



S.E.T. for socio-economic growth

National Science and Technology Forum (NSTF)

media release

International Day of Forests, 21 March 2024:

Championing forest conservation: Prof Paxie Chirwa honoured as NSTF-South32 Management Award winner

Forests play a huge role in our everyday lives, whether we are drinking a glass of water, writing in a notepad, taking medication or building a house. Sustainable forest management plays a key role in eradicating the effects of climate change. Forests are vital for all aspects of a healthy planet, from livelihoods and nutrition to biodiversity and the environment, but despite all their priceless ecological, economic, social and health benefits, forests are endangered by fires, pests, droughts, climate change and unprecedented deforestation. Prof Paxie Chirwa, Chair and Director: Forest Postgraduate Programme, University of Pretoria (UP) has championed forest conservation through his research work. He received the NSTF-South32 Management Award for his contribution, centred on people, to future forestry development in South Africa (SA) and training future foresters, aimed at recognising the importance of communities in proximity to the forest resource in sustainable forest management and use.

International Day of Forests, 21 March: The United Nations General Assembly (UNGA) proclaimed 21 March the International Day of Forests in 2012. It is a fortunate coincidence that this is also South Africa's Human Rights Day. The theme for 2024 is "Forests and Innovation". The Day celebrates and raises awareness of the importance of all types of forests and to highlight the importance of forest ecosystems in the fight against climate change and to warn of the danger of their degradation. On each International Day of Forests, countries are encouraged to undertake local, national, and international efforts to organise activities involving forests and trees, such as tree planting campaigns.

Forests are often referred to as the lungs of the earth, they are like giant sponges that the earth uses to breathe. The trees and plants release oxygen and absorb and trap carbon dioxide, helping to combat global warming and stabilising the climate. They also provide food and habitats for many living things, they control atmospheric temperatures, protect watershed areas and regulate the water cycle. Trees also enrich the soil, provide raw materials such as timber for construction material and paper as well as being source areas for palm oil harvesting.

The Amazon Rainforest in South America plays a critical role in Earth's climate system, storing 150 to 200 billion tonnes of carbon. It is also essential due to its biodiversity, as well as the indigenous communities that reside within it. The Amazonian Indigenous Territories store nearly one third (32.8%) of the Amazon's above-ground carbon (28.247 million tonnes), making a significant contribution to the mitigation of climate change. Rainfall produced in the Amazon results in the largest river discharge on Earth, accounting for about 20% of the total world river input to oceans.

The Amazon is being decimated and is quickly reaching a tipping point. Overexploitation, deforestation and forest fragmentation are pushing deforestation levels towards 20%, a point of no return beyond which the rainforest will be unable to regenerate. Directly affecting the livelihoods of the 47 million people living in the Amazon, 511 indigenous groups, 10% of the planet's biodiversity, and aggravating the global climate and biodiversity crises. The Science Panel for the Amazon (SPA) at COP26 stated that 18% of Amazon forests have been converted to other uses, with an additional 17% of the biome degraded. The report also warns that the vital goal of keeping global warming to 1.5°C cannot be met if the Amazon Rainforest is lost. Urgent action is needed to help ensure an ecologically healthy Amazon, and this will require international cooperation.

Although SA by nature is not a forest rich country, it does have some natural (indigenous) forests which are important to conserve, and timber plantations. Approximately 70% of the forestry landscape, 1.2 million hectares, is planted in compartments through historic afforestation, covering approximately 1% of the country's land cover. Many forests in SA are found in the coastal provinces of KwaZulu-Natal, Western Cape and Eastern Cape, and are all known for their beauty, rich biodiversity and vast birdlife. In the KZN we have the Mkhuze Fig Forest, Ongoye Forest and the Dlinza Forest. Other forests found in this province include Havaan, Hatikhulu, Karkloof, Ngome, Weza, each with its own endemic plant and animal species that set it apart from its surroundings. Along the Garden Route in the Western Cape province you'll discover the Tsitsikamma Forest, a rare rainforest with its name meaning 'the place of clear water'. The Modjadji Cycad Forest in the Limpopo province is the most fascinating of all. The oldest cycads in the world grow here and are inextricably linked to the incredible culture of Modjadji (the rain queen) and the BaLobedu people.

Management Award winner: The NSTF celebrates NSTF-South32 Award winner Prof Paxie Chirwa as we commemorate this significant day. Prof Chirwa has devoted his life to protecting the forest. He is passionate about fostering sustainable interactions between humans and forest environments.



Prof says: "Participatory management and adaptive resource management means that forestry researchers must work together with policy regulators, community leaders, scientists and other forestry professionals to prolong resources". He states that conserving natural resources is in some cases directly linked to climate change mitigation, and that communities can also benefit financially from conservation activities. He says that there has been a deviation from the old style in the conservation field which is more inclined to heavy regulation. Prof Chirwa contends: "But now, I think there's a turnaround — if you want to improve conservation, you have to bring people in at the centre of it all". He states that many scientists go out into the field and only study trees but neglect the crucial traditional knowledge systems of the people living around them. "In the past when I did research it was very much that you go and talk to the trees, so to speak". Prof Chirwa has had the pleasure of training many bright young minds through his Forestry programme. Many have contributed to its research findings and others have gone on to find great success as professionals and academics in the forestry field in various notable institutions.

"If you want to improve conservation, you have to bring people in at the centre of it all."

He concludes that conserving natural resources, climate change mitigation and producing economic benefits for the people, are all interlinked.

About the NSTF (National Science and Technology Forum): NSTF is an independent non-profit stakeholder body and network – a civil-society forum of over 130 organisations involved in science, engineering, technology (SET) and innovation in SA.

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- <https://www.un.org/en/observances/forests-and-trees-day>
- <https://nationaltoday.com/international-day-forests/>
- <https://thinklandscape.globallandscapesforum.org/54277/u-n-science-panel-releases-initial-findings-of-upcoming-overview-of-the-amazon/>
- [International Day of Forests 2024 \(sdg.iisd.org\)](#)

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
- gathers stakeholders around burning issues of national and global interest, across the public and private sectors, including matters of public policy
- includes a network of professional societies in SET and STEM education (STEM = science, technology, engineering and mathematics) - the NSTF proSET membership sector.
- recognises, awards and profiles the outstanding contributions of individuals and groups to SET and innovation through the prestigious NSTF Awards
- runs and supports collaborative projects and youth outreach, including recognition of top performance in mathematics and science, role modelling, bursary and STEM career information
- runs and supports the STEMulator.org which attracts youth and educators to Explore>Discover>Learn the world of STEM including careers. (Established by NSTF proSET)

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