

Minister Pandor's speech at the Africa Evidence Network conference 2016

Department of Science and Technology

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The public should have the opportunity to engage with evidence-based policy-making. It cannot be an ivory-tower exercise. Nor can it be left to rich men or corporations with particular personal interests to pursue.

Promoting public understanding and awareness of science is essential and so is the openness of the scientific community at established institutions to, for example, consider without prejudice Africa's rich indigenous knowledge systems.

Of course, societal expectations can directly influence the design of policy in democracies. That is part of the normal democratic process. Such expectations may in some instances conflict with the recommendations of available scientific evidence. For example, economic considerations may inform society's demands in a field such as energy policy, demands which will not necessarily take into account environmental considerations. Public expectations and scientific advice should be reconciled – that is our challenge.

There is a need to instill trust between the general public and scientific community. We have various platform and programmes in South Africa to promote a better public understanding and awareness of science in South Africa.

Notable programmes have targeted the public understanding of biotechnology and nanotechnology. The public support for South Africa's hosting of the Square Kilometre Array radio telescope is another example of how public support for science can be achieved through consistent and strategic communication.

Trust is always built up over time and must be carefully nurtured. It can never be taken for granted. The scientific community has a special responsibility in this regard. Our scientists should never forget that they are an integral part of society.

In February 2016 South Africa hosted the InterAcademy Partnership (IAP) Conference on Science Advice, which considered the importance of science in policymaking across various areas, such as climate change, urbanisation, disasters, deadly viruses, or emergencies that confront society. Scientists have a huge responsibility to ensure that scientific debates are informed by solid scientific evidence, logical argument, reasoning and sound advice. It was argued by some that science advice should be viewed as a component of science diplomacy.

Sir Peter Gluckman, science adviser to the New Zealand government, has been a leading light in spelling out the importance of science advice. His view is that policy is rarely determined by science alone, but policy can be informed by evidence.

He gives the example of the New Zealand government decision to outlaw the inclusion of folic acid in bread as it was said to cause cancer. He thought the science advice was wrong.

He said this was indicative of the fact that the science community had failed to properly communicate to the public on the issue.

You will no doubt think of our recent regulations over salt and sugar.

What I learned from this public engagement is that science informs advice, but it does not make policy.

There are different audiences for scientific advice, but the science community tends to focus on offering advice at a national level and not at the local government level.

And there are different types of science advice: technical, regulatory, formal, informal, and advice in emergencies.

Most important though is trust - trust between the politician, policymaker, the media, the public, and the science community.

The AU NEPAD Capacity Development Strategic Framework describes its core priorities as 'including leadership and citizen empowerment, unlocking African potential, skills and resources for development'.

In his introduction to the framework the CEO of NEPAD Dr Miyaki writes, "Overall the development dividend from any intervention is only as good as the capacities upon which the

effort rests. Transformative capacities are therefore required to tackle the continent's change agenda and processes. Africa's capacity for change will ultimately determine the quality of development that is achieved".

I think this perspective on what we need to do to support and promote development is very relevant for the deliberations that this meeting will hold. They are most certainly deliberations aimed at providing responses to what we have to do to successfully mobilise our human institutional and financial resources to ensure that our blueprint for Africa's development Agenda 2063 is fully achieved.

In South Africa, there are various institutions that play a key role in responding to our scientific advice needs. Despite their excellent work there is still a need to identify a means of assessing the degree to which the work feeds into actual policy and practice.

One of the institutions producing evidence-based advice is the Academy of Sciences of South Africa. Its evidence-based reports address a diverse range of topics - from the role of GMOs in agriculture in Africa to the emerging and little studied threat of drug-resistant tuberculosis, as well as strategies for the development of low-carbon cities or the prevention of a tobacco epidemic in Africa.

Another is the National Advisory Council on Innovation, which is an institution established to provide policy advice to the Minister of Science and Technology and the Cabinet. It is independent of government and works through standing committees and

task teams comprising of experts drawn from universities, science councils and business.

In addition, our public research councils such as the Human Sciences Research Council, the Council for Scientific and Industrial Research, the Medical Research Council, and the Agricultural Research Council all contribute to generating scientific advice that may guide policy making.

Evidence-based advice is important to sustaining science-based development in Africa.

Consider health. We promote health sciences because we need to improve the quality of life here in Africa.

African countries are at the forefront of global scientific discovery, as highlighted by the pioneering work undertaken in South Africa in areas such microbicides to prevent HIV-Aids, as well as drug and vaccine development for malaria and tuberculosis. This is shown by the full participation, including as funding parties and equal partners, by South Africa and other African countries, in the European Developing Countries Clinical Trials Partnership.

Much of the public health improvement over the last two centuries has been vaccine related - across the world, in both rich and poor countries, developed and undeveloped, north and south. Reaching children has been the aim of most campaigns to spread the impact of vaccines in poor countries. The barriers to vaccinating children are well known - the high prices of new vaccines, weak public health systems. But there is another barrier - low profit margins for vaccines and high profit margins

for drugs. This leads to less research into vaccines and more research into drugs.

We need to boost our own manufacture of drugs and vaccines.

We need to reduce the cost of drugs and vaccines by manufacturing here in Africa rather than importing from India and other countries.

African investment in research and innovation is growing.

African countries have made a determined effort to increase research, development and innovation by setting R&D targets.

The past fifteen years have seen interventions in higher education, in science councils, in academies and in universities.

As the 2015 UNESCO science report reveals, there has been a positive shift in research, development and innovation.

It shows the success of the AU's first African science technology and innovation Plan of Action.

Recently the AU adopted its second African Plan. It prioritises science to drive economic and social development across the continent. It commits signatory countries to six goals, including tackling hunger, disease and unemployment, and will set up structures to pursue them.

We know that breakthrough or frontier science takes a long time and that breakthroughs are immensely difficult to predict. It's all about getting the right balance between funding basic or frontier

science and focusing on particular fields of science in which we know that we want to build new industries.

That is why South Africa has invested so strongly in astronomy.

That is why South Africa has invested so strongly in space science.

That is why South Africa is investing more in biotechnology and nanotechnology.

We can't do this without the best evidenced-based advice available.

Thank you.