Science and Disaster Management for Social Justice

an NSTF Discussion Forum in collaboration with the Science Councils and Statutory Bodies Sector

Day 1: 05 December 2022

Speakers' Biographies

Prevention of epidemic and pandemic disasters – A transdisciplinary health perspective
KEYNOTE SPEAKER

Prof Petra Bester is a transdisciplinary health researcher and, since 2015, the director of the Africa Unit for Transdisciplinary Health Research (AUTHeR), Faculty of Health Sciences, North-West University. She holds a PhD in Nursing and a clinical master's degree in community psychiatric nursing. Her research and stakeholder engagement focuses on the human factor within the South African public health system. From a systems approach, Petra brings creative qualitative research methods into the team to facilitate situational awareness amongst agents and views this as a transformational opportunity. Petra's insight into both health systems and human behaviour enables her to join multi-, inter- and transdisciplinary teams as the health professional in the team and becomes the patients' voice. She chairs the health research ethics committee at North-West University and is a member of the Academy for Nurses South Africa. To date, Petra supervised 60 postgraduate students from various disciplines. Prof Bester is a health professional that can work across and beyond disciplines, which is essential in Disaster Management and Environmental Health.

Building Communities' Trust for Public Health Disaster Resilience

Having previously served as the Deputy Vice Chancellor for Research and Innovation at Sefako Makgatho Health Sciences University, **Prof Ayo-Yusuf** is currently the Head of the School of Health Systems and Public Health at the University of Pretoria. His main research focus is on behavioural epidemiology and related policy evaluation for non-communicable diseases (NCD) prevention and health promotion. In particular, he has been an investigator and/or co-investigator on national and international research, including clinical trials and capacity-building projects related to tobacco use prevention, treatment/cessation and policy advocacy.

He is also working on resilience studies having previously directed the USAID-funded transdisciplinary Southern Africa resilience innovation programme (SARiLab) as part of the Resilient Africa Network (RAN), made up of 20 African Universities and three US partner Universities. The programme allows for the development of innovative interventions including technologies that can strengthen health systems and community disaster resilience.

Prof Ayo-Yusuf is a NRF B-rated Scientist with over 100 scientific publications in high impact journals and serves as a member of the editorial board of a number of international journals and as a member of a number of national and international scientific committees/groups including current role as the Deputy Chair of the Standing committee on Health of the Academy of Science of South Africa (ASSAf), a member of the WHO Tobacco Regulation Scientific Group and Chair of Gauteng Provincial Health Research Committee.

Mr Dechlan Pillay currently works at the National Disaster Management Centre (NDMC) and oversees the ICT function including the Directorate Early Warnings and Disaster Risk. He has an MBA (GIBS) and a Masters in Geographic Information System (GIS) and Remote Sensing. He is a registered practitioner with the SA Geomatics Council.

His career path has allowed him to work in several institutions before the NDMC one of which included the Satellite Applications Centre

The role of science, research and technology in the management of large-scale disaster affecting vulnerable communities in South Africa.

(now called the SA National Space Agency – SANSA) and the CSIR's Meraka Institute.

He is currently in a position that allows him to develop national information and communication systems for the benefit of the disaster management fraternity.

Besides the numerous GIS projects completed, he has just completed phase 2 of the NDMC Big Data application platform that allows both structured and unstructured data sources to be stored and analysed at their national headquarters in Centurion, Pretoria. On the international platform, Mr Pillay participated in various fora related to disaster management, information and technology and remote sensing. He has recently completed the country level registration and accreditation of South Africa to the International Charter for Space and Major Disasters that yields important satellite data to the country for large scale disasters. This was activated for both the KZB flooding and the recent mining disaster at Jagersfontein.

Our creeping disaster – under-maintained infrastructure

Prof Kevin Wall (PhD (UCT)), a civil engineer and town planner, is an Extraordinary Professor at the University of Pretoria and a Fellow of the South African Academy of Engineering. Until earlier this year, he was also a non-executive board member of the City of Ekurhuleni's wastewater treatment entity.

A Past President of The South African Institution of Civil Engineering (SAICE), he has received both the Gold Medal of SAICE and the Lifetime Award of the National Science and Technology Forum. Early next year, he is scheduled to receive the degree Doctor of Engineering (honoris causa) from the University of Pretoria.

Much of his work over the last two decades has been on effectiveness of government spending on infrastructure, and ways to improve the quality, reliability and sustainability of that infrastructure. For example, he led the research for all four SAICE Infrastructure Report Cards on the condition of infrastructure in South Africa which have been published since 2006.