented on the '[DSI COVID-19 research support and rapid response](#)'. When the first case was identified in South Africa, the first step was to look at rapid response, what could be done, and what resources could be brought together to address the situation. This meant looking at modelling surveillance epidemiology and community engagement to understand how it was affecting people and then moving to clinical trials for potential treatments. She underscored the value of collaboration and how by undertaking a concerted effort throughout the pandemic, it was possible to move swiftly and achieve remarkable results. The presentation concluded with fact that the pandemic had shown everyone how it was important to collaborate and share facilities so that everyone can come together to create a solution.

### Climate models for advisories on adaptation

**Prof Sue Walker**, Principal Researcher: Agrometeorology, Agricultural Research Council (ARC) – Natural Resources and Engineering; and Professor Emeritus: Agromet (Agricultural Meteorology), University of the Free State (UFS), South Africa, addressed the '[Use of Crop Climate Models to Develop Advisories](#)'. Her presentation painted a stark picture on how climate change will introduce more frequent droughts and heat waves of longer duration alongside reduced soil moisture, shorter growing seasons, and reduced maize and livestock production.

The implications are that there will be more frequent droughts and that the growing season will be impacted which makes it important to help farmers to maintain sustainable farming systems. Using crop climate models, there is potential to change agronomic management practices that are calibrated for each unique climate situation. These models can be used over extended periods of time to establish best practice and to apply this to local ecosystems and provide salient advice to policymakers. In addition, the models can be used to advise on pest spray, diseases, weather conditions, and so much more, and can be shared with government teams to enable them to act in a positive way.

#### **The National Science and Technology Forum (NSTF) is:**

- Independent non-profit stakeholder body and network – a civil-society forum
- Unified voice to government for the science, engineering, technology (SET) and

#### **The lessons learned**

The session underscored how advice is a two-way stream. That scientists advise government, and government must be open to scientists and that there must be shared collaboration to ensure that the advice comes to fruition. There's also a two-way

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| <p>innovation community</p> <ul style="list-style-type: none"><li>• Includes private and public sectors</li><li>• Promotes SET and innovation in South Africa since 1995</li></ul> |
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interaction between government and the public and scientists and the public that's become crucial to reduce misinformation and promote learning.

In the panel discussion, **Dr Jabu Mtsweni**, emphasised the importance of data and how this can be used in the formation of policies. He also highlighted how there will always be gaps in the research data. It's important to share information so that it is possible for researchers to improve on one another's work and learn from one another. This allows for problem solving across multiple contexts.

**Ms Glaudina Loots** added that this is one of the things that COVID-19 brought to South Africa – that information is being shared and that government is working more closely with scientists. She emphasised that this is something that needs to continue along with increased sharing of data and knowledge so people can be aware of it and use it effectively.

When it comes to agriculture, **Prof Sue Walker** unpacked how it is important to look at information sharing across the local municipality level and the provincial level. While there is a reliance on researchers to assist with policy generation on the national level, there's a need to fill capacity gaps at the local level. There remain complexities in communication between scientists and government as sometimes government doesn't agree with the data, or won't impose restrictions based on the data. This can result in changing regulations or limited impact, but scientists need to continue working as best they can and to focus on ongoing collaboration with government to effect lasting change.

It is not an easy space to negotiate, but for Loots the support of scientists has been invaluable throughout the pandemic. Across all panellists there was a shared sentiment that being open and talking to one another was critical. That taking the lessons learned over the past few years will be instrumental in changing dialogues between government, citizens, and science.

The speakers or the spokesperson, [Ms Jansie Niehaus](#), Executive Director of the NSTF, can be contacted through [media@nstf.org.za](mailto:media@nstf.org.za). Further information can be found on the [NSTF website](#) and the [NSTF YouTube channel](#). Read about previous [NSTF Discussion Forums](#) held in 2021:

- [Preparing for epidemics in South Africa – human and animal](#), 25-26 February 2021
- [Plant health in South Africa – threats to biosecurity, biodiversity and food security](#), 10-11 June 2021
- [Loadshedding and power cuts – what is really going on?](#), 25-26 October 2021
- [Skills to prepare South Africa for future pandemics](#), 01 December 2021

## About the NSTF

The National Science and Technology Forum (NSTF), established in 1995, is a broadly-representative stakeholder body for all science, engineering and technology (SET) and innovation organisations in South Africa, which seeks to influence policy formulation and delivery.

The NSTF Awards are unique in SA, recognising the outstanding contributions of individuals, teams and organisations to SET and innovation.

The science bursaries page provides information on bursaries and bursary providers for science, engineering and related studies.

STEMulator.org attracts learners and students to the exciting world of science, technology, engineering and mathematics (STEM). It provides a virtual world full of stimulating content to excite and inform the youth, including STEM career guidance. Established under the auspices of the NSTF proSET membership sector (Professionals in *science, engineering and technology*).

### Disclaimer

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### For more information

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