



ZAMBIA ACADEMY OF SCIENCES



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ZaAS

INSIGHTS AND UPDATES

Esteemed Members,

This July newsletter of the Zambia Academy of Sciences (ZaAS) highlights significant advancements and partnerships. On 16th July, ZaAS signed a Memorandum of Understanding (MoU) with the Life Transforming Institute to promote a growth mindset in science and enhance public appreciation. Another notable partnership is with the Dziwa Science and Technology Trust (DSaT Trust), focusing on scientific research, technological discovery, and community engagement to drive socioeconomic development in Zambia.

This edition also features exciting science news, including the discovery of a potential lunar base in a 100-meter-deep Moon cave, offering insights into future human colonization and space exploration. Additionally, it covers tips for managing stress and back pain, member focus, and upcoming opportunities for fellowships and recognitions in the scientific community.

ZaAS NEWS

MoU Signing – Zambia Academy of Sciences and Life Transforming Institute

On Tuesday, 16th July, the Zambia Academy of Sciences (ZaAS) and the Life Transforming Institute celebrated a landmark partnership with the signing of a Memorandum of Understanding (MoU). This agreement sets the stage for a dynamic collaboration aimed at fostering a growth mindset in science and driving national development. This partnership will develop joint initiatives designed to enhance public appreciation of science and its pivotal role in national development.



MoU Signing - Zambia Academy of Sciences (ZaAS) and the Dziwa Science and Technology Trust (DSaT)

In a significant move to advance scientific research, technological discovery, and innovation in Zambia, the Zambia Academy of Sciences (ZaAS) and the Dziwa Science and Technology Trust (DSaT) have signed a Memorandum of Understanding (MoU). This partnership is set to enhance communication and advocacy, capacity building, research, and community engagement. The ZaAS Acting President, Professor Cyprian Katongo expressed keen anticipation for the cooperation, noting that the Academy looks forward to leveraging this partnership to drive science and technology forward. Similarly, the DSaT Chairperson, Dr. Paul Zambezi highlighted the importance of this collaboration, emphasizing its potential to strengthen science communication to the public and policymakers.



SCIENCE NEWS

Scientists Uncover Potential Lunar Base in Newly Discovered Moon Cave

Scientists have confirmed long-held theories about lunar pits by finding a cave on the Moon that is roughly 100 meters deep and could be the perfect site for a permanent human base. The cave, which is situated in the Mare Tranquillitatis area, was located by University of Trento researchers using radar equipment. Given its depth and structure, it may be able to shield humans from space weather, radiation, and severe temperatures—all factors that are essential for establishing human habitation on the moon. [Read More](#)

Geo-Engineering: Potential Solution or Risky Gamble in the Fight Against Climate Change?

As global temperatures continue to rise, scientists are exploring geo-engineering—manipulating the climate to cool the planet—as a potential solution, despite significant risks like disrupting weather patterns and potentially warming certain regions. This £103 billion (\$135 billion) industry includes solar radiation management and direct air carbon capture, with techniques such as marine cloud brightening and stratospheric aerosol injection showing promise but also posing serious risks. Ultimately, geo-engineering might become part of a broader array of solutions to combat climate change. [Read More](#)

MEMBER FOCUS

DR KUTEMBA KAPANJI - KAKOMA – TREASURER, ZAMBIA ACADEMY OF SCIENCES

Dr. Kutemba Kapanji-Kakoma is a seasoned chemical engineer, research scientist, consultant, mentor, and adult educator with over fifteen years of experience in the mining industry, higher education, and R&D institutions. She is deeply committed to research and innovation, particularly their application in improving livelihoods and economies, recognizing the crucial role of partnerships across research, government, and industry. Currently, she heads the Materials Engineering and Technical Services Centre at the National Institute for Scientific and Industrial Research (NISIR) in Zambia. Her expertise spans hydrometallurgy, metallurgical accounting, ion exchange, solvent extraction, and adsorption techniques. Her research focuses on energy self-sufficient biorefinery complexes, bio-based chemical production, green and circular economies, wastewater management, and sustainability studies. She holds a PhD and MSc in Chemical Engineering and a BEng (Hons) in Chemical Engineering with Minerals Engineering.

PUBLICATIONS

[Navigating New Horizons – A Global Foresight Report on Planetary Health and Human Wellbeing](#)

The United Nations Environment Programme (UNEP) and the International Science Council (ISC) released a report that emphasises the need for a forward-looking approach to address emerging global challenges. The report highlights eight critical global shifts, including environmental degradation, rapid technological development, resource competition, and widening inequalities, which are accelerating the triple planetary crisis of climate change, biodiversity loss, and pollution. [Download the Report](#)

[From science to action: Leveraging scientific knowledge and solutions for advancing sustainable and resilient development](#)

A position paper was published by the International Science Council (ISC) and the World Federation of Engineering Organizations (WFEO) for the 2024 High-level Political Forum. The paper compiles the latest scientific evidence and insights from the scientific, engineering, and technological community, highlighting policy-relevant and evidence-based strategies to accelerate progress on the Sustainable Development Goals (SDGs). [Download the Paper](#)

Quote

“I have not failed. I've just found 10,000 ways that won't work”

- Thomas Edison

Tips for Managing Stress and Back Pain

1. **Maintain Good Posture:** Sit up straight, roll your shoulders back, and take deep breaths to alleviate tension.
2. **Stay Aware of Tension:** Avoid clenching your jaw and tensing your shoulders, common habits when using computers or smartphones.
3. **Understand Stress Impact:** Recognize that stress can cause and amplify pain, particularly in the head, neck, and shoulders.
4. **Promote a Healthy Spine:** Keep your spine flexible and mobile to prevent stiffness and compensate for tension in other areas.
5. **Incorporate Simple Exercises:** Engage in gentle movements daily to maintain health and prevent pain. A few minutes of standing up from your desk can make a significant difference.
6. **Practice Shoulder Rolls:** Open your upper back by rolling your shoulders back and try movements like the archery move to release tension

Source: [The Telegraph](#)

OPPORTUNITIES

Opportunities: Fellowships

Woodrow Wilson International Centre Fellowship

The Wilson Center invites scholars, practitioners, journalists and public intellectuals to take part in its flagship international Fellowship Program. Fellows conduct research and write in their areas of interest while interacting with policymakers in Washington and Wilson Center staff and other scholars in residence. The Center accepts policy-relevant, non-advocacy fellowship proposals that address key challenges confronting the United States and the world. **(Deadline: 1 October 2024)** [Read More](#).

The Christine Mirzayan Science and Technology Policy Graduate Fellowship Program

The Christine Mirzayan Science & Technology Policy Graduate Fellowship Program is a full-time, hands-on training and educational program that provides early career individuals with the opportunity to spend 12 weeks at the National Academies of Sciences, Engineering, and Medicine in Washington, DC learning about science and technology policy and the role that scientists and engineers play in advising the nation. **(Deadline: 9 September 2024)** [Read More](#)

National Humanities Centre Fellowship Programme

The National Humanities Center provides scholars with an environment and resources conducive to generating new knowledge and furthering their understanding of the human experience. Mid-career and senior scholars are encouraged to apply. Emerging scholars with a strong record of peer-reviewed work may also apply. **(3 October 2024)**. [Read More](#)

Opportunities: ISC (International Science Council)

- [Call for nominations](#) for the Norwegian Academy of Science and Letters' Abel Prize recognizing pioneering scientific achievements in mathematics **(Deadline: 1 September 2024)**
- [Call for membership](#) of the Global Young Academy **(Deadline: 18 September 2024)**
- [Call for nominations](#) for 2024 Agarwal Prize for young scholars in ecological economics **(Deadline: 15 December 2024)**

For more ISC opportunities, click [here](#)