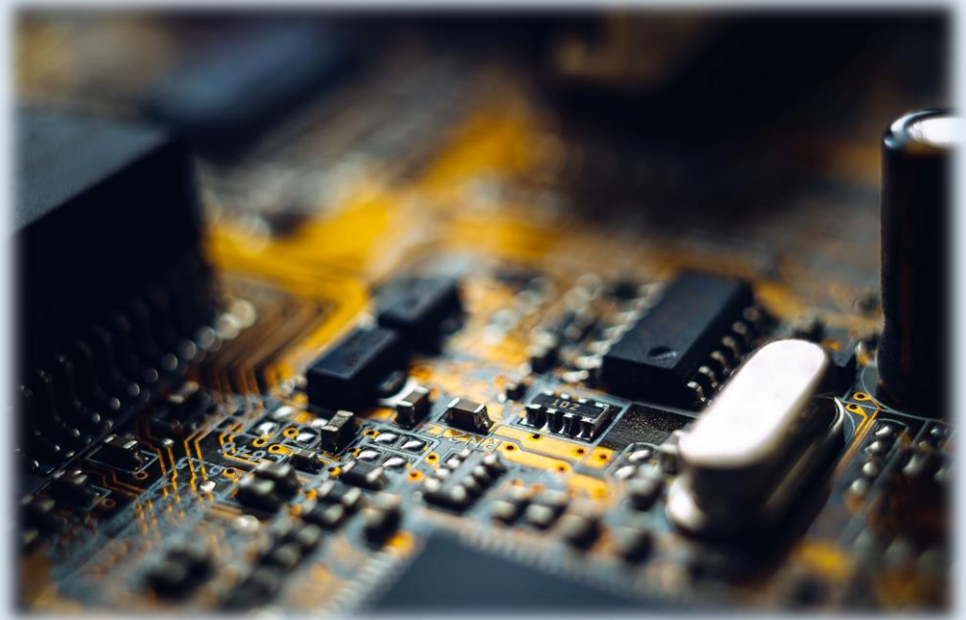




ZAMBIA ACADEMY OF SCIENCES



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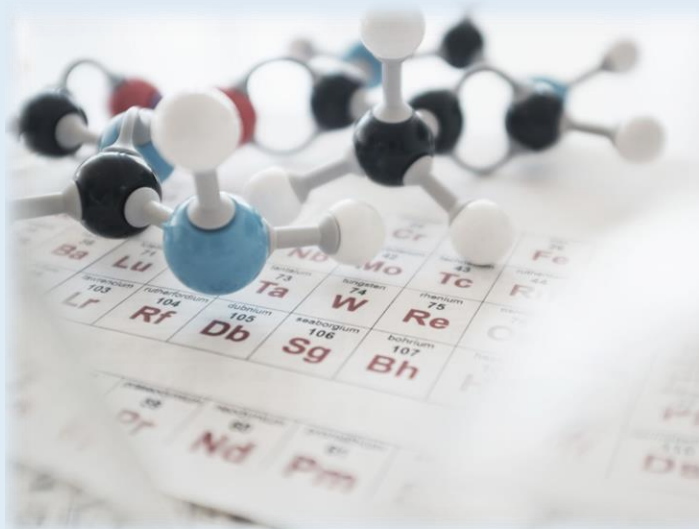
INSIGHTS AND UPDATES

Esteemed Members,

In this edition, we cover key developments in science and technology such as the most recent developments in the energy and environmental areas. The devastating effects of extreme weather and land degradation on the world's food security are discussed in key articles, highlighting the necessity of regenerative farming and the expected rise in oil demand, which will make it more difficult to attain net-zero emissions by 2050.

Publications include an AI policy handbook and science-based suggestions for global plastic pollution restrictions. Additionally, we also highlight World Food Safety Day 2024, provide tips for optimising sleep positions, and present various opportunities such as the Earthna Prize, British Academy's Visiting Fellowships, Radcliffe Fellowship Program among others.

Lastly, under Member Focus, we spotlight Professor Godfrey Biemba, the newly elected president of the Zambia Academy of Sciences, and highlight his extensive contributions to global health and research.



ZaAS NEWS

Celebrating 2024 World Safety Day

The Zambia Academy of Sciences, in collaboration with the Ministry of Health and other partners, held a media launch of this year's World Food Safety Day (7 June 2024). This year's subject was "Food Safety: Prepare for the Unexpected". The purpose of the day was to emphasize the importance of food safety accidents and the need to be prepared for them, regardless of their severity. Addressing these incidences requires a collaborative effort from legislators, food safety regulators, farmers, and food businesses, with consumers also playing an important role.

SCIENCE NEWS

Extreme Weather and Land Degradation Threaten Global Food Security

Droughts and flooding are making it hard for some of the poorest regions to sustainably produce crops, resulting in zero harvests and an increased dependency on charity. According to Martin Frick of the World Food Programme, 40% of the world's farmland is already damaged, with 95% expected by 2050, resulting in widespread crop failures even in richer countries. Degraded soil cannot sustain plant life or absorb atmospheric carbon, exacerbating climate change. Frick advocates for regenerative farming to improve soil health and prevent food shortages, citing successful programs in Niger. Delaying these measures raises susceptibility and impedes recovery efforts. [Read More](#)

Forecasts Highlight Robust Oil Demand and Challenges to Achieving Net-Zero Emissions by 2050

Recent estimates of global crude oil demand and use differ, but it is obvious that reaching net-zero carbon emissions by 2050 is implausible. Despite global disruptions, oil prices remain high, with demand likely to rise due to economic recovery, increasing travel, and industrial activity in non-OECD nations such as China and India. The International Energy Agency (IEA) forecasts modest rise, but the US Energy Information Administration (EIA), Goldman Sachs, and OPEC expect bigger increases due to strong demand for transportation fuels. All sources concur on strong oil demand growth in 2024/25 and rising crude prices in the later half of 2024, as well as increased demand for other carbon-intensive fuels, showing that the energy transition is not progressing as expected. [Read More](#)

PUBLICATIONS

Key Requirements for a Science-based International Legally Binding Instrument to End Plastic Pollution

In preparation for the Intergovernmental Negotiating Committee on plastic pollution (INC-4), the ISC expert group on plastic pollution has prepared a High-level commentary in response to the Revised Draft and ongoing negotiations. The commentary underscores a set of science-based recommendations to inform ongoing negotiations, ensuring an effective and robust regulatory instrument and implementation. [Read More](#)

A guide for policy-makers: Evaluating rapidly developing technologies including AI, large language models and beyond

This paper by the ISC outlines a framework to guide policymakers in navigating the numerous global and national AI discussions. The ISC's guide aims to bridge the gap between high-level principles and actionable policies, addressing the urgent need for a common understanding of AI's opportunities and risks. The framework takes a holistic view of AI's potential, considering human and societal wellbeing alongside external factors such as economics, politics, the environment, and security. [Read More](#)

MEMBER FOCUS

PROFESSOR GODFREY BIEMBA – PRESIDENT, ZAMBIA ACADEMY OF SCIENCES

Professor Godfrey Biemba, recently elected as the President of the Academy, brings his extensive expertise and leadership to advance the mission and impact of the Academy further. He is a full Professor of Global Health and Research at Lusaka Apex Medical University and has held significant leadership roles, including past Director/CEO of the National Health Research Authority in Zambia. With over 38 years in the health sector, he has extensive experience as a medical practitioner, researcher, and public health manager. He has been involved in various types of health-related research, focusing on HIV/AIDS, malaria, maternal, neonatal, and child health, and health systems. Prof. Biemba has over 100 publications, including 69 peer-reviewed articles. He has held academic positions at the University of Barotseland and Boston University School of Public Health. His governance experience includes serving on numerous boards, such as the Tropical Diseases Research Centre and the European and Developing Countries Clinical Trials Partnership

HEALTH AND WELLBEING

Tips for Healthy Sleep Positions

1. Side Sleeping:

- **Left Side:** Ideal for pregnant women and those with acid reflux or GERD.
- **Right Side:** Recommended for individuals with heart conditions.
- **General Tips:** Use a thick pillow to align your head and neck with your spine and place a pillow between your knees to support your hips and reduce lower back strain.
- **Considerations:** Be mindful of potential issues like wrinkles and shoulder pain.

2. Back Sleeping:

- **Benefits:** Optimal for spine alignment and minimizing wrinkles; beneficial for those with back and neck pain.
- **Risks:** Can cause sleep apnea, particularly in individuals with obesity.
- **Tips:** Sleep with a pillow under your knees to preserve natural spine contours and consider elevating your head to reduce sleep apnea symptoms.

3. Front Sleeping:

- **Risks:** Likely to cause neck and back pain due to twisting and arching of the spine; can contribute to facial wrinkles.
- **Tips:** Use a thin pillow or no pillow to keep the neck neutral and place a pillow under the pelvis to support the lower back.

4. General Advice:

- **Daytime Activity:** Maintain an active lifestyle to reduce nighttime postural discomfort.
- **Adjusting Sleep Position:** Gradually train yourself to switch positions by incrementally increasing the time spent in the new position each night.

Source: [The Telegraph](#)

Opportunities: Awards

The EARTHNA PRIZE

The Earthna Prize is an initiative aimed at celebrating and supporting projects, actors and systems that are working towards the preservation, integration, adaptation, and adoption of ancestral knowledge and cultural heritage in addressing contemporary environmental challenges. The prize aims to inspire a wider community to champion environmental stewardship and contribute to a more resilient and environmentally conscious world by showcasing outstanding efforts. **(Deadline: 30 June 2024)**. [Read More](#)

Opportunities: Fellowships

The British Academy's Visiting Fellowships Programme 2025

The British Academy's Visiting Fellowships programme provides outstanding academics based in any country overseas with the opportunity to be based at a UK higher education or other research institution. The programme is open to academics at any career stage, and in any discipline within the humanities and social sciences. Visiting Fellowships are available for a period of between 3 to 6 months. **(Deadline: 23 October 2024)**. [Read More](#)

Radcliffe Fellowship Program

Applications are open for the Radcliffe Fellowship Program. The Program awards 50 fellowships each academic year. Applicants may apply as individuals or in a group of two people working on the same project. Harvard Radcliffe Fellows benefit from a uniquely interdisciplinary and creative community that each year spans the sciences, arts, humanities, and professions. The deadline for applications in humanities, social sciences, and creative arts is **12 September, 2024**. The deadline for applications in science, engineering, and mathematics is **3 October, 2024**. [Read More](#)

Opportunities: ISC (International Science Council)

- [Call for mentors and mentees](#) to the INGSA-Africa Science Advice Skills Development Mentorship Program building capacity of early and mid-career African scientists for the effective practice of science advice **(Deadline: 15 July 2024)**.
- [Call for nominations](#) to the INGSA-Asia Grassroots Science Advice Promotion Awards 2024 **(Deadline: 31 July 2024)**.
- [Call for professorships](#) by the British Academy for internationally recognised established scholars within the social sciences and the humanities overseas to work in the UK **(Deadline: 23 October 2024)**.
- [Call for nominations](#) to IUPAC's 2025 Distinguished Women in Chemistry or Chemical Engineering Awards **(Deadline: 1 November 2024)**.

Quote

"If I have seen further, it is by standing on the shoulders of giants."

- Sir Isaac Newton