



UNIVERSITY OF LEEDS



The students learnt how telecoms dishes that have been turned into radio telescopes are operated and the type of data they can create. Image shows students standing in front of telescope.

Integration of SDGs in

- Institutional governance/strategic level
- SDGs in research
- SDGs in campus operations
- SDGs in curriculum development
- SDGs in student engagement activities
- SDGs into community activities
- SDGs at a whole-institution level

Focus on

- Goal 1 - No poverty
- Goal 2 - Zero hunger
- Goal 3 - Good health and wellbeing
- Goal 4 - Quality education
- Goal 5 - Gender equality

SDG Accord Case Study

- Goal 6 - Clean water and sanitation
- Goal 7 - Affordable and clean energy
- Goal 8 - Decent work and economic growth
- Goal 9 - Industry, innovation and infrastructure
- Goal 10 - Reduced inequalities
- Goal 11 - Sustainable cities and communities
- Goal 12 - Responsible consumption and production
- Goal 13 - Climate action
- Goal 14 - Life below water
- Goal 15 - Life on land
- Goal 16 - Peace, justice and strong institutions
- Goal 17 - Partnerships for the goals

Summary:

Born in Zambia in a village with no electricity, Saul Phiri is now a physics lecturer at the country's Copperbelt University, carrying out research into the formation of stars. He is one of nine young researchers who gained their PhDs thanks to the **Development in Africa with Radio Astronomy (DARA)** project, led by the University of Leeds.

The project's aim was to build research capacity in radio astronomy in eight African countries that will be part of the Square Kilometre Array (SKA) – the world's largest radio telescope project.

The SKA is installing hundreds of radio dishes in South Africa to enable astronomers to study the sky in unprecedented detail.

However, the countries taking part – Kenya, Zambia, Namibia, Botswana, Ghana, Madagascar, Mozambique and Mauritius – were starting from an unequal basis. In most of these developing countries, radio astronomy as a discipline was virtually non-existent and the subject was not taught at university. Without a research base, it was clear these countries would struggle to reap all the potential benefits of being part of SKA.

And so the DARA project was born. Saul is now part of a fledgling African radio astronomy research network that the project was set up to create – a position that was beyond his imagination when he was growing up.

A key part of the DARA PhD package was annual home visits to build links with relevant institutions. This helped Saul to keep in touch with Copperbelt and he was subsequently invited to apply for a permanent position as a lecturer in physics, which he now holds.

Saul said: "My PhD gave me access to new techniques and advanced technologies and equipment that aren't yet available in Africa. DARA has allowed me to develop as a researcher and that's both a win for me and a win for my country."

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Outline the 3 key benefits of integrating this theme:

1. Builds research capacity in a developing country
2. Unlocks potential in early career researchers
3. Grows the academic discipline globally

Outline the barriers or challenges encountered in integrating this theme and how you overcame these:

The original project, first funded in 2014, is now complete, with over 300 students having received basic training, 27 funded through DARA for their Master's and nine to complete a PhD. Around 100 students have also received business advice, to help put their new skills to commercial use. The DARA team have secured some follow-on funding from the University of Leeds and will be applying for other grants to continue the project.

Professor Melvin Hoare, who heads the project, said: "Ghana, Zambia and Kenya were the first countries to join DARA and they now have radio astronomy research groups established. We see similar ambition in the other countries, Botswana, Namibia, Mozambique, Madagascar and Mauritius. There are also many other DARA students with potential, like Saul, who've had doors open for them, and we want these opportunities to continue. There's so much more we can do – we really don't want to stop now!"