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OVER the past five years, Africa’s contribution to the world’s research — that is, new knowledge generated by African scientists working beyond their own countries and continent — has varied from a low of 0.7% to the present, and highest, level of 1.2%.

There are many reasons for Africa’s small contribution to world research. One of them, sadly, is that at least some of this new knowledge is produced by African scientists working beyond their own countries and continent.

Many have chosen to leave because of the limited support and funding opportunities better than those at home.

It’s also important to point out that the sum of knowledge generated each year, including Africa’s contribution, is measured using research articles published by scientists and scholars in scientifically recognized journals. This means that some of the work that is being done isn’t getting the attention or credit it deserves...

The journal system is not a perfect method of measuring scientific productivity. For now, though, it’s a means that can be applied fairly to document peer reviewed research from around the world.

These concerns aside, there is, I’m happy to report, much to celebrate about research in Africa.

For starters, the world’s largest collection of peer-reviewed, Africa-published journals, is growing all the time. African Journals Online currently carries 52 titles across a range of subjects and disciplines.

Science journals are also well represented, although there’s still work to be done. Three out of 10 sub-Saharan researchers are women.

The continent’s researchers are working on challenges as varied as astrophysics, malaria, HIV/AIDS and agricultural productivity.

They are making significant advances in these and many other critical areas. The projects I talk about here are just a few examples of what African scientists are doing on and off the continent.

Africa is also establishing itself as a global player in astronomical research. The Southern African Large Telescope (SALT) is the largest single optical telescope of its kind in the southern hemisphere.

Work undertaken at this facility in the Southern Cape has resulted in the publication of close to 200 research papers.

The telescope has sparked new partnerships, with South African and international collaborators to uncover a previously unknown major supercluster in the constellation Vela.

SALT has two siblings: MeerKAT, which is already producing results, and the Square Kilometre Array, which is still being developed.

In a very different sphere, Professors Ihsan and Shameema Siddique, of the University of Cape Town, have been awarded international and national awards for their work in drinking and livestock health.

Professor Girdra Gruy, chief executive of the South African Medical Research Council, has been honoured by Times magazine as one of the world’s 100 most influential people.

She, too, is a pioneer in HIV/AIDS research, in Kenya, dedicated research institutes are tackling agricultural challenges to improve food and nutrition production and livestock health.

This not only boosts Africa’s research output, but contributes greatly to rural development on the continent.

Elsewhere, Nigeria has established a number of research institutes that focus on a range of agricultural challenges. Research is also being generated on an important area of seismography.

Although it started from the University of Cape Town, the African Climate and Development Initiative has been working in a partnership in Mozambique.

There is addressing the critical and interrelated challenges of climate change and adaptation responses for agriculture, tourism and the red meat value chain.

Professors are working on projects that are not just for Africa. For example, the research is tackling local and global problems.

This type of research not only helps Africa, but helps the world.

Thus there’s also research “out of Africa”. This involves discoveries about the human past and the origins of Homo sapiens.

Hominin research was often done by people from outside Africa. Increasingly, though, African scholars have come to the fore.

The researchers who discovered a new human relative and mapped the tree of human evolution are working at the University of Witwatersrand.

The continent’s scientists are punching above their weight and changing the world.