



KeSEBAE NEWS



Newsletter of the Kenya Society of Environmental, Biological and Agricultural Engineers

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KeSEBAE 2025 Annual Conference: Engineering Climate Change

By Yvonne Madahana



KeSEBAE has held conferences since 1989, bringing together experts, researchers, and professionals in environmental, biological, and agricultural engineering to discuss pressing global challenges. Over the years, our conferences have served as a vital platform for knowledge exchange, networking, and collaboration among professionals, policymakers, and industry leaders. Attendees gain valuable insights from thought-provoking discussions led by experts, participate in exhibitions showcasing innovative technologies and solutions, and engage in meaningful conversations that drive progress in their respective fields. Additionally, students benefit from industrial visits, offering hands-on experience to bridge the gap between academia and real-world application. To further support professional growth, participants also earn Professional Development Units (PDUs), enhancing their credentials and career prospects. Through these experiences, KeSEBAE continues to foster impactful discussions and drive engineering solutions that contribute to a sustainable and prosperous future for Africa and beyond.

DEAR READER

Welcome to KeSEBAE Newsletter.

A monthly Newsletter touching on topical issues affecting our environment.

KeSEBAE NEWS is a Newsletter of the Kenya Society of Environmental, Biological and Agricultural Engineers (KeSEBAE)

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This year, the Kenya Society of Environmental, Biological, and Agricultural Engineers (KeSEBAE) is once again hosting its highly anticipated Annual Conference under the theme Engineering Climate Change. Climate change is one of the most urgent global issues of our time, affecting every aspect of life, from food security to water availability, infrastructure resilience, and economic stability. As temperatures rise, extreme weather events such as floods, droughts, and wildfires are becoming more frequent, threatening lives and livelihoods. Developing countries, including Kenya and other African nations, are particularly vulnerable due to their reliance on agriculture and natural resources for economic development.

The **Engineering Climate Change** theme is particularly relevant today because engineering solutions are critical in mitigating and adapting to climate change. Whether it's through renewable energy, sustainable infrastructure, improved irrigation systems, or innovative waste management, engineering plays a pivotal role in reducing carbon emissions and enhancing resilience to climate impacts.

Moreover, industries and economies worldwide are transitioning toward green technologies and carbon-neutral policies, making it essential for engineers, researchers, and policymakers to collaborate on sustainable solutions. The 2025 KeSEBAE Conference will serve as a platform for thought leaders to share ground breaking research, innovative technologies, and actionable strategies to combat climate change effectively.

Conference Sub-Themes

The 2025 KeSEBAE Conference will explore various sub-themes that highlight engineering solutions to climate change, including:

i. **Green Economy**

A green economy is an economic system that promotes sustainability while reducing environmental risks. Discussions in this sub-theme will explore policies, investments, and

technologies that contribute to sustainable economic growth while addressing climate change challenges.

ii. **Carbon Trading**

As the global focus on combating climate change intensifies, carbon trading has emerged as a market-based approach to incentivize emission reductions. This system allows entities to buy and sell carbon credits, which represent verified reductions or removals of greenhouse gas emissions, typically measured in tonnes of carbon dioxide equivalent (CO₂e).

Carbon markets serve as trading platforms where organizations, industries, and governments can participate in buying and selling these credits. By doing so, businesses can offset their carbon footprints while contributing to broader climate goals.

This sub-theme will explore the fundamentals of carbon credit markets, key policies, and mechanisms that drive carbon trading. Experts will discuss its role in reducing greenhouse gas emissions, promoting sustainable industrial practices, and shaping the future of environmental responsibility.

iii. **Industrialization for Climate Change**

Industrialization is often associated with high carbon emissions, but through green technology and sustainable engineering, industries can mitigate climate change effects. This session will explore eco-friendly manufacturing, circular economy models, and energy-efficient industrial processes.

iv. **Agricultural Mechanization for Climate Change**

Agriculture is one of the most vulnerable sectors to climate change. This sub-theme will focus on how mechanization, precision farming, and smart irrigation systems can enhance agricultural productivity while minimizing environmental impacts.

v. Waste Management for Climate Change

The global waste crisis contributes significantly to climate change. This discussion will highlight recycling innovations, circular economy practices, and sustainable waste management strategies that can help curb pollution and reduce greenhouse gas emissions.

vi. Energy Systems for Climate Change

Energy production and consumption play a critical role in climate change. This session will focus on renewable energy sources such as solar, wind, and hydropower, as well as energy-efficient technologies and grid innovations that can support a low-carbon future.

vii. Housing and Infrastructure for Climate Change

Urbanization and construction contribute heavily to carbon emissions. This sub-theme will explore green building techniques, sustainable urban planning, and climate-resilient infrastructure that can reduce environmental impact.

viii. Irrigation and Water Resources

Water scarcity is a growing concern in the face of climate change. This session will address efficient irrigation techniques, water conservation strategies, and policies that promote sustainable water resource management.

ix. ICT Systems

Technology plays a pivotal role in climate change mitigation. This sub-theme will highlight smart climate monitoring systems, AI-driven environmental solutions, and data analytics to improve decision-making in climate-related policies and practices.

x. Engineering Education and Practice for Climate Change

The role of engineers in climate change mitigation cannot be overstated. This discussion will focus on curriculum development, research advancements, and professional training programs that equip engineers with the skills to address climate challenges effectively.

Conference key dates, payment details and venue are indicated below:

2025 KeSEBAE Annual Conference

Theme: Engineering Climate Change

 **Date:** Wednesday, 23 – Friday, 25 April 2025

 **Venue:** University of Nairobi Towers

Key Dates

Abstract Submission Deadline: 04 April 2025

Paper Submission Deadline: 11 April 2025

Payment Deadline: 23 April 2025

Charges

Members: KES 15,000 (\$150)

Non-Members: KES 20,000 (\$200)

Undergraduate Students: KES 2,000 (\$20)

Field Visit: KES 5,000 (\$50)

Virtual Participation: KES 5,000 (\$50)

Payment Details

Lipa na M-Pesa

Paybill Number: 4002575

Account Name: Full Name

Contact for Booking

 **Phone:** 0788712156

 **Website:** www.kesebae.or.ke

 **Email:** info@kesebae.or.ke

Pictorials of Conference in Previous Years

1.0 KeSEBAE/PASAE Conference 2023



A picture of Chief Guest and Other Invited Guests, PASAE and KeSEBAE officials During the Opening Ceremony of the Conference



From Right: Eng. Prof. Lawrence Gumbe, Chairperson KeSEBAE, Hon. Harriette Chiggai, the President's Advisor on Women's Rights, Chief Guest and Eng. Erastus Mwongera, Chairman EBK, Follow the Conference Proceedings During the Opening Ceremony of the 5th PASAE International Conference 2023.



Hon. Harriette Chiggai Operating the Lovol Tractor from CAMCO Equipment (K) Ltd



Adebayo Segun Emmanuel Presenting on the Effect of Machine Parameters on Physical and Sensory Properties (Desirability) of Coated Peanut Snacks



Tea Machinery Engineering Company Limited (TEMEC) Demonstrating their Products to Students



KeSEBAE/PASAE delegates in Olkaria Geothermal Power Plant in Naivasha

2.0 KeSEBAE Conference 2022



Eng. Shiribwa Mwamzali, Eng. Patrick Wambulwa, Philip Kello Harsama (PS, Crop Development), Eng.Prof. Lawrence Gumbe, Aboud Moeva and Eng.Prof. Ayub Gitau sharing a photo during the opening ceremony



Technical Sessions Going on During the Conference



KeSEBAE Guests Having Lunch During the Conference



A Picture of the Intake of the Dam



Executive Committee Members During the Annual General Meeting

3.0 KeSEBAE Conference 2019



KeSEBAE Members Following the Proceedings of the Opening Ceremony



Principal College of Architecture and Engineering (CAE), Prof. Peter Ngau, represented the Acting Vice Chancellor, Prof. Isaac Mbeche.



Eng. Prof. Lawrence Gumbe making the final presentation: Engineering Education for Environmental, Biological and Agricultural Systems in Kenya.



Membership Certificate Presentation to Ezekiel Oranga by Prof. David Kimutai Some



Vote of Thanks from the Dean of Students – School of Engineering, University of Nairobi, Eng. Prof. Ayub Gitau



Photo Session After the closure of KeSEBAE 2019 Conference



KeSEBAE

2025 ANNUAL CONFERENCE



WED 23 - FRI 25 APR 2025



UNIVERSITY OF NAIROBI TOWERS



CALL FOR ABSTRACTS

Theme:
Engineering Climate Change

Sub-themes

1. Green Economy
2. Carbon Trading
3. Industrialization for Climate Change
4. Agricultural Mechanization for Climate Change
5. Waste Management for Climate Change
6. Energy Systems for Climate Change
7. Housing and Infrastructure for Climate Change
8. Irrigation and Water Resources
9. ICT Systems
10. Engineering Education and Practice for Climate Change

Submission Guidelines

1. Abstract of 250-300 words should be emailed to: events@kesebae.or.ke
2. Abstracts should be in one continuous paragraph and include up to 6 keywords for indexing.
3. Abstracts should include the names of the author(s), affiliations, email and telephone contacts, with the corresponding author indicated in a footnote.
4. The full paper should be 3,000 - 8,000 words prepared in Times New Roman, font size 12, spacing of 1.5 and in editable text format.
5. All references cited in the papers should follow APA 6th Edition citation style
6. The full paper should be emailed to events@kesebae.or.ke
7. Abstracts and papers can be

Timelines



CALL FOR BOOKING

0788712156

For more details, visit our website or email us
www.kesebae.or.ke
info@kesebae.or.ke



JEAE

Journal of Engineering in Agriculture and the Environment

The Journal of Engineering in Agriculture and the Environment (JEAE) is a Publication of the Kenya Society of Environmental, Biological and Agricultural Engineers (KeSEBAE) through which researchers in the fields of Environment, Agriculture and related fields share research information and findings with their peers from around the globe.

The JEAE Editorial Board wishes to invite interested researchers with complete work in any relevant topic, to submit their papers for publication in the next editions of the Journal.

Manuscripts may be submitted online or via email to:

Chairperson, JEAE Editorial Board via Email: jeae@kesebae.or.ke or Online via: <https://kesebae.or.ke/journal/index.php/kesebae/about/submissions>

Criteria for Article Selection

Priority in the selection of articles for publication is that the articles:

- a. Are written in the English language
- b. Are relevant to the application of engineering and technology in agriculture, the environment and biological systems
- c. Have not been previously published elsewhere, or, if previously published are supported by a copyright permission
- d. Deals with theoretical, practical and adoptable innovations applicable to engineering and technology in agriculture, the environment and biological systems
- e. Have a 150 to 250 words abstract, preceding the main body of the article
- f. The abstract should be followed by the list of 4 to 8 “Key Words”
- g. Manuscript should be single-spaced, under 4,000 words (approximately equivalent to 5-6 pages of A4-size paper)
- h. Should be submitted in both MS word (2010 or later versions) and pdf formats (i.e., authors submit the abstract and key words in MS Word and pdf after which author uploads the entire manuscript in MS word and pdf)
- i. Are supported by authentic sources, references or bibliography

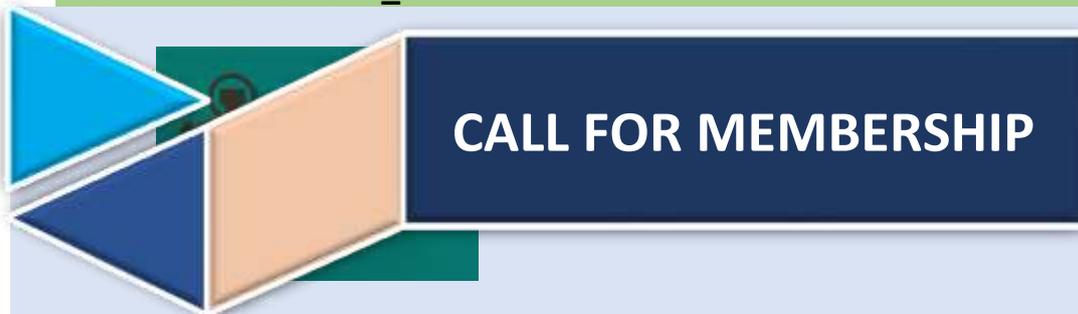
Our Expert Reviewers are Highly Regarded Globally and Provide Fast and Rigorous Review Services For additional details and online support visit: <https://www.kesebae.or.ke/journal/instructions.php> or visit our JEAE website at: <https://kesebae.or.ke/journal/index.php/kesebae>

CALL FOR ARTICLES TO KeSEBAE NEWS

KeSEBAE NEWS Editorial wishes to call for topical articles for publication in future editions of KeSEBAE NEWS.

Please transmit the same via Email: info@kesebae.or.ke

NOTE: A payment will be made to the author of each selected article



CALL FOR MEMBERSHIP

Be a KeSEBAE Member:

The annual subscription fees, admission fees and reinstatement fees for members of all grades (except Honorary and Life Members who shall pay no dues or fees) are indicated below: The annual dues are as follows:

| <i>Membership Category</i> | <i>Annual Subscription (KES)</i> | <i>Admission Fees (KES)</i> | <i>Reinstatement Fees (KES)</i> |
|----------------------------|----------------------------------|-----------------------------|---------------------------------|
| <i>Fellow</i> | 5,000 | 1,000 | 2,000 |
| <i>Member</i> | 2,000 | 1,000 | 2,000 |
| <i>Ass. Member</i> | 1,000 | 1,000 | 2,000 |
| <i>Aff. Member</i> | 500 | 1,000 | 2,000 |
| <i>Student</i> | 300 | 100 | - |

Membership Renewal

Members of all grades are requested to renew their 2024 membership as follows.

| <i>Membership Category</i> | <i>Annual Subscription Fee (KES)</i> |
|----------------------------|--------------------------------------|
| <i>Fellow</i> | 5,000 |
| <i>Member</i> | 2,000 |
| <i>Ass. Member</i> | 1,000 |
| <i>Aff. Member</i> | 500 |
| <i>Student Member</i> | 300 |

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<https://web.facebook.com/kesebae1/>

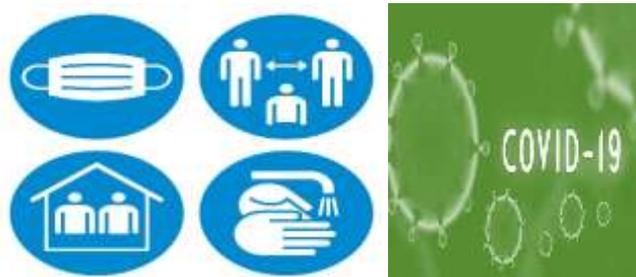
PAYMENT DETAILS

| Bank | |
|--------------|---|
| Bank | Absa Bank Kenya Plc |
| Branch | Nairobi University Express Branch |
| Account Name | Kenya Society of Env. Bio. & Agric. Engineers |
| Account No. | 2038150696 |
| Swift Code | BARCKENX |
| Currency | Kenya Shillings |

M-PESA DETAILS

Pay Bill No.: 4002575

Account No: Your Full Name



Important Links

| | |
|---------|---|
| KeSEBAE | https://www.kesebae.or.ke/ |
| JEAE | https://www.kesebae.or.ke/journal/ |
| EBK | https://ebk.or.ke/ |
| IEK | https://www.iekenya.org/ |
| PASAE | http://www.pasae.org.za/ |
| Email | info@kesebae.or.ke |